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The New England Medical Gazette

A JOURNAL OF HOMŒOPATHY
ITS ALLIED SCIENCES AND INSTITUTIONS

"A homœopathic physician is one who adds to his knowledge of medicine a special knowledge of homœopathic therapeutics and observes the law of similia All that pertains to the great field of medical learning is his by tradition, by inheritance, by right."

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JANUARY, 1917

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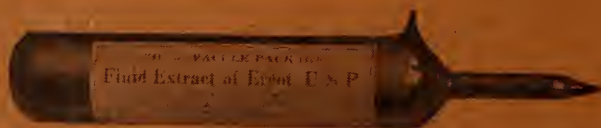
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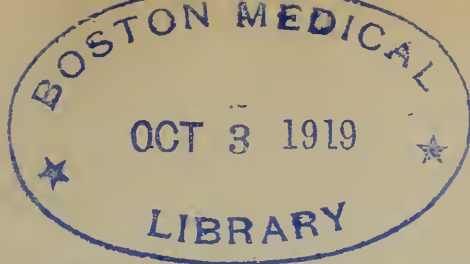
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THE NEW ENGLAND MEDICAL GAZETTE

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No. 1

ORIGINAL COMMUNICATIONS

WHOOPING-COUGH AND ITS TREATMENT

CONRAD WESSELHOEFT, 2D, M.D.

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For the past three years I have been called upon to treat cases of whooping-cough at the West Department of the Massachusetts Homœopathic Hospital. During my first service the cases were few in number and mild in character, running a comparatively short and uneventful course under homœopathic medication in the lower potencies. During the year of 1915 I met with a few stubborn cases, and this last winter I became so impressed with my inability to influence the course of the disease in a number of cases that I felt constrained to make a more extended study of the disease with the hope of coming to some conclusions regarding the treatment which might be of benefit to myself as well as to others.

Whooping-cough is considered much too lightly by the medical profession at large and by the laity. In Berlin alone there were 4,898 deaths from this disease from 1890 to 1900, among whom 2,619 occurred in the first years of life. Furthermore, from 1885 to 1896 the death rate per thousand in this city was 9.54 for whooping-cough, as against 7.83 for scarlet fever and 6.88 for measles.¹ In America there were 9,958 deaths from whooping-cough during the year 1900, which gave a greater mortality than that of scarlet fever over the same period.²

So far as the ætiology is concerned it is generally accepted that the Bordet-Gengou bacillus is the cause. This organism resembles the bacillus of influenza but may be distinguished from it by agglutination and other serologic reactions. The Bordet-Gengou bacillus may be recovered from the sputum during the first two weeks of the disease. After this time it cannot be found. This bacteriologic fact corroborates the clini-

cal experience that the disease is most infectious during the first two weeks, and that carriers have never been described.³

The characteristic pathologic lesion has been pointed out by Mallory and Horner⁴ to be the accumulation of masses of bacilli, similar to those of Bordet and Gengou, lodged between the cilia which line the trachea and the bronchi. These authors believe that the presence of these bacilli in such numbers interferes with the function of these cilia, thus giving rise to a reflex irritation which produces the paroxysmal cough. Besides this mechanical interference, the bacilli also produce a mild toxin which gives rise to changes in the lymph nodes and the characteristic lymphocytosis,* together with the production of a specific antibody.

The incubation period is generally one to two weeks but may be even less. Consequently two weeks is usually considered ample quarantine for those who have been exposed and develop no catarrhal symptoms. The whoop itself may not develop until two weeks later. Unfortunately the disease is thought so little of that isolation of patients, suspects, and exposed individuals — who have never had the disease — is most imperfectly carried out. Furthermore, there is a general impression that adults rarely contract whooping-cough. The reason for this impression is that most people have it in childhood and maintain their acquired immunity throughout life. The greatest susceptibility to the disease appears to be from the sixth month to the fifth year. However it is not uncommon for adults and even elderly people to contract the disease, and suffer severely with it.

The disease is ushered in with a general catarrhal condition similar to that of a common cold in the head. Headache, malaise, coryza with sneezing, lachrymation and photophobia may be present. These symptoms are followed or accompanied by a bronchitis with a cough, which soon develops a paroxysmal character especially worse at night. There may be the slight evening rise in temperature and general muscular pains so common in many infections. It is said that the younger the child the shorter will be the catarrhal stage. A few cases begin to whoop in a day or two, but others continue these catarrhal symptoms for ten to twelve days before the whoop develops.

An individual who, never having had the disease, has been recently exposed to it, and who develops a cold followed by a persistent cough of a paroxysmal character which is particularly worse at night, should be suspected of having whooping-cough,

* In a series of out-patient hospital cases Ladd⁵ found a moderate leukocytosis in the early stage with an increase in mononuclears. Kolmer⁶ found more or less leukocytosis with a relative lymphocytosis, and in the third stage a mild eosinophilia.

and be isolated accordingly. Like measles the disease is especially infectious during the catarrhal stage, because the organisms exist in the mucus of the upper respiratory tract and get onto the hands and thence to everything that the hand of man touches. Contact infection, however, probably plays a minor part as it does in measles, but it should not be overlooked as a means of spreading the contagium. Droplet infection, on the other hand, is largely responsible for the spread of this infection. The sneezing and coughing disseminates many fine droplets into the air about the patient. These droplets contain the bacilli. In a closed bed-room the air may become saturated with the contagium. In a school-room, dining-room, public conveyance or a hospital ward those nearest the coughing and sneezing patient may easily become infected providing they are susceptible. The organisms die in a few hours from drying and exposure to light. Consequently, thorough ventilation is the most efficacious method of disinfecting a room. It has been said on good authority⁷ that the value of fumigation lies in the thorough ventilation that follows, and I am one who fully believes this to be the case in whooping-cough.

In the paroxysmal stage appear the diagnostic and characteristic symptoms of the disease. The cough becomes severe and more and more spasmodic, often of a metallic character. After a series of rapid coughs there is a whoop which cannot be mistaken. This whoop occurs during inspiration, and is the result of a spasm of the larynx reflected from the bronchial tubes. The whoop is again followed by a series of racking coughs which lead to a second whoop. This may keep up for several minutes, and is usually terminated by the patient raising a lump of mucus, which act is often accompanied, or immediately followed, by vomiting. During the attack of coughing, the face becomes cyanotic, tears come to the eyes, and the child sits up in bed with an anxious, pitiful, pleading look on its face, trying to cry but unable to. I have often seen the smaller children pull themselves up on the sides of the crib during a fit, as if standing made it easier, or tended to relieve the restlessness. Paroxysms may come on while the child is quiet or even asleep. In fact it is characteristic of the disease that the patient coughs more at night. At other times the attacks are brought on by excitement, anger or fright. In the hospital it is common to have one child start the whole ward coughing in chorus. Such a bedlam may disturb patients in the most remote wings of the hospital, and this is a factor that causes some physicians to resort to opiates even though they do not consider it the best thing for the whooping-cough patient. The duration of the spasmodic stage varies greatly. Some patients

only whoop a few times, while others continue to do so for weeks and even months. The longest case I have had under observation whooped for three months; this child entered the hospital with scarlet fever, and had been whooping for two or three weeks before entrance.

The stage of decline is represented by a gradual improvement in which the cough loses its paroxysmal character and the whoop lessens until recovery is reached. Recurrence of the paroxysms may occur from time to time after too violent exertion or some other exciting cause. The average duration of these stages, as given by Ruhrah,⁸ are: "incubation one week, catarrhal stage one to two weeks, paroxysmal stage from four to six weeks, and decline two to three weeks."

The blood count shows an early leukocytosis of 20,000 or higher with a relative increase in lymphocytes. Some authors have found glycosuria, which has been explained as being due to a lowered glycogenic function, allowing an excess of sugar in the diet to show in the urine. Albuminuria is rare. Diarrhœa of a mucous character is sometimes met with and prolapse of the rectum and various hernias have been reported. The chief complications of the disease are found in the respiratory tract. The bronchitis of the catarrhal stage may persist throughout and develop into broncho-pneumonia or lobar pneumonia. In my hospital experience pneumonia has been the most serious and frequent complication. Spasm of the glottis with complete closure and asphyxiation is rare. No case of this has occurred at our hospital during the past three years. Hæmorrhages as a result of paroxysms are said to be infrequent. These may take the form of epistaxis, or may occur in the conjunctiva or in the tympanum. The only hæmorrhages in my cases have been in the form of nosebleeds or streaks of blood in the sputum. A variety of psychoses, neuroses and motor and sensory troubles has been described, but has never come under my observation.

The diagnosis of whooping-cough depends upon the spasmodic character of the cough and the characteristic whoop, which when once heard is rarely mistaken. A similar cough may be brought about by enlarged bronchial or tracheal glands, but here there is much less likelihood of vomiting with the paroxysms, and there is more apt to be an evening rise of temperature with sweats. Foreign bodies in the larynx, trachea or bronchi may give rise to a paroxysmal, "whoopy" cough. Here the cough appears suddenly and disappears as suddenly when the foreign body is removed. I have seen one such case in which an infant nine months old began to show signs of whooping-cough two days after acquiring a cold which was running through the rest of the family. The cough was especially

marked just after feeding. While on my first visit to the case the infant — during a paroxysm — coughed up a small safety pin which had been missing just forty hours. The mere presence of a physician in the sickroom was never accompanied by a more startling recovery; the patient did not cough again,

In the catarrhal stage the diagnosis is made largely on presumptive evidence, namely the presence of a whooping-cough epidemic or of a known exposure to the disease. Considerable emphasis has been laid on the value of a blood examination in the diagnosis of pertussis. Kolmer made a correct diagnosis by the blood findings alone in 81 per cent of a short series of cases before the cough developed. The disease, however, was apparently epidemic at the time in his wards, and consequently the diagnosis on the presence of a cough might have given even better results. The finding of a lymphocytosis is merely corroborative evidence, and although present in whooping-cough its frequency in children to a mild degree makes it unreliable and of only slight significance in the diagnosis. The complement-fixation test has been found to be reliable in the hands of Friedlander and Wagner.⁹ A cough alone, when of a spasmodic character, — in the presence of a whooping-cough epidemic — is enough to warrant keeping the child out of school and public places for two weeks. In the absence of a possible exposure* and a spasmodic cough with a whoop, it is impossible and unjustifiable to make a diagnosis of whooping-cough.

We now come to the goal of all our medical endeavors in regard to pertussis, namely, the prevention and treatment of the disease. Any disease which is self-limited and runs a protracted course, and for which there is no definite, preventive, or specific cure is bound to have a multitude of widely divergent therapeutic measures vaunted for its treatment. In no acute disease is this more true than in whooping-cough. Doctors and parents are on the average equally gullible and equally skeptical of the value of such methods. Only those physicians who have treated a series of cases through different epidemics, and, being open-minded, have made careful observations with cautious deductions, can be qualified to judge as to the merits of this or that procedure. Under drug treatment we have to consider the alloëopathic treatment which is admittedly palliative, the homœopathic treatment which is professedly curative, and the vaccine treatment which claims to be both palliative and preventive. Let us hear with patience and forbearance the vaunted merits and the fallacies of each.

Thomas Willis¹⁰ who was one of the earliest authors on this

* If whooping-cough is epidemic or endemic at the time, exposure through direct or indirect methods should be considered possible.

subject, wrote to the effect that this disease "was apt to run its course in spite of every mode of treatment," and that "it might be said to cease rather by time and change of season than by remedies"; that "from the general want of success, when treated by the regular practitioners, this branch of practice had fallen chiefly into the hands of old women and quacks." He, however, noticed "several remedies which were beneficial, the chief of which were bleeding, vomiting, purging, and blistering." The celebrated Sydenham¹¹ was in favor of purging in this disease for the following reason: "That such gentle and gradual evacuations effect the cure, as I imagine, by easing the lungs which, though they are not found in this distemper to contain much of any serous humour, yet are forced into their violent fits of coughing, by fervid and spiritous vapours, thrown upon them at certain times by the mass of blood; and are therefore best relieved, by directing those vapours through the lower bowels and breaking their force by a contrary direction." Further on Sydenham remarks: "By this practice of venesection and repeated purges, and by this only, is conquered the convulsive or whooping-cough; an obstinate disorder, which scarcely any other method will subdue." "Of all other remedies," says Cullen,¹² "emetics are the most useful in this disease, both in general, by interrupting the rectum of spasmodic affections, and in particular, by determining very powerfully to the surface of the body, and thereby taking off determinations to the lungs. For these purposes, I think full vomiting is frequently to be employed, and in the intervals necessary to be left between full vomiting, nauseating doses of the antimonial emetics may be useful." Robert Watt¹³ in his elaborate study of whooping-cough published in 1813 writes: "I believe there are few cases of chincough where emetics are not required, or, at least, where they would not be of service to the patient; and I think there are none, where purging can be safely omitted."

In 1854 Gibb published his extensive "Treatise on Hooping-Cough," a book of 375 pages, comprising a complete discussion of all phases of the subject to date. In the consideration of the treatment he takes up the use of general measures such as venesection, leeches, emetics, purgatives, external applications, inhalations, warm baths, change of air, and a regulated temperature, and then goes on to an enumeration of the drugs employed in this disease with what can be said for and against each. The following are mentioned:

- | | |
|------------------------------|------------------------------|
| 1. Acid Acetic. | 27. Henbane. |
| 2. Acid Hydrochloric. | 28. Iron. |
| 3. Acid Hydrocyanic. | 29. Lactea virosa. |
| 4. Acid Nitric. | 30. Laurel water. |
| 5. Acid Sulphuric. | 31. Lead. |
| 6. Alum. | 32. Lobelia inflata. |
| 7. Amber (oil of). | 33. Meadow Narcissus. |
| 8. Ammonium chlorid. | 34. Musk. |
| 9. Antimony (Tartar emetic). | 35. Muscus. |
| 10. Arsenic. | 36. Nux vomica. |
| 11. Asafœtida. | 37. Opium. |
| 12. Barium chlorid. | 38. Phellandrinum aquaticum. |
| 13. Belladonna. | 39. Polygala seneka. |
| 14. Camphor. | 40. Potassium carbonate. |
| 15. Cantharides. | 41. Quinin. |
| 16. Castor. | 42. Rhus vernix. |
| 17. Cinchona. | 43. Saffron. |
| 18. Cochineal. | 44. Salacin. |
| 19. Coffee. | 45. Sambucus niger. |
| 20. Colchicum. | 46. Sulphur. |
| 21. Copper. | 47. Sulphuret of potash. |
| 22. Coro-watti. | 48. Tannin. |
| 23. Digitalis. | 49. Tobacco. |
| 24. Guaiacum. | 50. Valerian. |
| 25. Geum urbanum. | 51. Zinc. |
| 26. Hemlock (conium). | |

For inhalations Gibb mentions the following:— Vapor of tar, spirits of turpentine, benzoin, ether, chloroform, cherry-laurel water, and “aromatic herbs.”

Coming down to modern times we find the following additions to the above list of “useful” drugs recommended in whooping-cough:*

- | | |
|---------------|--------------------|
| 1. Adrenalin. | 8. Cocain. |
| 2. Antipyrin. | 9. Codein. |
| 3. Atropin. | 10. Cod liver oil. |
| 4. Bromids. | 11. Heroin. |
| 5. Bromoform. | 12. Phenacetin. |
| 6. Calcium. | 13. Veronal. |
| 7. Chloral. | |

* Moncorvo. — De la coqueluche et de son traitement par la résorcine. Paris, 1885. p. 89. Review in *Jahrb. f. Kinderheilkunde*, 1890, xxxi, 372.

Farlow, J. W. — Use of résorcine in whooping-cough. *Boston Med. and Surg. Jour.*, Feb. 27, 1890.

Mellish, E. J. — Bromoform in the treatment of pertussis. *Chicago Med. Record*, Jan., 1892.

Fest, F. T. B. — Rational treatment of pertussis. *Jour. A. M. A.*, Aug., 1895.

Eaton, P. J. — Bromoform in pertussis. *Jour. A. M. A.*, Oct. 12, 1895.

Ruhräh, J. — In Forchheimer's *Therapeutics of Internal Diseases*. 1913, II, 177. *Ibid* in Osler and McCrae's *Modern Medicine*. 1913, I, 663.

Graham, E. E. — Treatment of pertussis. *Arch. Pediatrics*, Aug., 1914, p. 578.

Editorial on Therapeutics. *Jour. A. M. A.*, Jan. 30, 1915, p. 434.

For inhalations, sulphuric acid (by burning sulphur pastilles), creosote, oil of eucalyptus, and carbolic acid vapors are added to the list. As sprays for the nose, pharynx and larynx the following are recommended:—phenol, antipyrin, quinin, thymol, eucalyptol and resorcin.

Most of these drugs and preparations are recommended in widely different dosage by different authors; consequently the administration of a few of the most commonly used drugs will merely be touched upon.

1. Adrenalin, 3 minims of a 1-1000 solution by mouth every 4 hours.

2. Antipyrin, grain $1/60$ to $1/4$ according to the age of the patient.

3. Atropin sulphate, one grain to two ounces of water; one drop of the mixture every three hours, increasing the drops by one until flushing results, and then diminishing.

4. Belladonna tincture, minims one to ten, four or five times a day.

5. Bromoform, five to twenty minims in 120. cc. water. One to two drams every two hours. (Owing to its high specific gravity there are 360 drops in one dram.)

6. Codein sulphate, grain $1/60$ to $1/4$ according to the age of the patient.

7. Quinin sulphate, and bisulphate, from grain $1/6$ q. i. d. upwards.

For inhalations creosote, oil of eucalyptus, and phenol may be administered by adding one dram of any one of these to a pint of boiling water and allowing the patient to inhale the steam. Salicylic acid or resorcin in two per cent. solutions may be sprayed into the throat every two or three hours.

The above are the recommendations in drug therapeutics recommended by the so-called "rational school"—in contradistinction to the "homœopathic school" which employs drugs on the principle of symptom-similarity. Most of the drugs here enumerated are in no sense allœopathic to the symptoms of whooping-cough. On the contrary they are mostly recommended on the purest empirical grounds, and are only irrational when their vaunted empirical value is proved worthless. Atropin, bromids, the opiates and veronal are the only drugs, which, from a pharmacological ground, can be considered to have any effect in directly suppressing the symptoms. These then are truly allœopathic to whooping-cough, and their administra-

tion conforms to the Galenic principle — *contraria contrariis curentur*, — (let opposites be treated by their opposites).

(Homœopathic therapeutics and vaccine therapy of whooping-cough will be taken up in a subsequent article.)

535 Beacon Street.

¹ Baginsky, A. — Pertussis, in Infectious Diseases, edited by Wilson, J. C. and Salinger, J. L. New York, 1908, p. 784.

² Ruhräh, J. — Whooping cough, in Modern Medicine, edited by Osler and McCrae, New York, 1913, I., 661.

³ Ruhräh, J. — Whooping-cough, in Forchheimer's Therapeutics of Internal Diseases. II., 174.

⁴ Mallory, F. B. and Horner, A. A. — Jour. Med. Research. 1912, xxvii, 115.

⁵ Ladd, M. — Vaccines in the treatment of pertussis. Arch. Pediatrics, 1912, xxix, 581.

⁶ Kolmer, J. A. — The diagnostic value of a blood examination in pertussis. Am. Jour. Dis. Children, June, 1911, p. 439.

⁷ Walcott, W. W. — Field Work of the State Dept. of Health on Communicable Diseases, Bos. Med and Surg. Jour., 1916, clxxiv, 341.

⁸ Ruhräh, J. — loc. cit., 659.

⁹ Friedlander, A. and Wagner, E. A. — Diagnosis of whooping-cough by the complement-deviation test. Am. Jour. Dis. Children, Aug. 1914, p. 136.

¹⁰ Willis, Thomas. (1622-1675) "de Medicamentorum Operationibus." Sect. I. Cap. vi., quoted by Robert Watt in Treatise on Chincough, Glasgow, 1813, p. 22.

¹¹ Sydenham. — Swan's translation, p. 231.

¹² Cullen, William — First lines of the practice of physic. §1419.

¹³ Loc. cit., p. 213.

ACUTE POLIOMYELITIS*

By SAMUEL A. CLEMENT, M.D., Boston, Mass.

Poliomyelitis is an acute infectious, and supposedly contagious, disease of the central nervous system, occurring both in epidemic and sporadic forms, characterized by sudden onset, fever, vomiting, headache, lameness, hyperæsthesia and catarrhal irritation, commonly and promptly followed by a flaccid paralysis corresponding to the amount of damage to the gray matter of the cord or brain, and in time leading to a progressive regeneration, although it may leave permanent atrophy of the muscles, and deformities.

HISTORY

The old name "Acute Anterior Poliomyelitis," commonly known as "Infantile Paralysis," is really a misnomer. We now know that the gray matter in the anterior horns is chiefly affected, but the gray matter in the posterior horns, the motor nuclei of the cranial nerves, and cells in the cerebral cortex are also involved. As to "infantile," cases have been reported from birth to 74 years of age. We do not as yet know a suitable name for this disease.

* Read before the Massachusetts Homœopathic Medical Society, November 1, 1916

Poliomyelitis is a disease which has not attracted much notice in the sporadic form which occurs chiefly during the cold season, but has attained a high rank and wide interest in its epidemic form, occurring usually during warm weather and cropping out, possibly after skipping a few years, in places of its original occurrence.

In 1840, Heine separated this paralysis from other forms of paralysis. Colmer, an American physician, in 1841 recognized the first real epidemic. In 1884, before the International Congress, Medin described the clinical types of poliomyelitis much to the astonishment of prominent pediatricists who still retain the old name, acute anterior poliomyelitis. Medin called attention to a widespread epidemic in 1887 which occurred in Sweden and Norway, especially studied by Wickham. In 1894 Caverly described an epidemic in Vermont. In all, including 1916, forty-three epidemics have been observed in America and on the Continent. The epidemic of 1907-08 in New York City reached 2,000 cases. The present epidemic is the largest the world has ever known. Approximately 20,000 cases have been reported.

ÆTIOLOGY

Predisposing Causes. The majority of cases occur between 6 months and 10 years of age, although many cases are seen in young adults and even to 74 years. Low resistance, previous diseases, overwork, loss of sleep (especially in adults), exposure, unsanitary surroundings, lack of sunshine, may favor the disease, but every case must originate from another case.

Many times one would be led to think that poliomyelitis has a predilection for healthy, robust individuals. It has no respect for the most hygienic surroundings, nor for wealth, although the majority of cases are among the poorer classes. It seems to select one individual out of a large family. Two and even five cases have been reported in the same family, but it is rather unusual. When two or more cases are found in the same family, they seem to have contracted the disease at the same time.

The disease is probably due to a minute filterable micro-organism which has been found in the secretions, excretions, and tissues of patients, attendants, other members of the family, etc. This bacterium has been cultivated, inoculated into monkeys and the disease produced in them.

PROBABLE METHOD OF TRANSMISSION

Since the virus is found in the mucous secretions from the beginning of the disease to even 6 months afterwards, it is

logically assumed that it is transmitted by direct or indirect contact, as are measles, diphtheria, whooping cough; etc.

Facts against its being transferred by direct contact

1. Extreme rarity of the disease in doctors, nurses, and other attendants.
2. Entire absence of the infection in laboratory workers who have experimented with the virus.
3. Comparatively rare occurrence of two cases in the same family.
4. Failure to spread in schools, hospitals, and institutions where one case had been found.
5. Comparatively maximum prevalence of the disease in country districts where personal contact is least intimate.
6. Summer incidence of the disease. The vast majority of cases occur during the warm weather when people are more in open air. With the onset of winter, when the population becomes more and more congested in houses, schools, etc., its morbidity is markedly reduced while the other so-called communicable diseases are much increased.

Facts as to transmission by insects

1. We know that malaria and yellow fever are transmitted by mosquitoes. Poliomyelitis being more prevalent also during the warm season, and since we do not know definitely its method of transmission, it would lead one to think that it might be transmitted by flies or other insects.
2. The disease also being more prevalent near lakes, rivers, low marshy lands, dumps, where flies and mosquitoes are most abundant, would favor the insect theory.
3. The fact that the disease occurs in well-to-do people on high lands, in most hygienic surroundings, militates against this theory, as does the existence of winter epidemics, such as was reported in Sweden (from November to the middle of March).

INCUBATION PERIOD

It varies from 2 days to 2 weeks with an average of 10 days.

SYMPTOMATOLOGY

1. *Prodromal or pre-paralytic stage.* The constitutional symptoms may be very severe or unnoticed. Sudden onset, fever, vomiting, headache, irritability, general hyperæsthesia, lameness, backache, stiffness of neck muscles, profuse sweating,

and drowsiness are the most important symptoms. If there can be obtained a history of exposure to the disease, it is advisable to isolate the case. Examination of the spinal fluid will usually help in the diagnosis. During this period retention of urine has been observed in several cases. The sphincter seems to be normal but the wall of the bladder has no expulsive power. The same condition has been noticed in the lower bowel. When a case presents these prodromal symptoms with temporary weakness in the muscles but no paralysis, the diagnosis of abortive poliomyelitis is usually made, especially if there should be another case with definite paralysis near by or in the same family.

2. *Paralytic stage.* Following the above symptoms, usually on the fourth or fifth day, paralysis is noticed. The amount of paralysis does not necessarily depend on the severity of the onset and of course corresponds to the amount of damage to the central nervous system. Since any part of the motor tract in the brain and cord may be involved there are no muscles exempt from paralysis. Just as the paralysis makes its appearance, the acute febrile symptoms gradually subside and the paralysis rarely increases after the temperature has been normal for 48 hours. A few cases at the West Department have shown a sort of relapse (reinfection?); two died at the end of 10 days from respiratory involvement.

Reflexes. As this is a flaccid paralysis, the reflexes are absent in the affected muscles. The knee jerk is lost in quadriiceps paralysis, while the plantar will be normal unless the muscles of the foot are affected. In the bulbo-pontine and meningeal types of poliomyelitis the reflexes are exaggerated. Rarely, a Babinski, active knee jerk and ankle clonus are observed in this paralysis, showing that the *extensors* of the knee and the *extensors* and *flexors* of the ankle have escaped paralysis.

Diagnosis. The diagnosis is based upon the following points: History of exposure, age, presence of an epidemic, a suggestive incubation period, fever, vomiting, headache, malaise, irritability, rigidity, hyperæsthesia, shooting pains in the extremities, altered reflexes, drowsiness, and weakness in the limbs. With these symptoms, if the cells in the spinal fluid are increased in number and are chiefly lymphocytes, and if there is increased globulin, the most probable diagnosis is poliomyelitis.

3. *Stage of repair.* This is the most interesting stage to study. At the very onset of the paralysis the central nervous system in many cases seems to be overwhelmed with poisons, and on examination the patient is found to be in a stupor, unable to move a toe or finger, so that the first examination is very discouraging. Soon, however, the toxic effects disappear,

the patient is brighter, and gradually the limbs become more freely movable, indicating that those regions of the central nervous system which were only poisoned or compressed are restored to their normal functions. The muscles which remain paralyzed show the real extent of destruction to the gray matter in the cord and brain. The reflexes which may have been lost are likely to reappear in a few days.

OBSERVATIONS ON POLIOMYELITIS AT THE WEST DEPARTMENT FROM
AUGUST 12 TO NOVEMBER 1, 1916

During this epidemic a peculiar maculo-papular eruption has been noticed in several cases during the onset of the disease. The first case of poliomyelitis was admitted to the hospital as measles or scarlet fever because of this unusual rash. We have admitted 130 cases. The vast majority were brought into the hospital on the fourth or fifth day of the disease, because, as I have said before, the paralysis is usually noticed at that time and the diagnosis is commonly not made before the paralysis appears. So we have found the temperature nearly normal; and extension in the paralysis while in the hospital has rarely been observed.

A few cases, showing paralysis of one limb with a fairly high temperature (102–103) on admission, on the next day presented more paralysis. The three most remarkable instances of spread in the paralysis after admission were the following:

1. A girl of 8 years came in with paralysis of the upper left extremity, and remained so for five days. On the sixth day she developed respiratory paralysis and died within twenty-four hours.

2. A man of 30 years who was clinically diagnosed poliomyelitis, with paralysis in both lower extremities. This patient did well for a week and on the tenth day the thoracic muscles became involved and he died in a few hours, showing exactly the same symptoms as several undoubted cases dying of respiratory failure, the heart beating for several seconds after the last respiration. This case was interesting, since the pathologist could not find any lesion in the central nervous system at post mortem and no other cause of death was found.

3. A boy with paralysis of both legs on admission developed paralysis of the ocular muscles after five weeks.

As a rule, if the patient survives the first five days, he will recover. All but two of the cases that died were moribund on admission and died within 24 hours.

Twelve cases were of the ascending type (Landry's paralysis), and died in a short time from respiratory failure.

Four cases had only a left facial paralysis.

Two cases had only a right facial paralysis.

One case had the left side of the face and the right lower extremity paralyzed. This case showed the long distance which may exist between the two foci of infection.

Three cases had paralysis of the throat with inability to swallow. One of these we had to feed with a stomach tube for over a week. All three cases recovered.

One case had paralysis of the throat, larynx and tongue, also a right facial paralysis.

Several cases showed paralyzes of the neck muscles and of either one or both upper extremities.

Several cases presented paralysis of all the trunk muscles; these had paralysis of one extremity as well.

Three cases were of the cerebral type, and died.

Three cases presented paralysis of all four extremities and two of these had paralysis of the thorax as well. These two died during the fourth week, following a gastro-enteritis, possibly as the result of continual, labored diaphragmatic breathing.

The three most remarkable cases were:

1. A boy 6 years of age, showing paralysis of the 7th, 9th, 10th, 11th, and 12th cranial nerves on the left side, also of both phrenic nerves. This child died on the eighth day.

2. A boy of 8 years with paralysis of both lower limbs on admission and during the fifth week developed paralysis of all the ocular muscles except of both external recti.

3. The case which afforded the greatest interest was a boy of 8 who had paralysis only of the muscles of mastication, both sides being equally involved. (Inferior maxillary motor branch of the trigeminal.) As far as I know, this is the only case reported.

The right upper extremity was involved alone oftener than the left upper, and in cases where both were involved the right was much more so than the left. The same thing was noticed in the lower extremities.

Retention of urine was observed in 10 cases. This condition lasted for about a week and was usually followed by incontinence for a few days, which cleared up shortly. One, a young man, 19 years of age, was unable to urinate normally all the time he was in the hospital.¹

The lower bowel was paralyzed in four cases; one for 5 weeks with impaction of the rectum.

In five families two cases developed. One family had three cases.

Two cases were treated with immune serum in the pro-

¹ December 14, 1916. Fourteen weeks from the onset he still has to be catheterized.

dromal stage, before admission, by the Harvard commission. One developed paralysis in both legs; the other showed no paralysis.

RECOVERY

Although it is said that Nature starts the process of repair just as soon as the paralysis is completed, in the majority of cases it is hard to notice any appreciable improvement before two weeks. A marked and definite improvement was noticed then in all our cases, and it is surprising how quickly the children, especially, will get back on their feet. Only three cases left the hospital at the end of five weeks without showing some improvement in the paralysis.

WRONG DIAGNOSIS

The diseases which were mistaken for poliomyelitis and sent to the West Department were apoplexy, spastic paraplegia, alcoholism, Erb's paralysis, ileocolitis, indigestion with convulsions, meningitis, and pericarditis. Two cases were referred as laryngeal diphtheria tube cases and on admission the labored breathing as found to be due to paralysis of intercostal muscles with the resulting diaphragmatic breathing.

PROGNOSIS

All cases with the ascending type died in a few hours. When the muscles of breathing are involved the prognosis must be very guarded. If the patient survives for 5 days he is very likely to recover. All four extremities may be paralyzed and prognosis as to life may be good. Cases where the cerebrum was involved usually died early with convulsions.

Prognosis as to the paralysis is very undecided, for the worst cases may do well. A gradual improvement has been observed while here at the hospital.

Our mortality is 16.6 per cent.; 15.8 per cent. in children, 28.5 per cent. in adults.

PROPHYLAXIS

The patient should be isolated, preferably in a hospital. Sunshine and fresh air are the best disinfectants. The discharges must receive proper disposition. One attack usually confers immunity. Immune serum has conferred immunity in monkeys.

TREATMENT

Absolute rest, good nursing, a nourishing diet, prevention of abnormal contractures and keeping the paralyzed parts warm, are the most important points in the early course of the disease.

Homœopathic remedies. Gelsemium, conium, plumbum, emetin, and arsenicum were the drugs most frequently prescribed.

Experimental treatment. Twenty cases were treated with immune serum, intraspinally. Twenty cases were treated with normal serum intraspinally. Twenty cases were treated by withdrawal of spinal fluid. Twenty cases were treated by lumbar puncture and injection of their own spinal fluid subcutaneously. Twenty cases have been treated with just homœopathic remedies. No noticeable difference has been observed in the progress of these cases.

SUMMARY

1. Very little as to the ætiology of poliomyelitis has been discovered so far in the epidemic.

2. The actual means of transmission is yet unknown.

3. The diagnosis is still very difficult before paralysis appears.

4. In our cases we have observed that the right side of the cord is more often and extensively affected than is the left side.

5. All of the motor cranial nerves have, in different cases, been involved.

6. The cerebral type of poliomyelitis has been observed in three cases.

7. The prognosis must be very guarded in cases where the breathing is involved.

8. The four forms of experimental treatment are of no appreciable helpfulness after paralysis has appeared.

DISCUSSION OF DR. SUTHERLAND'S AND OF DR. CLEMENT'S PAPER*

Dr. Ulrich

Dr. Clement has spoken of the serum treatment of anterior poliomyelitis. I might, perhaps, elaborate a little on that. At the West Department several methods have been tried. There, all cases, or nearly all, are paralyzed when they come to the hospital, and for this reason they are hardly suitable for testing the efficiency of the serum treatment. Twenty of the cases have been treated with the immune serum advised by Flexner. In those cases where paralysis was present before the patient received the serum treatment it has been of absolutely no use. Dr. Place of the City Hospital tells me that he had 24 cases in the pre-paralytic stage. Sixteen of these received no treatment, and eight received the immune serum. Only one of the sixteen untreated ones developed paralysis, and three out of the eight treated ones developed paralysis, which would show that serum treatment is certainly no better and apparently even worse than no treatment.

As regards Dr. Sutherland's pigeon experiment, its bearing on anterior poliomyelitis is extremely doubtful, especially because of the fact that anterior poliomyelitis comes on very rapidly. If it were a dietetic disturbance we should expect some chronic preliminary disturbance leading up to the paralysis.

* Dr. Sutherland's paper was published in the *Gazette* Dec. 1916.

Dr. Belding

I wish to make a few remarks about the bacteriological side of infantile paralysis and in so doing must necessarily discuss some of the statements which Dr. Sutherland has made, because I do not quite see what bearing the pigeon experiments which he described have upon infantile paralysis. It has been definitely shown that the consumption of white flour by the inhabitants of certain sections of the Labrador coast has brought about a condition comparable to beriberi. It is also a well-known fact that polyneuritis gallinarum, a condition simulating beriberi, can be produced in chickens and other birds by feeding with white flour. In 1914 I had the good fortune to observe feeding experiments with chickens where whole wheat bread and white bread were used. The birds on the whole wheat diet remained perfectly well, while those fed with white flour developed polyneuritis. However, their symptoms were entirely different from those of infantile paralysis. In about twenty-six days there appeared paralysis of the extensors, complete paralysis of the right leg, and later, general paralysis. The paralysis differs from that of infantile paralysis in that it is peripheral in origin and later extends to the higher nerve centers, whereas in anterior poliomyelitis the paralysis is central.

Likewise, the pathological findings in these birds showed fatty degeneration of the extensor muscles and a degeneration of the myelin sheath of the sciatic nerve, which is distinctly different from the lesions in the anterior horn cells in anterior poliomyelitis. Therefore, in view of the fact that the symptomatology and the pathology of polyneuritis gallinarum is distinctly different from poliomyelitis, we must look elsewhere than to the diet for the cause of infantile paralysis. We must admit, however, that diet is a great factor in determining the resistance of our bodies against disease, but this applies to all infections in general and not particularly to infantile paralysis.

Of popular interest are the recent investigations of Rosenow, Towne, and Wheeler, and also those of Nuzum and Herzog, and of Mathers. These three sets of investigators have isolated by modern aerobic and anaerobic methods of cultivation from the brains and spinal cords of persons dying from infantile paralysis a micrococcus which when injected into rabbits produces paralysis. The description of this organism varies with the different investigators, but the general results of all three are the same. Cultivated anaerobically under certain conditions this organism resembles the form previously described by Flexner and Noguchi. In this stage it is so small as to pass through a Berkefeld filter and occurs in chains, pairs, and masses. When placed in suitable media, such as dextrose ascitic broth, it is claimed that it will revert once more to the larger micrococcus. It thus seems that we may have a polymorphic organism which may lead a Dr. Jekyll and Mr. Hyde existence, in one stage being so small as to pass through a Berkefeld filter, and in another stage appearing as a fairly large micrococcus.

The bacteriology of the disease is as yet unsolved. Nevertheless I feel that we may be on the verge of some important discoveries as to the exact causative agent of infantile paralysis.

Dr. Hooker

I have noted down in parallel columns the following additional points, as they came to me, in the comparison of epidemic poliomyelitis and beriberi. Poliomyelitis is essentially epidemic, whereas beriberi is essentially endemic. In poliomyelitis, immunity follows an attack; in beriberi no immunity follows. The lesions of epidemic poliomyelitis are essentially of the cerebro-spinal axis, while the lesion beriberi is a Marchi degeneration of the myelin sheaths of the peripheral nerves. Poliomyelitis occurs chiefly in children and the onset is rapid; beriberi, chiefly in adults, the onset being slow. In epidemic poliomyelitis instances of two or more cases in one family are rare; in beriberi whole families are stricken with the disease.

There is one point in the matter of treatment not referred to — that is the use of adrenalin as advocated by Dr. Meltzer of the Rockefeller Institute. A number of years ago Dr. Meltzer noted that the injection of adrenalin into an inflammatory focus caused a rapid and moderately enduring disappearance

in the peripheral zone of active hyperæmia, exudation and œdema. In view of the pathology of epidemic poliomyelitis, which consists largely of perivascular round-cell infiltration, of hyperæmia, exudation and necrosis, and in view of the logical assumption that the paralysis might be due to pressure upon nerve cells, it was felt that adrenalin by its power of reducing peripheral zones of œdema might be of some assistance in the treatment. Accordingly it was tried on completely paralyzed and moribund poliomyelitic monkeys by injecting 2 to 3 cc. intraspinaly. The results were somewhat remarkable, and in Dr. Meltzer's words — "several hours later these previously completely paralyzed monkeys were seen sitting up in their cages eating bananas which they held themselves." The general opinion regarding the use of adrenalin is somewhat unfavorable, but it is to be kept in mind as a recourse in cases of threatened involvement of respiratory centers and might conceivably tide the patient over until natural immunity had developed in sufficient degree to arrest the progress of the disease.

It is well to keep in mind four symptoms of the abortive type of the disease. They are first, fever — second, irritability — third, drowsiness — fourth, transient muscular weakness. All of these symptoms are directly referable to the inflammatory processes in the central nervous system, and, especially in the presence of an epidemic, taken in conjunction with the usual findings in the cerebro-spinal fluid, warrant the diagnosis of epidemic poliomyelitis.

Dr. Richardson

It seems to me that the subject has been pretty thoroughly covered. In regard to the use of adrenalin, — it has been used pretty much in the New York City Hospital, and the effects are not important enough to warrant its use. It does good, however, in some cases, and sometimes tides over, I have no doubt. In regard to Dr. Sutherland's paper, — the analogy or lack of analogy I shall not try to go into. The matter of resistance is, I think, a very important one and one that cannot be emphasized too greatly.

Just one word as to diagnosis. It is the habit at the present time to make a cocksure diagnosis of poliomyelitis. Spinal fluid examination in my opinion is not a sufficient reason to warrant such a diagnosis. In many instances this year wrong diagnosis has worked great hardship, whole neighborhoods have been quarantined, men have lost their positions or been thrown out of work unnecessarily for a period of six months. A person supposed to be suffering from infantile paralysis is regarded as a menace, an outcast. I do not believe in going about making a lumbar puncture on every sick child; but with hyperesthesia, aching back, etc., it may be well to do so.

We cannot be sure of the serum treatment. Dr. Clement's paper has described its use in the West Department. In cases where paralysis was present at the time the treatment was given it has proved of absolutely no use.

One matter that is important is rest, absolute rest — not moving the patient about, at least for three weeks.

In closing I might simply say that I believe that sometime we shall find out something about anterior poliomyelitis. I believe that we know so little about it at present that we cannot be too careful in our diagnosis, prognosis, and treatment.

Dr. Richardson asked Dr. Townsend to describe a unique case which had come under his care.

Dr. Townsend

In this case two children in the same family were taken sick with infantile paralysis. One child died a few days after the onset. In the other child the disease developed rapidly. He was perfectly well on Sunday night. The next day he complained of his hand feeling numb. By night the numbness had extended to his elbow and the next night paralysis was present in the upper arm and shoulder. He complained of seeing things. Bees and spiders were continually biting him. He would wake from sleep crying out because bees and spiders were biting him. This condition kept up for about a week.

Then for some days he was apparently free from the trouble. Then for several days he complained of his ears. There were noises all the time—sometimes buzzing, sometimes like the sound of a shell held to the ear. Now for five days all these symptoms have been absent. Aside from the symptoms described the case is going on in the usual way.

Dr. Packard

Dr. Sutherland's paper interested me very much indeed, especially the suggestion that anterior poliomyelitis may be a constitutional disease. I should rather question that and take a little exception to the analogy existing between beriberi on the one hand and anterior poliomyelitis on the other, because beriberi and pellagra are acknowledged as constitutional diseases and result in starvation, while we all know that anterior poliomyelitis from what we can find is a bacterial disease. That does not prove that Dr. Sutherland's doctrine is not a true solution of the reason why poliomyelitis gets a foothold and we have an epidemic. This brings up the subject of resistance. I became much interested in observations along this line a number of years ago. The idea that resistance must depend on the character of the nutriment taken in seems very plausible. If the system does not have strong healthful material, it is weaker in its resistance. I really think that much may develop from this suggestion of Dr. Sutherland's that there is something in this constitutional side. I feel like preaching with all the vehemence in my power the use of cereals which have not been robbed of their life-giving properties. As I travel around I find that I can now get in hotels whole wheat bread. And I have been much gratified that one of the largest flour concerns in the middle west with which some years ago I took up the matter of making whole wheat flour, only to have my ideas flouted by them, has within the year sent me a circular stating that they are putting out the best whole wheat flour made in the country, together with a letter asking my coöperation in introducing the flour and my recommendation.

BLOODLESS TONSILLECTOMY*

By EVERETT JONES, M.D., Boston, Mass.

There is probably no operation in the entire field of rhinolaryngology which is more frequently performed than the operation for the removal of the faucial tonsils; and I think I am safe in saying there are more operations upon the tonsils than upon any other organ. According to the latest report of our Homœopathic Hospital, of 772 operations on the nose, throat, and mouth, 696 were for hypertrophied tonsils.

ANATOMY OF THE TONSILS

Let us consider very briefly the anatomy of the faucial tonsil. It is a globular mass of lymphoid tissue, lying one on either side of the oropharynx, in fossæ formed by the palatal arches. It is the largest of the lymphoid nodules of the respiratory and alimentary tracts. The outer wall or bed on which the tonsil rests is the superior constrictor of the pharynx; and the so-called capsule of the tonsil, which, according to Dr. Patterson

* Read before the Boston District of the Mass. Hom. Medical Society, Dec. 7, 1916.

of London and Dr. Hudson Makuen of Philadelphia, is merely a portion of the intrapharyngeal fascia, or aponeurosis of this muscle, having its attachment at the base of the skull and extending down into the region of the œsophagus. Folds of this membrane protrude between the pillars and palate, forming the *plica triangularis* or *plica tonsillaris*.

THE BLOOD SUPPLY OF THE TONSIL

Arteries.—The tonsil is an extremely vascular organ, receiving its blood supply from the tonsillar and palatine branches of the facial, the descending palatine branch of the internal maxillary, a branch from the lingual, and from the ascending pharyngeal. Its chief blood supply, however, is from the tonsillar and ascending branches of the facial. The veins of the tonsil form a plexus lying in the walls of the sinus, and is of great importance from the operative standpoint, as troublesome bleeding may result if this plexus is injured. The lymphatics draining the tonsil empty into the deep cervical chain beneath the sterno-mastoid muscle, from here to the thoracic glands, and eventually to the thoracic duct.

Before it is decided that the tonsils should be removed, one or more of the following conditions must be present:

1. The tonsil must show a disease of its structure.
2. The tonsils must be so large as to cause obstruction.
3. The patient's general condition must be unfavorably influenced by the diseased condition of the tonsil.
4. Recurrent acute catarrhal infections of the throat or peritonsillar abscess.

I believe the removal of any structure of the body, even a tonsil, is a more or less serious matter; and I believe in the exercise of great care, and in the acquirement of great skill, in the performance of this difficult and important operation.

If the theory above advanced relative to the capsule of the tonsil is a correct one,—and I believe it is,—it has a very important bearing upon the surgery of this region. There is probably no other part of the body where so many different kinds of operations have been tried.

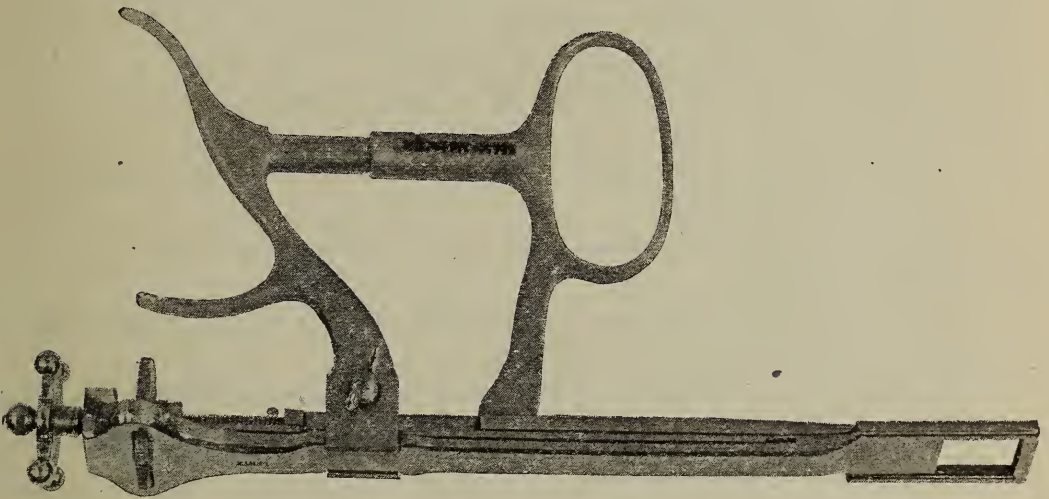
Notwithstanding the many tonsil operations, I am introducing another in Boston, and, as far as I know, to New England, which seems to me to enucleate the tonsil more easily, with less damage to the surrounding parts, usually bloodless, and, what is of the greatest importance, with less of the so-called capsule of the tonsil than any other operation with which I am familiar.

This operation is easily done in five or six minutes. One half minute is used in engaging the tonsils in the fenestra of the instrument, and the other five in making it a bloodless

operation. This instrument is a modification of the MacKenzie and Sluder instruments, by Drs. LaForce of Iowa and Skillern of Philadelphia. It has a blunt blade for splitting the capsule and crushing the blood vessels and a sharp one to sever them.

TECHNIC

With slight modifications the technic is that used by Dr. W. E. Dixon of Oklahoma and Dr. Skillern. The patient is flat on the back, if under general anæsthesia, and nearly in the erect position if local anæsthesia. The head may be held firmly by the anæsthetist to prevent rotation, and the mouth kept



open with a gag, using good head light or reflected illumination. The surgeon stands on the patient's right. It is a very great advantage to operate on the right tonsil with the instrument in the right hand and on the left tonsil by holding it in the left hand.

Assuming that the surgeon uses his right hand for both tonsils, for the right one he faces the patient's head, for the left one he must turn around so that he faces the patient's feet and stands somewhat above the head. With this method one must approach the tonsil at an angle of 45 degrees, which requires the shaft of the instrument to cross the mouth from the opposite side outward and backward, passing back until the distal part of the aperture is completely behind the tonsil. It is now brought slightly forward and upward into the region of the alveolar eminence. By rotating the handle a little upward the upper portion of the tonsil is everted through the fenestra. If the entire tonsil is everted through the fenestra there is a dimple in the anterior pillar readily seen and felt. If it is not entirely through it can be massaged through gently with the ball of the index finger, at the same time pressing the blunt blade

across the fenestra, taking a small amount of the capsule with the tonsil, the blunt blade is held on the blood vessels for two or three minutes, then the knife worked by the smaller screw severs the vessels. The instrument is withdrawn and the tonsil completely enucleated resting over the fenestra. Looking into the throat we see the severed layer of the capsule slipping back behind the pillars as they separate. The tonsillar fossa has a soft velvety feel as the larger part of the capsule remains to line the fossa. Recovery is rapid, the patient usually taking solid food the day following the operation.

I believe this method is applicable to all cases except those rare ones in which incomplete operation or inflammatory processes have left the parts bound in a network of rigid, unyielding scars, with little tonsil tissue present. The strong features in this operation which appeal to nearly every physician and surgeon, are:

1. It completely enucleates the tonsil without damage to the surrounding structures.
2. The tonsillar fossa is left lined with the larger part of the smooth capsule.
3. The patient makes a rapid recovery, as the sore throat is very slight following this method.
4. By this method tonsillectomy is nearly always bloodless and the anæsthetist is all the assistance required.

496 Commonwealth Avenue.

HIRSCHSPRUNG'S DISEASE, OR MEGACOLON *

By FRANK R. SEDGLEY, M.D., Boston, Mass.

The subject of Hirschsprung's disease was assigned to me because of the fact that in the last six months there have occurred two cases in the wards of the Massachusetts Homœopathic Hospital. When one is confronted by the situation that such a case presents, the name of Hirschsprung's disease, or megacolon or giant colon, carries with it a great deal more of meaning than the book study of the disease is apt to convey. In fact, if one has not encountered the condition the name is not likely to mean anything. As one of our members told me a few days ago, whatever this subject might mean, he was "neutral."

So I think it will be better if we start in and visualize the topic first by the exhibition of a specimen which was loaned to me by Dr. Stone of the Children's Hospital and by Röntgenographs of another case from the Homœopathic Hospital. This specimen, which you may examine more thoroughly later, is

* Read before the Mass. Surgical and Gynæcological Society, November, 1916.

the entire colon including the cæcum, together with a small portion of the ileum, showing the anastomosis that was made between it and the upper portion of the rectum. The plates are of another case and show very well the distention of the abdomen in life, and the marked upward displacement of the heart.

It should be defined as a congenital dilatation of either the entire colon or a part of it, the sigmoid being always involved, and in fifteen per cent. of all reported cases, the entire colon. It is better named megacolon or giant colon, but was very fully described in 1886 by Hirschsprung, though Parry in 1825 and others at intervals of every few years have since published accounts of undoubted cases. Though rare in occurrence, it presents so striking an appearance that a high percentage of the cases are reported and consequently there has developed an extensive bibliography. The disease as a rule manifests itself in the first few months of life, and the clinical features are very distinctive. The chief points are an intractable constipation and progressive enlargement of the abdomen, with both a tympanitic and doughy consistency present, due to the accumulation of large masses of fæcal material and quantities of gas in a greatly dilated colon. There is a failure of nutrition to the point of emaciation as intestinal intoxication proceeds, together with fœtid breath, dry, harsh skin of a yellowish color, with occasional vomiting. The peristaltic waves of the smaller intestine may easily be seen through the thin abdominal walls as in intestinal obstructions, yet fæcal vomiting has not been described in any cases I have looked up, in spite of the fact that there have been recorded intervals of from three, four and six weeks to three months between movements of the bowels. Boys are much oftener affected than girls, the proportion in a series of nineteen cases being sixteen to three. Ten were one year of age or under, and six between one and five years. The degree of all these symptoms depends upon the extent of enlargement of the colon, but is always serious in the cases that are brought for hospital treatment. At intervals a colitis occurs, resulting in a diarrhœa that results in temporary relief.

To return to a description of the pathological changes in the intestine. On opening the abdomen an enormously dilated colon is at once seen and in the *true* Hirschsprung's disease there is no mechanical obstruction below to account for it, which distinguishes it from a condition sometimes seen in adults called pseudo-megacolon, which is a condition of dilatation depending upon some partially obstructing lesion and is not what we are just now interested in. The dilated portion, usually the

sigmoid, may be from five to eight inches in diameter and its capacity correspondingly great. One case containing forty pounds is reported. In this way an emaciated child may not actually have lost weight. The walls of the intestine show marked changes and instead of being thinned out, as would be supposed by the extreme dilatation, they are actually thickened in all their layers, especially the muscular coats, so that a hypertrophy exists as well as the dilatation. The peritoneal coat is also thickened and lacks the normal luster. There may be some staining or pigmentation, and the longitudinal bands are usually obliterated. In the majority of cases there is an enlarged and thickened condition of the mesocolon, with a rich blood and lymphatic supply. The rectum frequently does not share in the process and may even be empty in the lower portion, in which case the lower limits of the hypertrophied part may be felt by the examining finger giving the impression of a spincter-like formation. This was true in the patient from whom this specimen was obtained and which I had the opportunity to examine before operation. The examination resulted in immediate but only temporary relief from the constipation. I have found collected by Phinney nine theories as to the cause of this malformation. I am not going to repeat them all to you, but will only remark that such a number is in itself a pretty good sign that there is no one satisfactory explanation. It is known to be congenital, as cases have exhibited the marked hypertrophy as well as the dilatation at autopsy immediately after birth. It is a fact also that up to the seventh month in the foetus the calibre of the large intestine is the same as the small, the longitudinal bands have not yet appeared, and in the last two months of uterine life marked changes and greater activity of growth take place in the colon, especially in the muscular portions. That the influence which controls growth and provides for symmetry and maintains proportions does not more often miss the mark is always a source of wonder to me, and I am afraid we must be satisfied with the explanation that does not explain, that the condition is due to some perversion of the influences that control development. In this same connection it is interesting to note the similarity of congenital pyloric stenosis to megacolon. Both conditions are present at birth and both consist of hypertrophy of the muscular coats, chiefly the circular one, and both occur with much greater frequency in boys.

The diagnosis having been made, corroborated by Röntgenographs and differentiated from the few things that could be mistaken for it, — chiefly tuberculous peritonitis, or some chronic mechanical obstruction, — we have to consider the

prognosis, which is very poor with treatment or without treatment. The younger the patient the more unfavorable the prognosis.

Treatment is either medical or surgical and one about as unsatisfactory as the other. Medical treatment consists of cathartics, enemata, rectal tubes, massage, electricity, exercise, diet, but if the condition is well established, it is difficult to see how medical measures can help. Drugs rapidly lose all their power, and enemata are usually retained or returned without effect. The rectal tube is uncertain and can be only a temporary expedient, and if the patient's symptoms are progressing, as they do in spite of the medical treatment, surgery holds out the only remaining hope. Duval gives a mortality of 74 per cent. with medical and 34 per cent. with surgical treatment. Lowenstein collected 59 cases treated medically, with a mortality of 66 per cent., and 44 cases treated surgically, with a mortality of 48 per cent. The ages of these patients were not given. The surgical treatment has been varied. Colostomy as a preliminary step to short-circuiting, or resection of the affected part, has been used a great many times. Appendicostomy has been done and the colon irrigated through the stump of the appendix to relieve the intestinal toxæmia, and this is less severe on a young child than a colostomy. Plication of the colon has appealed to many operators, but the results are disappointing. The ideal form of treatment is the removal of the whole of the affected bowel down to the lowest portion of the rectum, and anastomosis of the ends. In children under three years of age this is a very serious operation either when done at a single sitting or by a two-stage operation. There are many cases of successful operations recorded but they are almost entirely among older children who have suffered with more gradual development of symptoms. I have personally seen three cases, all about a year old, and all three died. The first I saw through the kindness of Dr. Stone of the Children's Hospital about a year ago. This patient was operated first by appendicostomy and by an anastomosis between the lower part of the ileum and the upper part of the rectum. The patient was a year old, a marked case, and recovered from the effects of the operation with marked general improvement for about two months, when just before it was planned to resect the affected portion of the bowel, he developed a pneumococcus peritonitis. Of the other two cases which I have seen, the first was opened in the median line by Dr. Chandler, and the colon was emptied by squeezing out its contents. There seemed to be a stricture in the sigmoid which was not so marked as to make the operator feel warranted in doing any more, but the patient died in a few days.

The other case was operated on in September by Dr. Crane by the same method as employed by Dr. Stone but without the appendicostomy. The patient was in very poor condition at the conclusion of the operation, and died within twenty-four hours.

Such results are the rule with very young children, but before condemning surgical treatment, the successful cases in older children should be considered, since many single reports of successful operation by different operators are recorded. The most remarkable figures that I have found were a series of five cases in 1912 by Lane, who anastomosed the ileum to the lower portion of the rectum, excising the entire colon at one operation. Only one case died, and in that death was due to the slipping of a ligature at the close of the operation, the patient dying from the shock after two days. If such results are obtained in one series of patients in the face of such hopeless conditions, I feel it is a better plan to risk the high mortality and accept the chance than flatly refuse either to operate or to recommend operation for sufferers of this type, as discouraging experiences have led many surgeons to do.

HOW CAN A UNIFORM EXAMINATION BE CONDUCTED AND A UNIFORM RATING BE MADE BY THE REG- ISTRATION BOARDS OF THIS FEDERATION?*

By N. R. PERKINS, M.D., Boston, Mass.

Member of the Massachusetts Board of Registration in Medicine

The fact that the above subject has been suggested as a topic for discussion at this meeting is an assumption that a more uniform method is wanted, and what little I have to say will simply be in the form of suggestions — to start something.

Any plan to be uniform must have three factors: uniform questions, uniform rating and uniform percentages. A three-legged stool will stand alone and give the sitter a feeling of security, but if one of the legs is removed only an acrobat can retain his seat.

It would be a small matter to arrange for uniform questions for the Boards that have examinations at the same time. A part of the Boards, at least, have regular examinations in

* Read at the annual meeting of the New England Federation of Examining and Licensing Boards in May, 1916.

Reprinted from the Monthly Bulletin of the Federation of State Medical Boards of the United States, November, 1916.

March, July and November on even dates. The time of holding examinations by the other Boards I am unable to state.

The following is suggested as a tentative plan: Each examiner to submit five questions to the president and secretary of this Federation; or what might be better — to the chairman and secretary of one of the State Boards; the Boards to rotate in alphabetical order. This reference board or committee is to draw ten questions by lot from those submitted in each branch, and these ten questions are to be used by each board having examinations at the same time. Should there be duplicate questions drawn, another drawing is to be made.

I would suggest a scheme something like the following: Anatomy, ten questions; surgery, ten; medicine, ten; obstetrics and gynecology, five each; physiology and hygiene, five each; pathology, ten; pediatrics and toxicology, five each; when practical examinations are to be held, the examiner should send with his questions a scheme for practical work; the chairman and secretary (or committee) should decide what practical work is to be used at the examinations. Practical work in the several Boards can be arranged so as to be fairly uniform; urinary examinations, more to test the candidate's technic than anything else; patients to be examined by percussion and auscultation, locating the region where the various heart sounds are heard; microscopic slides and pathological specimens; regional anatomy and dissection; bandaging, instruments, splints and their use; demonstration of the application and use of the obstetric forceps on the manikin; use of the pelvimeter and significance of pelvic measurements; use of nose, throat and ear specula, the head mirror and ophthalmoscope. These and various other means will suggest themselves to the alert examiner. Identification of each applicant by a photograph submitted with his application; to be verified by someone known to the Board or by a notary under seal; this to be kept with his application.

With examinations conducted on these or similar lines a reciprocity could be obtained, and the objections now made by many would be obviated. Let me illustrate. The examination books of this conjoined method to be kept on file in the office where the application and examination was first made for a period of years (I would put a limit on this and say that those obtaining over seventy-five on first examination) and any applicant having passed a satisfactory examination with a rating of seventy-five or more on first examination and wishing to locate in another State, may have typewritten copies of his examination papers (certified under oath by the secretary of the Board), court records if there are any, sent to the Board in the State in which he wishes to locate; this Board to pass on his

qualifications the same as if it were an original application. A uniform fee should be arranged for this. I would suggest three fourths the original fee. Minor details that are applicable to each Board, either by enactment or rules adopted by different Boards, could easily be arranged for without undue conflict.

Under such a plan as outlined each Board would pass on the application and if that is found satisfactory, would rate the examination papers, and if these were found satisfactory according to the standard of that Board, the applicant would be registered. The Board would be relieved from the presence of the applicant; the applicant would be relieved from the added expense and anxiety attendant on taking an additional examination, and also it would tend to make each examiner do better work, for if each one of us felt that our work was to be reviewed by members of other Boards, the incentive would be sufficient to make us extremely careful in our work. With uniform examinations and more uniform ratings applicants will have a better standing in communities where they locate; members of the several Boards will strive to do a more uniform work; individual Boards of the New England Federation will have a standing in the National Board that they only can have when back of them stand the united forces of an association like this.

NECESSITAS NON HABET LEGEM*

By WESLEY T. LEE, M.D., Boston, Mass.

One night, my varied daily tasks performed,
 Fatigued in mind and body, I sought rest;
 And gentle slumber, nature's soothing balm,
 Came to my quick relief; my eyelids closed,
 My tired nerves relaxed; life's many cares
 Ceased to oppress me; earthly things forgot,
 I crossed the borders of infinity
 And sank into a peaceful sleep at once.

How long I thus remained I cannot tell:
 I roused to sudden consciousness of pain;
 A keen distress possessed me, and I felt
 A sense of sickness, vague, insistent, strange.
 I tried to reason out this curious thing
 Which had so quickly seized and mastered me;

* Annual Oration delivered before the Mass. Hom. Med. Society, Nov. 1, 1916.

To find a cause, a diagnosis make,
To think what these queer feelings might portend,
To plan a line of treatment. But my mind
Incapable of action seemed; I felt
An utter helplessness, and realized
That I was powerless to aid myself.

While thus I lay, a frightful wave of fear
Swept over me; my mind became alert,
My senses keen, my pulses quick; the air
Seemed charged with something supernatural.
'Twas chill and dark; no sound I heard, no voice
Had called me, yet instinctively I felt
The presence of some being in my room,
The awful nearness of a spectral form.
My straining eyes soon sought the creature out:
It stood at my right side clothed all in white,
And with extended hand, beckoned me to come.
So horrified was I that I was cold
And paralyzed. Th' approaching hand seized mine,
And in a moment all my fear was gone;
My weakness disappeared, and though my frame
Was racked with pain, I instantly arose.

I dressed in haste, while my strange visitor
Remained in silence; then he led me forth.
We hurried from the quiet house, and out
Upon the deserted street. On, on we went;
The city's lights were left behind; our pace
Grew faster rapidly, until we seemed
To travel with the speed of lightning,
Unhampered by restrictions of the flesh.
O'er lands and seas, through wilds and wastes we sped,
The darkness growing deeper all the while;
Then left earth's bounds, and took our hurried flight
Through endless space toward some far distant shore.
All sense of time and space was lost; I feared
That an eternal journey had begun,
'Till presently the gloom became less dense;
Our rapid pace grew slower; suddenly
The darkness vanished, and we came to rest
Before a gate set in a massive wall.
While thus we stood, I courage took to ask
My guide what place this was, and who dwelt here.
"My son," he said in a sepulchral voice,
"This wall surrounds the Doctor's Paradise;

Within you shall find ease from your distress,
And ere you leave, a full return to health.
Your treatment may seem harsh, the way be long,
The methods unaccountable, the progress slow;
But be assured that with returning health
A lesson you shall learn of priceless worth."
My guide a signal gave; a voice within
Demanded, "Give the password." Instantly,
"*Necessitas Non Habet Legem*" came
In voice of thunder from him at my side.
The gate swung wide, the guardian bade us come;
A mighty welcoming chorus filled the air
Which echoed and re-echoed, as we passed
The entrance into Doctor's Paradise.

I looked about. A vast and level plain
Spread out before me, all enclosed by walls;
And in the foreground, a tremendous mass
Of beings crowded toward me. Farther out
There was a gathering of less extent
Which was approaching; and on every hand
Were crowds of varied sizes, each in haste
To get as near as possible to me.
Beyond all these, I saw a countless throng
Extending to the plain's remotest bounds,
Which stealthily advanced. The eyes of all
Were fixed upon me in an eager gaze,
Full of expectancy, as though they longed
To seize upon me as their lawful prey.
Each group remained distinct, and distance kept
Between itself and those around, and each
Seemed jealous of its rights. On every side,
By threatening gesture, scornful shrug, and glance
Of ill-concealed disdain, 'twas evident
That there existed bitter rivalry.

While deep I pondered on this wondrous scene,
My guide spoke thus:—"My son, you seek relief
From your distress; all these who come
Desire to help you, and to work a cure
Upon you. Though their methods vary much,
Their object is the same. This largest crowd
As 'Allopaths,' or 'Regulars,' was known
When on the earth. The chiefest place they claim,
And hold by right of eminent domain
And strength of numbers. Jealously they guard

Their points of vantage, and their interests
 Protect with never failing vigilance.
 The leaders of the noble healing art
 In every age, and the vast progress made
 In medicine and surgery, they hold
 As largely theirs. The group beyond is formed
 Of those who practiced homœopathy;
 Direct descent from the same heritage
 As Allopaths they claim, and credit take
 For generous share in the development
 Of modern practice. Strongly they assert
 That Hahnemann expounded a new law
 Of healing, which they follow, adding this
 To all that's useful in the other school.
 These smaller groups, in their terrestrial state,
 Were called ' Eclectics,' ' Christian Scientists,'
 ' Mechano-Therapists,' and ' Osteopaths,'
 ' New Thoughtists,' ' Divine Healers,' ' Hydropaths,'
 And other ' paths ' *ad infinitum*. Each
 Its own peculiar methods used, and each
 Claimed that its form of practice was the best
 To overcome the ills of all mankind.
 The mighty throng which you observe beyond
 Is formed of those who, when on earth, were known
 As ' quacks,' or ' charlatans,' ' irregulars ' ;
 And these were frowned upon by all the rest:
 Go forward now upon your tortuous course;
 No lasting harm can come to you while here:
 Whate'r befalls you shall be for your good,
 So do not fear, and well your lesson learn."

My guide ceased speaking; when I turned to look,
 I found that he had vanished. I began
 Involuntarily to move ahead
 Toward the expectant creatures in my path.
 They seized me, stripped me, laid me quickly down;
 Percussed and auscultated every inch
 Of my anatomy; examined close
 My eyes and ears, my nose and throat and tongue,
 My chest and abdomen, and every nook
 And cranny of my being. Then by tests
 Of temperature and pressure, pain and touch,
 Reflexes, fæces, sputum, urine, blood,
 My spinal fluid, stomach contents, teeth,
 Mentality, digestion, taste and smell,
 And many other things inside and out,

They sought to find the cause of my distress.
No end there seemed to questions which they asked.
Into my past they delved with tireless zeal,
Extracting knowledge of my ancestors
Of every sort for generations back.
My parents were minutely analyzed
And all my dead and living relatives
Were thoroughly discussed. My early life,
From foetal stage, through infancy to youth,
Seemed of much interest. My previous ills,
My hopes and fears, my deeds both good and bad,
And all my tendencies and ways of life
Were asked about in infinite detail.
To make my case complete and record full,
The specialists of every grade and kind
Went through and over me; and surgeons made
Exploratory cuts from head to foot,
Removing sections for the microscope,
Together with my spleen, appendix, glands,
Tonsils and adenoids, and other things
Which might, perchance, prove pathological.

At last, when every test had been applied,
And each had formed his judgment of my case,
They held a solemn council, and discussed
The question of my illness long and loud.
Then presently a shout of triumph rose;
A diagnosis they had made at last,
All doubts had vanished, and a name applied
To my disease, they all seemed satisfied.
They gave me physic in such liberal dose
That I was greatly moved, and sedatives
To make me comfortable; then bade me go,
And use expectant treatment as required.
I started on, much comforted in mind
To think they knew what ailed me; but I still
Felt far from well, and while some pains were gone,
New symptoms seemed to rack my tortured form.

I had not traveled far, when from all sides
The Homœopaths appeared and quickly took
Possession of me. They examined me
By the same methods which the others used:
The specialists and surgeons took their turns,
Completing each his task with thoroughness;
And several of my organs which escaped

The Allopaths were deftly taken out.
 They questioned me at length about the past;
 But chiefly for my present grievous state
 They seemed concerned. They asked in great detail
 About my every feeling, thought and wish;
 If I was worse at two o'clock A.M.,
 Or after noon, or when the wind was west;
 If pains shot in, or out, or up, or down;
 If motion made them worse, or rest increased
 Their violence; and as to whether warmth
 Or cold produced an aggravated state.
 They gave me medicine in every form
 From tinctures to the highest potencies,
 And closely watched for provings, all the while
 Upon each other trying out the drugs.
 Volumes were written on my case, and all
 Authorities consulted that were known.
 At length they held a conclave, and ere long
 Had come to a decision. Then there rose
 This joyous pean which resounded far,
 "We've found the indicated remedy."
 They gave me a supply of this proved drug
 And sent me forth. But I was not yet well;
 I felt the need of further treatment, and
 With willingness awaited what should come.

Time fails to tell in detail what befell
 As slowly I passed on from group to group:
 How Osteopaths, with superhuman strength,
 Manipulated all my aching bones,
 Pulling my legs and arms, my creaking joints
 Twisting and jerking 'till they almost snapped:
 How Hydropaths, with water hot and cold,
 Internal and external, drowned me out:
 How Christian Scientists their practice tried,
 Giving me absent treatments, interspersed
 With good advice, and readings from their book,
 Together with choice scripture passages,
 Maintaining all the while a placid calm
 And talking in an optimistic vein:
 How I was prayed with, sworn at, hypnotized,
 Vibrated, radiated, magnetized;
 Electrified with currents of all kinds;
 Rested and worked, toned up, reduced, X-rayed,
 Physicked and drugged by every method known;
 Dieted, starved and fed; injected full

Of sera, bacterins and opsonins;
Sweat, poulticed, plastered, blistered, bandaged, bled,
And tortured in a thousand other ways,
'Till all had tried their hands and passed me on.

I stood alone. Each one had done his best
To make me well, and each had credit taken
For having worked a cure. Yet well I knew
That something had been missing from the first
To make the cure complete; though all the skill
And wisdom of the ages had been used,
There lacked coöperation of the groups
And wise coördination of the means.

While I was musing, I became aware
Of some great transformation taking place
About me. All the beings on the plain
Had come together in one mighty throng:
Loud sounds of verbal conflict rent the air,
Derisive laughter, scornful epithets,
Recriminations, accusations, jeers,
And awful threats of legal punishment.
The gathering became a seething mass
Of frenzied creatures, surging to and fro;
And from some words which now and then I caught,
I knew it was my case which they discussed.
Each claimed the credit for a perfect cure
And loud his arguments put forth in proof,
Denouncing all the other methods used
As bad, unethical, empirical.
I viewed the scene with great astonishment,
And wondered that the devotees of such
A noble calling as the healing art
Should stoop to such unfortunate display.
But presently I came to realize
That while I gazed, this struggling, frantic mob
Was growing indistinct, the sounds more faint;
And 'twas not long before it disappeared.
But as it faded slowly from my sight,
Another, smaller company, appeared,
Which seemingly developed from the first
By some peculiar metamorphosis.
A blissful calm spread over all the plain;
The atmosphere was redolent with peace;
No sound of tumult, or discordant note
Was heard; all seemed in perfect harmony.

As I approached, I noticed with surprise
That this transformed assemblage was composed
Of faces, which I quickly recognized
As those I had so recently observed.
Of Allopaths and Homœopaths, there seemed
A marked preponderance; and yet I saw
A goodly number of the other kinds;
Eclectics, Osteopaths, and Scientists,
Mechano-Therapists, and Hydropaths,
And many others of the well known schools:
And here and there were some who had before
Been classified as charlatans and quacks.
I felt that I should now regain my health,
Since those who were to treat me were the best
Of all the schools, and all the methods used
Had been proved good by long experience.
With perfect confidence I gave myself
Into their hands. They quickly put me through
A thorough testing, using every means
Within their power to diagnose my case.
No time was lost, no useless measures tried;
All worked together, and there seemed to be
A spirit of harmonious helpfulness
Which knew no jealousies or rivalries.
The course of treatment chosen was the one
Approved by each and all, and was composed
Of physical and mental elements
From different kinds of practice which I'd known.
'Twas simple but effective; I soon felt
My sickness passing off, my weakness gone:
Full strength and courage quick possessed me, and
I shouted with delight, "I'm well again."

Just then a hand was laid upon my arm,
And turning, I beheld my former guide.
He gave me kindly greeting; then he spoke,
While I gave close attention to his words:
"My promise is fulfilled; you now are cured;
Forget not what you've seen and heard, and try
To bear in mind through all your future work
The lesson of your full return to health.
All schools have good, though varying in degree;
Each has its values, each its usefulness;
No one possesses all the truth, and each
Can well afford to learn from all the rest.
Try, then, to utilize the best in all

While holding fast your fundamental faith,
 And waste no time in useless bickerings,
 Or arguments which merely stir up strife.
 The human needs are compassed by no laws;
 All means are justified which help to cure;
 Remember that the greatest law of all
 'Necessitas Non Habet Legem,' is."
 He vanished from my sight. All things grew dark;
 I felt that I was falling rapidly:
 In anguish I cried out, and struggled hard,
 And suddenly — awoke; it was a dream.

OUR FIFTIETH ANNIVERSARY

Response of J. P. Rand, M.D., at the Annual Dinner of the Worcester
 District of the Massachusetts Homœopathic Medical Society, Nov. 8,
 1916

Fellows and friends: —

'Tis truly meet that we should pause today
 At this historic milestone, for just a brief survey;
 Should turn our recollections back, as Israel did of old,
 And bless the Hand that safely led through dangers manifold.
 And now we've reached that festal year, the year of jubilee,
 When every captive was released and every slave set free,
 And shall we not exultant sing, as did the ancient Jew,
 Of Hahnemann, our Joshua, who brought us safely through?
 He brought us out of bondage, through an empiric flood,
 He led us through the wilderness, a record stained with blood;
 He was our flaming star by night, our guiding cloud by day;
 He cured us of the serpent's bite, — in an homœopathic way.¹
 He caused the walls of mystic rites to tremble at his will;
 The medieval satellites, at his command, stood still.
 And all these wonders have occurred within a little span
 Of years which make the fleeting show we call the life of man.
 And this Society has borne a most distinguished part
 In that great *renaissance* that marks our therapeutic art.
 Oh! few and weak our numbers were, a handful of brave men!
 Who dared defy the serried ranks of opposition then;
 Who dared proclaim "*Similia*" to a relentless foe
 And say to arrogance entrenched: — "Let my afflicted go!"
 Those were the days of trial and persecution sore,
 When noble men were ostracized for principles they bore;
 When consultations were denied to show us disrespect,
 And every petty effort tried to slight us and neglect!

Then it was a scanty dozen of our worthy fathers met
 And drew up our *Magna Charta*: we are guided by it yet.
 All are gone, those brave "Eleven"; every one has passed away,
 But they left a "leaven" behind them, which is moulding thought today

¹ Vide: "Serpent of brass" — Numbers 21, 8-9.

Would that I could paint a picture, which would keep forever clear
 The memory of that valiant soul, — our grand old pioneer!
 Next to God he loved his mission! Here, in spite of rigid rule,
 Side by side, in quick succession, sprang up hospital and school;
 And although official stations he was seldom called to fill,
 Yet the people flocked around him, for his worth and for his skill,
 Flocked to meet him, flocked to greet him, and, most glorious for aye,
 Turned the venom of his critics to the plaudits of today.

Yes, he was a mighty figure, independent, stalwart, bold,
 Hating ancient forms of error, as the prophets did of old;
 While his use of "Guiding Symptoms" was so clever, it is said —
 With but slight exaggeration — he could almost raise the dead.
 And he did it! Yes he did it! Thousands are alive today
 Who, without his ministrations, would have gone the other way;
 And the works he did, and greater, shall be ours to repeat
 If we follow in his footsteps, meekly at the Master's feet.
 Oh! We are but feeble saplings, born a generation late
 To appreciate the fibre of those men severely great!

And what about the future? The past is now secure;
 Our fathers did heroic work. Long may their work endure!
 But there are problems left for us, just as acute today
 As those our fathers had to face, yet in a different way.
 For the oldtime opposition, that would crush them to the ground
 Has assumed a softer aspect and goes "pussy-footing" 'round.
 "Will you walk into my parlor? Will you join the A. M. A.?
 Will you turn the stone a moment, while we grind 'our axe' today?"

Oh! the music of the siren had a most seductive name!
 But Ulysses understood it, — knew the source from whence it came.
 And our members have been tempted. Some have yielded, just a few,
 And have joined the opposition for a more "progressive view."
 They have taken down their colors, are not bound by creed or sect,
 Now as "Hyphenated-Healers" they command deserved respect!
 Yet we would not raise a finger to disturb these "lambs at play"
 In the shambles of the spoiler, even on Election Day.

But I see a spectre sitting at this festive board tonight
 As I look into your faces, think of those beyond our sight!
 Has our School performed its mission? Is it destined to decay?
 Does "Survival of the Fittest" mean that we shall pass away?

But the spectre makes no answer, nor can we an answer frame;
 Are we fighting for existence to preserve an empty name?
 Is the bauble worth the effort? — Time alone can surely tell.
 We must watch our sacred interests, be prepared to guard them well!
 If union is about to be 'twixt ancient thought and new,
 Let us insist that Hahnemann has recognition due!
 Let us insist that liberty shall be with union wed,
 "Forever and inseparable" — as Webster proudly said!
 And then, when all our work is done, when we have had our day,
 We'll leave the stage for other hands and steal content away!

CLINICAL DEPARTMENT

Conducted by A. H. RING, M.D.

Case reported by R. O. PARRIS, M.D.

Mr. G. A. P., aged 50, was first seen Sept. 23, 1916, at 3.30 A.M., suffering with colic, nausea and diarrhoea. Twelve hours previously he had eaten quite heartily of pears and cheese while on an automobile trip; an hour after having eaten, he noticed some discomfort and was nauseated; upon arriving home he vomited what he had eaten, undigested. His abdominal discomfort continued and after colicky pains had lasted for some time he had several loose movements.

When first seen he was somewhat pale and perspiring slightly, temperature, 99; pulse, 90; respiration, 24. He had not vomited for an hour, the amount at that time being small and undigested. The pain was at times continuous and at times became rhythmical, with periods of abatement.

Physical examination: Well developed man of 50, color somewhat pasty. Tongue slightly coated and moist, heart and lungs negative, abdomen tympanitic and generally tender with muscular spasm of the epigastric region. The spot most sensitive to pressure was just below the umbilicus. The pain did not extend through the urinary tract nor was there increased micturition.

The family history finds diabetes on the paternal side; mother well at 72, except for beginning cataracts. Two brothers living and well.

The patient's past history is as follows: mumps and measles when a child. Three attacks of biliousness, within the last two years, diagnosed by the attending physicians as indigestion, twice, and as "jaundice," the last time, three months ago. Otherwise he has been well, except for a chronic dry cough which has never been benefited by any treatment. He has had several automobile accidents, fracturing the left arm in the last one. He denies venereal disease and has one child by his first wife.

The treatment given at this time was a tablespoonful of castor oil and an enema. Tincture of colocynth 2 gtt. every ten minutes. At the end of an hour the pain still being as severe, he was given morphin and atropin, the tentative diagnosis of appendicitis having been made.

The patient was seen about five hours later and the abdominal condition was found to be the same; the pain was now continuous, though not as severe. The temperature at this time was 100, and the pulse, 108. A blood count showed 90 per

cent. neutrophils, and a positive diagnosis of appendicitis was made.

The case was removed to the Corey Hill Hospital and a badly diseased appendix was removed, its location corresponding to the point of greatest tenderness in the middle line. There was a small quantity of fluid about the appendix and at the time of operation was considered to be pus, though later no opening could be found in the diseased part of the appendix. Exploration of the kidney, liver or gall-bladder was not made. The wound was drained.

Following the operation the patient had to be catheterized for six days; the drain was removed, and the wound at the end of the tenth day was closed except for about a quarter of an inch. At this time the patient began to cough, being temporarily relieved by lying down; the same night the temperature rose to 101; pulse, 110; and respiration, 30. Urinary examination at this time showed the following: 25 ounces, high color, s. g. 1.010, sugar and acetone absent, slight trace of albumin. Sediment slight and light colored, showing nothing abnormal.

The elevated temperature continued and the cough which was previously spoken of became very frequent and irritating, requiring morphin. Chest examination at this time was negative except that the inspiratory sound was somewhat louder on the left side, at the base, posteriorly. He complained of nothing except the cough and extreme weakness.

Blood examination at this time was as follows:

Hæmoglobin,	75 per cent.
Leukocytes,	12,000
Red cells,	3,200,000

No malarial organisms found.

Abdominal examination: Wound nearly closed, no tenderness. The temperature ranged between 100.5 and 103.8; pulse, from 100 to 120; respiration, from 25 to 36.

At this time a consultant was called, and he suggested that the condition might be due to low solid excretion and the cough to nervousness. The patient was given digipuratum $\frac{1}{2}$ grain every four hours, and morphin as often as necessary for the cough.

The solid output increased within a few days, the temperature gradually came down and reached normal ten days after the initial rise. On October 13, the patient was returned to his home.

Twenty-four hours later the temperature again rose to 100.6; pulse, 80; respiration, 30; the cough again returned and he was put on the same treatment that had benefited him while at the

hospital. The temperature rose steadily and in a few hours reached 104.2; pulse, 120; respiration, 44. He complained only of being hot. Abdomen negative; inspiratory sounds louder on the left side still. There had been no chills. Catheterization again became necessary. It might be well to say here that he had never been able to urinate while lying down. Reflexes were as follows: pupils, normal; knee jerks, absent; ankle clonus, absent; plantar reflex, normal.

Uranalysis on October 14th, the day of the rise of temperature, was as follows: 1,200 cc., color slightly high; s. g. 1.011; sugar and acetone absent; chlorids normal; total solids 30 gm.; urea 20 gm. Sediment slight, bacteria and moderate number of leukocytes and a few squamous cells.

On October 15, he had several watery movements and the temperature ranged between 101 and 103.6; pulse, 100; and respiration, 35 to 37.

All other findings were practically the same. Chest and abdomen negative.

On October 17, the temperature was 104 at six o'clock; pulse, 116; respiration, 40. During the night he had complained of some pain in the lower part of the abdomen and was slightly tender but in the morning both pain and tenderness had disappeared. Hiccups had been present for several days to a moderate degree. On October 17, they became very obstinate, resisting all treatment.

Blood examination was as follows:

Hæmoglobin,	75 per cent.
Red cells,	4,750,000
Leukocytes,	23,000

During the P. M. he was catheterized, 24 ounces of urine were withdrawn, following which a large amount of pus was found. A blood examination the next day showed a strongly positive Wassermann, and one a few days later gave the same result.

The case now being clearly one of pyelitis or abscess of the kidney he was put on hexamethylenamin 10 grains every four hours. Signs of weakening heart became apparent, and strychnia was given followed by camphor in oil. During the next few days he was seen by two consultants, both of whom gave a hopeless prognosis.

All precepts were then thrown to the winds and he was changed from echinacea tincture to potassium iodid 18 drops t. i. d. and $\frac{1}{4}$ gr. of proto-iodid of mercury. Brandy, two drams every two hours, was substituted for the strychnia, and camphor was used when apparently required.

On October 23, antisyphilitic treatment was begun; five days later the temperature had reached 99, pulse 98, respiration 30, and the patient seemed clearer mentally, having been more or less delirious previously. There followed several rises of temperature, each accompanied by discharges of pus. From this point on the case gradually recovered.

The points of special interest in the course of the disease are:

Absence of all usual symptoms, except fever, of pyogenic kidney infection in the adult.

Improvement followed administration of mercury and potassium iodid in a case of purulent pyelonephritis.

The question whether this was a case of renal syphilis complicated by a secondary infection with pyogenic organisms, or whether syphilis had no relation to the kidney disturbance.

The source of the infection, whether hæmetogenous (following appendicitis) or ascending (following repeated catheterization.)

LETTER FROM THE MASSACHUSETTS BOARD OF REGISTRATION IN MEDICINE

Boston, January 3, 1917.

To the Editor of the
New England Medical Gazette,
82 East Concord St., Boston, Mass.,

Sir:

The attention of the Board of Registration in Medicine has been called to the conviction of a registered practitioner of this State, for failure to report a case of ophthalmia neonatorum.

A hearing was given to this physician by the Board, at which time he was given an opportunity to show cause why his certificate of registration should not be revoked, and his registration cancelled.

A consideration of all the circumstances seemed to justify the Board in not taking drastic action at this time, and the case was placed on file, to be taken up at any time if the future behavior of this physician is unsatisfactory.

The attention of the profession is called to the fact that failure to comply with a law so important as that requiring the reporting of cases of ophthalmia neonatorum, will be regarded by the Board of registration in Medicine as a serious offence, and may result in the revocation of the certificate of any registered physician who violates this law.

Respectfully,

WALTER P. BOWERS, *Secretary*.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the GAZETTE only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

THE GAZETTE does not hold itself responsible for the opinions expressed by its contributors. Reprints furnished at cost.

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THE INFLUENCE OF THE GREAT WAR ON OUR CHARITABLE INSTITUTIONS

As the dark clouds of this great war loom up larger and larger, and overcast in a most serious and menacing manner the civilized neutral nations of the world, those of us with special interests at heart begin to feel the effects of this enormous struggle. Many large charitable institutions in and about Boston, New York and Philadelphia are sorely in need of funds to carry on their work. The people in this part of the country are so worked up over the needs of the struggling nations that they forget the need of charity at home as they contribute bountifully to the nations of Europe, apparently unmindful of the great strain brought to bear on our home institutions as a result of the increased prices of supplies.

If this rise in prices continues some of our smaller charities, which in the past years have rendered much needed aid to the poor, will be forced to close their doors on a class of American citizens which is already threatening us with revolt through an industrial war. We find today in Boston the children of the rich openly begging in the streets to raise funds for the wounded of Europe, while our own American children of the poor are begging in vain for bread and clothing. The Americans in these great eastern cities have gone war mad, and are blind to the increasing suffering under the stars and stripes. It is true that the war has awakened an artificial prosperity in certain industries which cater to the warring nations, but this increase in employment in these lines of industry does not compensate for the throttling influence of war prices on the commodities and charitable needs of the poor. The federal reserve board of bankers has sensed the danger to our own country brought about by the investment in foreign loans of the money made in

war industries. The result of this artificial prosperity is thus beneficial only to those engaged in catering to Europe and to the treasuries of these European countries that they supply.

We are a money-getting, hysterical nation, rich in natural resources but short-sighted as to the future sequence of international events. The West and the South by electing a continuance of Wilsonian policy have rebuked the ardent European war interests in the East. They are forging ahead in their industries and agriculture, reinvesting their gains in home industries and institutions unmindful of the pro-Ally and pro-German propagandas which encourage internal dissension and threaten us with the calamities of war.

Since we cannot appear fair in the eyes of the two warring factions as regards our interpretation of international law, and since, owing to existing circumstances, we cannot appear fair to our neighboring republic Mexico, let us at least be fair to ourselves. Let us prepare ourselves industrially and commercially and at the same time improve our national means of defense. And let us support our present charitable institutions, for charity should not only begin, but in these trying times, should continue, at home.

C. W.

THE COAGULATION OF THE BLOOD

The present basic theory of blood coagulation is as follows: A fibrin ferment, thrombin, converts a soluble plasma protein, fibrinogen, into insoluble fibrin; this change occurs in shed blood due to the influence of a substance formed or activated during the disintegration of leukocytes or blood platelets. The presence of calcium salts is essential to the process.

There is considerable disagreement regarding the formation of thrombin and the nature of its action. Several investigators maintain that prothrombin, which is formed by the disintegration of leukocytes and blood platelets, is changed into thrombin by calcium salts. Howell asserts that prothrombin exists as such in the normal blood plasma but that antithrombin protects it from the action of calcium. A more elaborate explanation is that in the presence of calcium, thrombokinase (from disintegrated tissues and platelets) acts on thrombogen (a soluble plasma constituent) to form thrombin.

With the problem still unsolved it is not strange that uniformly successful non-surgical methods of arresting hæmorrhage have not yet been devised. Lack of discretion in choice of treatment, however, is responsible for a large share of the confusing results that have been obtained. Obviously, the treatment must vary with the cause of delayed coagulation; no

amount of calcium can stop a hæmorrhage due to lack of fibrinogen or prothrombin, nor are tissue extracts indicated except there be excess of antithrombin or lack of thrombo-kinase. The case must be individualized.

The Treatment of Delayed Coagulation

For some time, blood or one of its constituents has had extensive application in the treatment of hæmorrhage. That its use has, in general, been fairly successful is to be explained on the theory that whatever may be the missing element that is essential to prompt coagulation, it is supplied in normal blood.

Dried fibrin, horse and human sera, defibrinated blood and other preparations possess a certain measure of efficacy. Fresh blood applied directly to the bleeding surface has proved successful. The use of whole blood injected subcutaneously, intramuscularly, intravenously, or transfused, has received, and probably deserves, the most attention. It furnishes a considerable amount of nutrition in addition to necessary factors in coagulation. Its use is, however, attended by no little inconvenience, so the recent discovery of a new hæmostatic preparation, discussed in the following paragraphs, is to be welcomed if only for that reason.

Tissue extract ("thromboplastin") as a hæmostatic

The experimental, and much of the clinical, investigation on the hæmostatic uses of tissue extract has been done by Hess¹ in the Research Laboratory, Department of Health, New York City.

That the solution, prepared usually from brain tissue, has a remarkable influence in reducing the coagulation time in vitro has been amply demonstrated.

Its local uses will be briefly listed. Cronin² found it to be of decided value when used in over 2,000 cases of tonsil and adenoid operation.

Melæna neonatorum, hæmorrhage following circumcision, incision of the lingual frænum, extraction of teeth, as well as gastric, duodenal, and rectal bleeding have yielded with significant promptness to this tissue extract. It is almost specific in hæmophilic bleeding.

Other conditions where it has been successfully employed are epistaxis, surgical operations involving the liver, prostate and spinal cord, and bleeding from the urinary bladder. It is necessary that the hæmostatic solution be brought into close

¹ Hess, A. F.: *Jour. A. M. A.*, 1915, lxiv, 1395; 1916, lxvii, 1717.

² Cronin, J. J.: *Jour. A. M. A.*, 1916, lxvi, 567.

contact with the bleeding point; soft clots should be removed. Injection into and around the site of bleeding is sometimes more efficacious than mere topical application.

Its success in hæmorrhage in the lower intestine would doubtless be greatly reduced by destructive digestive processes. Perhaps, if poured directly through a duodenal tube, it might prove of value. Sixty cc. have been given by mouth in the course of twenty-four hours without untoward effects, so its non-toxic property is rather well established.

The use of this thromboplastin solution intravenously is still in the experimental stage and it may only be stated that weak dilutions are without danger when given by this route.

Quite another field for its employment is found in the stimulating effect which it has upon granulation and epithelization. A number of chronic, torpid, varicose ulcers that did not respond to usual methods of treatment have healed completely under the use of tissue extract. The solution has also been reported on favorably when used as an accessory drip in the application of skin grafts.

Tissue extract is simple and inexpensive to prepare, sterility can be maintained with tricresol or it can be boiled for a short time without seriously impairing its hæmostatic qualities; it is stable over period of months, it is efficacious, and harmless. It merits extensive and critical trial.

The homœopathic use of drugs in the treatment of hæmorrhage

The use of drugs on the principle of symptom-similarity in the treatment of hæmorrhage seems to us to be empiricism of high degree. The "indications" depend largely upon the nature and location of the hæmorrhage and the appearance of the shed blood, factors which are altogether too fortuitous. From the macroscopic characteristics of blood rarely can there be obtained any precise knowledge of the cause of delayed clotting; we must resort to microscopic examination and bio-chemic tests of function in order to determine accurately just what coagulation factor is missing, or, all being present, whether there is an excess of antithrombin. It is a considerable strain on our credulity to believe that creosote, for example, will afford relief in cases of "profuse bleeding from small wounds" with "debility" or with "excoriating discharges" or "pulsations all over the body" — a symptom complex which may occur in some forms of "jaundice" where the calcium content is low, in scurvy where there is disturbance of the vessel walls rather than with coagulation processes, in hæmophilia where there is a lack of thrombokinase in the blood, in purpura where

there is a marked decrease of platelets, etc. Is there any drug which can produce *all* of these remarkable changes in the coagulation mechanism,—these “objective” symptoms? It is unlikely.

Here is offered an excellent problem for investigation in homœopathic pharmacodynamics. Much of the technical groundwork has been done and well done; there is opportunity to impose rigid, definite, unimpeachable controls, by far the most important elements in any research work; for material and equipment the expense should not be unduly great, and there is at least a reasonable probability of obtaining results of value and significance from an *Arbeit* of this nature. In point of authenticity and precise relationship, the determination of such definite *objective* “symptoms” appears to us to be one of the most urgent and fundamental of the many needs of homœopathy today.

S. B. H.

NEW LEGISLATION IN MASSACHUSETTS AS REGARDS INCOMES

For the benefit of our readers who may not be familiar with the new income tax requirements for Massachusetts, beginning January 1, 1917, the *Gazette* presents the following information written for us by Mr. Joseph E. Perry, State Income Tax Attorney for Massachusetts. This is an important matter with which every Massachusetts physician needs to familiarize himself to avoid possible violation of the new law.

It took many years to abolish the ducking stool and capital punishment for practicing witchcraft, yet the knell has but just sounded for a contemporary of those practices. For nearly three centuries our public revenues were raised in the main by the “general property tax.” On January first of the present year the old system was supplanted in large measure by a State tax levied on the basis of income.

Every physician and surgeon in Massachusetts will run the risk of extremely severe penalties if he fails to file a sworn income tax return with the State officials on or before March 1, 1917. In addition he ought, for safety's sake, to file a return with his local city or town assessors in April, showing his real estate and tangible personal property, which will continue to be assessed locally at local rates.

The new law taxes interest and dividends (except from certain ‘non-taxable’ sources) at the rate of six per cent. of the income yield. Profits from the purchase and sale of securities will be taxed at three per cent. and annuities at one and one-half per cent. A person receiving any of such income, no matter how little, during the calendar year of 1916, must make

his return, regardless of how much or how little income he may have received from other sources.

If the taxpayer has received *gross* income from his profession or business in excess of \$2,000 he must make the sworn return even though, by reason of exemptions or deductions, there may be no tax. This tax is at the rate of one and one-half per cent. of the excess over \$2,000 of such income. Business expenses, in some cases, worthless debts, and several other items may be deducted in computing the tax. By virtue of wife, children or dependent parents, there may be an exemption up to \$3,000.

Partnerships, executors and other fiduciaries, as well as employers, come within the scope of the law.

As this is a mere skeleton outline of the law and therefore is necessarily incomplete, the reader is urged to write at once to the Income Tax Division, State House, Boston, for the booklet of instructions explaining the details of when, where and how to make the required tax return.

L. G. K.

EDITORIAL NOTES

To those who have so promptly and cheerfully responded to the higher subscription price the *Gazette* extends its grateful thanks. The increase was most unwillingly made but was an absolute necessity on account of the greatly increased cost of publication. It will be our aim to add to the value of the *Gazette*.

Some of the responses have been very gratifying and encouraging. One old friend writes, "I have been a continuous subscriber to the *Gazette* since 1870 and hope to be as long as I live."

Another writes, "Doctor Sutherland's articles are worth the price of admission."

Another says, "We could not do without it," etc.

We regret the loss of some subscribers, and as the *Gazette* does certainly fill a distinct need we feel we should have the hearty support of the homœopathic profession.

Lecture and discussion on Health Insurance, Dr. I. M. Rubinow, one of the foremost authorities on this subject, and Secretary of the Committee on Social Insurance of the American Medical Association, will lecture on Tuesday evening, January 9, 1917 at 8 o'clock in Jacob Sleeper Hall, 688 Boylston Street, Boston. The public is invited.

REVIEWS

IMMUNOLOGY

The quantitative effect of salvarsan on the Wassermann reaction of the blood. *King, J. T., Jr.: Jour. A. M. A., 1916, lxxvii, 1669.*

The writer carried out titrations in sixteen cases of syphilis before and after twenty administrations of salvarsan. The cases embraced various types and stages of syphilitic infection, and were followed from two to five days after the injection.

Little change was noticeable in the Wassermann reaction, only one case showing a marked weakening of the test. Some previously untreated cases may be given prolonged salvarsan therapy with little weakening of the Wassermann reaction, and yet show clinical improvement. He concludes that definite proof of the existence of provocative Wassermann reactions following salvarsan is not at hand at the present time.

D. L. B.

PATHOLOGY

The relation of recurrent attacks of pellagra to race, sex, and age of the patient, and to the treatment of the disease. *Siler, J. F., Garrison, P. E., McNeal, W. J. Arch. Int. Med., 1916, xviii, 652.*

This paper is a continuation of the study of pellagra in Spartanburg County, South Carolina. The tendency to recurrence of the disease, 64.8 per cent., was about equal in both sexes, and in negroes and whites. The death rate in recurrent attacks was 12.3 per cent. as contrasted with the death rate of 16.2 per cent. in the initial attack. The death rate in recurrent attacks was about three times as great in negroes as in whites. Recovery from pellagra is much more frequent and more permanent in children than adults. General measures to increase resistance of the patient should be continued for at least a year after recovery from the acute attack.

D. L. B.

HOMŒOPATHIC PERIODICAL LITERATURE

The British Homœopathic Journal, October, 1916

1. *A week's surgical emergencies at the London Homœopathic Hospital.* 378-386. Hey, C. G.
2. *Pregnancy and appendicitis — a case.* 386-391. Johnstone, J.
3. *Clinical thermometry in drug pathogenesis.* Continued. 393-401. Goldsbrough, G. F.

This article was begun in the May number and embraces a discussion and analysis of the value of raised or lowered temperature in the therapeutic use of drugs which in their pathogenesis have exhibited temperature reactions. The material is derived from the "Cyclopedia of Drug Pathogenesy" and from later accessible experimental findings.

Arsenic and belladonna are discussed in the present instalment.

November, 1916

4. *Therapeutic problems and possible answers.* 409-431. Wheeler, C. E.

An interesting and altogether excellent general review of many of the problems of drug action. A number of "laws" and modern theories are intelligently discussed in their homœopathic applications. The gist of the argument is contained in the following: "We want more and more records of the effects of our drugs on the measurable reactions. Out of such accumulations will come much of the material by which to answer 'Yes' or 'No' to our tentative speculations."

S. B. H.

The Homœopathic World, October, 1916

5. *A Peak in Darien: Our new knowledge of the work of the ductless glands.* 436-442. Burford, G.

6. *A case of heart disease.* 442-443. Cash, M.

Aortic incompetence with dilatation and hypertrophy. Vertigo, congestive headaches, sleeplessness, and loss of strength disappeared after six months on *coffea*, 12.

7. *Cases from practise.* 444-447. Davidson, W. A.

8. *Some reasons for a belief in homœopathic practise.* A long series of brief case reports.

November, 1916

9. *The place of teaching in homœopathy.* 488-502. McLachlan, J.

The paper is founded on the principles that there is need for the widest toleration of opinion, and that to spread homœopathy each doctor must be ready to be a teacher to his patient or to any one who *wants* to know. There should be no forcing it on the unwilling. Those who are ready to hear will hear if they are properly addressed.

10. *The modern Parcœ: The internal secretions as the Fates of the body.* 502-507. Burford, G.

S. B. H.

The University Homœopathic Observer, October, 1916

11. *Personal economies.* 134-143. Hinsdale, W. B.

Address delivered at University of Michigan Convocation.

12. *Cardiac arrhythmias — their significance and treatment.* 144-152. Wells, G. H.

A discussion of sinus irregularities, paroxysmal tachycardia, auricular flutter, alternating pulse, heart block, premature contraction and auricular fibrillation.

13. *The rôle of the fascia in the radical treatment of inguinal hernia.* 153-156. Naylor, G. I.

S. B. H.

The Journal of the American Institute of Homœopathy, November, 1916

14. *The alternation and compounding of homœopathic remedies.* 501-508. Carmichael, T. H.

It is estimated that 59 per cent. of the output of our homœopathic pharmacies consist of compound tablets.

(The condemnation of the practices of compounding and alternating is, perhaps, insufficiently acidulous. — Ed.)

15. *Plan and scope of the lumbar incision.* 508-511. Fobes, J. H.

16. *Cultural and animal experimentation with leukæmic blood.* 512-515. Ulrich, H.

A diplo-streptococcus was isolated from the spleen and bone-marrow of a case of acute leukæmia. Inoculation of material from these sources into mice, guinea-pigs and rabbits was without results. Animal inoculation and cultures from a case of chronic myelogenous leukæmia were both negative.

17. *Homœopathy of the future.* 516-521. Burrett, C. A.

18. *The scope of nitrous oxid and oxygen anæsthesia in obstetrics.* 522-526. Buchanan, T. D.

19. *The recent experimentations on nitrous oxid and oxygen in obstetrics.* 527-530. Allan, H. C.

20. *The modern abortive treatment of Neisserian infection of the urethra.* 537-540. Washburn, V. D.

Fifteen drops of 5 per cent. argyrol are injected into the urethra, the urethra is massaged to spread the solution, the meatus is dried and closed with collodion.

Nineteen per cent. of the cases were aggravated by this treatment. In thirty-eight per cent. the cases were cured in about three weeks, — a gain of from five to seven weeks over the ordinary treatment.

In the discussion of this paper, Dr. H. M. Beebe referred to experiments in which barium sulphate was suspended in the

argyrol injected. Roentgenographs showed no shadow in the anterior urethra except when the patient strained.

21. *Concerning massage.* 542-549. Williams, E. C.

22. *Fractures involving the elbow joint.* 549-557. Sappington, E. F.

23. *Social hygiene.* 557-564. Johnston, A.

24. *Prenatal causes of infant mortality.* 565-569. Cobb, J. P.

25. *Electricity in eye practice.* 569-570. Baker, W. F.

S. B. H.

The Clinique, November, 1916

26. *The treatment of anterior poliomyelitis.* (Ed.) 501-503. Halbert, H. V.

A plea for the use of the indicated remedy.

27. *Potassium permanganate in erysipelas.* (Ed.) 512. Collins, C. D.

Two per cent. solution painted on acted satisfactorily as palliative.

28. *Symposium of defectives.* 515-516. Nair, B. P.

29. *The ætiology of defectives.* 516-520. Rowley, C. C.

Stress is laid on the great importance of heredity. Relation of alcoholism, as being result rather than cause of mental defect, is pointed out.

30. *The education and development of the defective child.* 520-525. Frost, A.

31. *The health movement in the public schools.* 526-537. Bradford, D.

The Polycrest, October, 1916

32. *Reflections and suggestions.* 7-13. Hinsdale, A. E.

33. *Anterior poliomyelitis.* 15-20. Carpenter, W. B. Review, with suggestions as to a few remedies.

The Chironian, November, 1916

34. *The moulding of the brain case.* 173-185. Seward, F. W.

Review of phylogeny and ontogeny of the brain and skull.

35. *The relation of the spleen to blood diseases from the surgical aspect.* 186-188. Cummins, F. A.

W. O.

The Journal of the American Institute of Homœopathy, December, 1916

36. *Radium in surgery and gynecology.* 599–616. Lee, J. M.
 37. *Appendicitis: The immediate results in treatment for the year 1915, University Homœopathic Hospital, Ann Arbor,* 617–622. Beebe, H. M.
 38. *The successful treatment of hay-fever.* 623–630. Laidlaw, G. F.
 39. *Cardiac exercises.* 631–638. Bailey, B. F.
 40. *Diabetes: Its rational treatment.* 639–647. Macfarlan, D.

Fourteen cases of "sugary diabetes" are reported by Macfarlan. They were treated with "the actual blood of the sick individual—in the dynamized state." This *dynamization* is supposed to be effected by violently shaking sixty drops of blood with nineteen drams of distilled water in a tightly corked bottle. Higher potencies are made by dilution with stated quantities of water, vigorous *dynamization* being required in going from one potency to the next higher one.

All of the cases reported were benefited after receiving some of the *dynamic* blood, and some were even said to be cured.

The case histories are lacking in many highly important details. The diet is given but casual mention in only four of the records. No special effort seems to have been made to compare the amounts of glucose eliminated before and after treatment, and in some cases no, or only one, sugar quantitation seems to have been made.

All of the cases except two are fleshy adults in or past middle life and many of them appear to be cases of "fat man's diabetes." The diet, when recorded at all, is stated to have been restricted. Since this so-called "fat man's diabetes" is very frequently overcome by a moderate limitation of carbohydrate intake, and since dietetic restriction will often improve cases of true diabetes, it becomes difficult if not impossible to accept the author's dictum concerning the value of his *dynamized* "depraved vital fluid in potency."

In an effort to substantiate his claims and theories regarding the "pathogenetic sphere of the blood," Macfarlan quotes from Surgeon-General Gorgas' report on yellow fever. The reader is apparently asked to believe that diabetes may be cured by ingestion of diluted diabetic blood because injection of yellow fever blood into healthy individuals produced yellow fever.

O sancta simplicitas!

The author asserts that "this is nothing more than pure homœopathy." Shades of Hahnemann, Hughes and Wesselhoeft!

41. *Facts and fallacies in obstetrical practice.* 647–656. Betts, N. S.

42. *Gastrocoloptosis.* 656–660. Upham, R.

H. U.

BOOK REVIEWS

Handicrafts for the Handicapped. By H. J. Hall, M.D., and M. M. C. Buck. Published by Moffat, Yard and Co., New York. Pp. 150. Price \$1.25 net.

This well-printed and very readable book contains directions, supplemented by diagrams and photographs, which apply to the following crafts: Basketry, chair seating, netting, weaving, bookbinding, cement working, pottery making and light blacksmithing. A useful bibliography on the general as well as the more specialized handicrafts and a list of dealers in craft work supplies are appended.

A certain relief of economic strain follows the restoration of more or less disabled workmen to labor even though the remuneration thereby obtained may be only a fraction of that which they had earned when well. In addition to this factor, work at the various crafts restores courage and confidence to the individual, as has been demonstrated by the success of the work cure at those institutions for the treatment of various forms of "nervous exhaustion." Such work, moreover, reduces measurably the public and industrial burden of obligation to the handicapped.

This book should be of distinct value to the patients themselves, and to those interested in their welfare, friends, attendants, patrons, and physicians.
S. B. H.

VERIFY YOUR REFERENCES

A Word to Medical Writers

By FRANK PLACE, Jr., New York.

Abstracted from N. Y. Med. Jour., 1916, civ, 697.

... Verify your references. That is my text, and in the present instance I wish to direct this text particularly to the medical man who would venture into print. It is to be assumed that he has fulfilled Billing's¹ four rules for the preparation of a medical paper. 1. "Have something to say. 2. Say it. 3. Stop as soon as you have said it. 4. Give the paper a proper title." It is in the revision, the polishing-off process, that he should, among other things, go over his list of references and verify them. To direct attention to this phase of authorship is the purpose for which this paper is written.

The science and art of medicine is so dependent upon its literature that reference to authorities is a recognized part of medical composition. The quantity of such printed matter is very great and quotation of sources is as necessary in medical literature as in any other literary endeavor. Such is the indifference on the part of writers, however, to the place and importance of the bibliographical reference that some attention should be directed to it.

What underlies this admonition, "Verify your references?" It is of the spirit of the scientific method. Substantiate your statement by proof, either of your own or by the work that others have done before you. We work with the tools that others have made and placed in our hands, and we hope to make tools to place in the hands of others who follow us. If our predecessors have experimented and have left no record in material objects or written description, their works profit us nothing. For the purpose of storing up medical advance in deed and thought medical books and journals exist, and in them we shall find description of the processes of work that others have employed. To find these papers in the great mass of literature, indexes and catalogues were invented. In addition, most writers, in reporting their work or ideas, read and gather the publications that relate to their particular task; and then, to help others in the same line, to record their own research, and to have a line of defense against criticism, they print with their report a list of papers they have consulted. Should not the scientist be as truthful and as accurate in recording his help as in giving his own work? One says "yes" without hesitation. How then, can the author permit references to

be printed which are not only false as to fact, but which also seem to be intentionally so? Some so far forget science as to quote articles that it is plain they have never seen, but have lifted bodily from some other list. Certainly there should be some distinction between the article read and the one known only by hearsay. If an author would but put himself in the place of one of the audience whom he is addressing; if he would but read the paper and verify the references as if he had never heard of the subject before, then he would begin to realize some of the deficiencies of his paper and to appreciate the need for fulness and accuracy of statement in his bibliography; he would perceive the reasons for including data whose usefulness he had never before recognized.

It is hard to understand the point of view of the writer who is preparing a paper and who says: "No one will ever take the trouble to look up these references. They are near enough correct now. Let them look 'em up as I had to." The obvious reply is, "Why print your references at all then? If you are so little interested in your work as that, if you have so little purpose to help others, why do you even print the paper? There are plenty of papers waiting to be published that are just as good or better." The time an author spends in verifying his references is more than saved for every one of his readers. "Rong References," are frequently so very wild that it is hardly worth while to continue the search for them.² The author who knows the material can more easily verify and correct his references before publication than any reader, "each in his separate sphere," can spend hours or days in finding them afterward. Nothing in science is too insignificant to notice. Therefore, verify your references.

The experience of writers and bibliographers has shown that the efficient bibliographical reference is the one containing the complete and correct answer to the question "Who wrote it? What is it about? When and where was it published?" Answering these questions the citation should stand as it does in the Index Medicus and in the Index-Catalogue of the Library of the Surgeon-General's Office. In referring to a book the details are these: 1. Author's name with initials. 2. Title of book. 3. Edition, other than the first. 4. Place, publisher and date (the imprint). 5. Volume, and page therein if a particular statement is to be quoted. On the other hand, a quotation from a classic, like Hippocrates, may be more readily accessible if the reference is to book, chapter, and paragraph. In the reference to a periodical article the details are nearly the same: 1. Author's name with initials. 2. Title of article. 3. Title of periodical. 4. Place and date of publication. 5. Volume, or series and volume. 6. Page, or inclusive paging. When space is not at a premium the unabbreviated form of words of titles is a desirable precaution against error.

However much verification be done in the course of composition, and that may well be considerable, the bibliography should be gone over *in toto* in the proof. Really, the best way is to free oneself from the suggestion of copy, take the proof alone and consult the sources themselves, making the necessary corrections on the proof. Each detail of figure, letter, and mark of punctuation should be carefully scrutinized; spelling, date, volume number, page number, each should receive its own attention. It is astonishing how many errors can be detected in a supposedly correct proof. Even then the influence of familiarity with the subject and with the articles consulted will slightly obscure the author's watchfulness. Some one unfamiliar with either will be more trustworthy in correcting the references.

"But why," some one asks, "is it not permissible, with all the catalogues and indexes we have, to say simply that Jones in 1900 did thus and so, or Jones, Journal of Medicine, 1900, said this and that?"

In the first instance, while you are saving space for yourself, you are probably wasting time for every reader of your article; in the second place, you are not saving enough to counterbalance its lack of efficiency; and in both cases the reference is of little worth in its collateral uses. In addition, you are mistaken in thinking that indexes are going to point out the article sought for at once, if at all. The indexes in magazines are themselves arguments for complete and correct reference. Indexes range all the way from the full and carefully made, like those in the *Journal of the American Medical*

Association and the *Journal of Experimental Medicine*, through the slovenly and incomplete with elaborate but useless "Table of contents," down to total absence of both "Contents and index." Atrophy and complete absence of index are too common in both journals and books; too common to speak well for medical journalism, and too common to trust medical literature to its mercy. The index may be lacking either from failure of the editors to have one made by a competent person, or from failure on their part to make the index an integral part of the magazine as published. Either cause is inexcusable and is decidedly bad for both journal and reader. These considerations lend emphasis to the demand for complete and correct references in bibliographies and to the slogan, "*Verify your references.*"

To the uninitiated all the details for a complete reference seem like redundancy of information. To such, the necessary points would be only the author, the journal, the year, the volume, and the page. In certain conditions, to save space, this brevity may be imposed upon one, but let it be only at command of the editor and when he brings forward proof of its necessity. For it must not be forgotten that the bibliography has uses beyond its connection with the article to which it is appended. A good bibliography is often used as a source of references without regard to the point of view of the paper itself. Frequently it is used by the student of the subject as a starting point for research rather than some of the more inclusive bibliographies like the Index-Catalog. Such a list is also called upon to locate papers that other reference books do not include. The more thoroughly the work on the bibliography is done, the greater is the service that it performs. As a finishing touch to the paper then, *verify your references.*

Though I have elsewhere³ in greater detail taken up the reasons for the inclusion of the several data in a reference, I wish to list some of them briefly here.

The author's name identifies the workman. The bibliography is an author index of the material referred to; it helps in this way in finding articles that indexes have omitted or that are too recent for any other index.

The title identifies the paper itself, especially when the author has written much on the subject. The title defines the scope of the paper without further search.

The place of publication (and in the case of a book, the name of the publisher) is of aid in identifying the publication.

The date of a book, journal, pamphlet, or other printed thing is, next to the name of the author, the most important fact in scientific bibliography. It establishes the worth of the work as to its timeliness and its position in questions of priority. The date is a point of departure for finding other articles, later or earlier; it furnishes a clue to the scope of the paper.

The volume number reduces the quest to a single book; in most cases to a single sequence of pages. This is no small item in the case of a journal that publishes several volumes a year. The *Biochemische Zeitschrift* issues almost an even dozen volumes during the twelve months.

The page number directs the reader immediately to the point sought; while inclusive paging gives him in advance an idea as to the length of the article. When given, the page reference obviates the use of the index, which may be absent, or useless, or omit the entry one seeks.

For one reason or another the searcher is sometimes unable to find the original article that he needs; all that is available is an abstract. Let him give a reference to the original as fully as possible from the information that he has, and then give also the citation of the abstract.

This method has its uses in quoting papers in other languages than the English language and in giving other sources in order that at least one may be available to the reader.

This leads me to another point. Give authorities as they are printed, not as you would like to have them printed. If the title is in French, give it in French. A seeker who cannot read French will not then spend time in digging up papers he cannot read. No one can object if, in addition to the title, a translation into English is given, especially if the other language is one that is generally unfamiliar, as Russian or Danish. In quoting other languages, however, great care must be exercised in transcribing names and

titles of papers. To get the force of this take up a list of references in some foreign journal and observe those to English or American literature. Hilarity is likely to ensue. Parker Syms appears as Darker Syms; Diseases of the Pituitary Gland, by E. G. Fearnside, M.A., M.D., B.C.Cantab., . . ." is given in a Jahrbuch as by "E. G. Fearnside & B. C. Cantch." Verification is vexation, but it is the price of safety.

A common fault lies in taking a reference from another's bibliography as though it were thereby Gospel truth itself. Faith may remove mountains, but in science ye are known by your words. "If the great Schmidt gives this reference, it is good enough for me." That is where trouble begins — or is continued; for the possibilities — nay, the probabilities — are that Prof. Dr. Geh. Schmidt allowed an inexperienced assistant to round up the references; that another, equally untried, omitted to verify them in any way, and in copying altered thus one unconsciously; while a third let the printer still further maltreat it. The result, fair without but false within, may mean nothing even to Fetlock Jones or Doctor Swatson. Take no reference for granted. Verify the reference that your best friend gives you. Verify the reference that your revered chief gives you. Verify, most of all, the reference that you yourself found and jotted down. To err is human, to verify is necessary.

Unless references are verified from the originals, marvelous are the results that are sometimes attained. Articles that mean nothing are ascribed to mythical authors; journals are quoted that never will be published, and dates are indicated that none of us ever will live to see. A classic example of bibliographical cacogenics is shown in the descent of the reference to a report of a case of urticaria by J. V. Hjelmman, published in a Finnish journal in 1899. This was abstracted in *Progres medical*, Paris, Jan. 27, 1900, 3. ser., xi, 60, but with no indication of its source in the Finnish journal. This French abstract was translated into English and printed in the *Medical Bulletin*, Phil., May 1900, xxii, 175. but credited to "J. V. Hieleman, *Progres medical*" and without date, volume or page. This translation was transferred bodily to the *St. Louis Medical and Surgical Journal*, August, 1900, lxxix, 96, credited to the same Hieleman, but now as originating in the "*Bull. Med. and Surg.*" "J. C. J.," transplanted this hardy annual to the October number, 1900, of the *Journal of Cutaneous and Genito-Urinary Diseases*, N. Y., 1900, xviii, 470, again deriving it from "*Bull. Med. and Surg.*" 1900, but also giving due credit to the St. Louis journal. Probably from the *Journal of Cutaneous and G.-U. Diseases* as his authority Hans Hübner added, "Hielemann, *Bull. Med. and Surg.*, 1900" to his bibliography which appeared with his article in the *Archiv fur Dermatologie*, Wien, 1900, lxxxi, on page 219. Seeing one of these latter references, who would turn for the original to *Finska Lakaresallskapets Handlingar*, Helsingfors, 1899, xli, 1236-1241? And echo answers, "Who-who."

Verifying references means work, sometimes a good deal of work; but if your article and bibliography are to be worth anything they should be worth the work to make them so. Why not have the best? If they are not worth the work, they are not worth printing. While the directions here enumerated are many and seem to make a counsel of perfection, the fact that these ideas have been acted upon by some writers shows that they are feasible. And yet these arguments for correct and complete references are not all that might be adduced. Every day, it seems to me, that some new-comer turns up which reveals a new outlook on the uses of the bibliography. In every case the correct reference becomes a time saver, a short cut through the hills of print. Wherefore I say again, *Verify your references.*

¹ J. S. Billings: Our Medical Literature, *Transactions of the Seventh International Medical Congress*, London, 1881, i, 54-70. Also: *Boston Medical and Surgical Journal*, 1881, cv, 217-222. See also his Medical Bibliography, *Transactions of the Medical and Chirurgical Faculty of the State of Maryland*, Baltimore, 1883, 58-80. ² F. Place, Bibliographic Bones, *Medical Pickwick*, Saranac Lake, 1915, i, 82-84. ³ Idem: Bibliographic Style in Medical Literature, *Medical Record*, N. Y., 1913, lxxxiii, 157-160.

SOCIETIES

THE AMERICAN CONGRESS ON INTERNAL MEDICINE

The first scientific session of the American Congress on Internal Medicine was held in New York City on December 28 and 29. The subject of the first day's session was "*The Ductless Glands in Cardio-Vascular Diseases and Dementia Præcox.*" The second day was devoted to a *Symposium on Duodenal Ulcer* to which Dr. John B. Deaver of Philadelphia contributed a paper on "The Diagnosis of Duodenal Ulcer."

On the evening of December 29 a convocation of the American College of Physicians was held.

BOSTON DISTRICT HOMŒOPATHIC MEDICAL SOCIETY

The regular monthly meeting of the Boston District Homœopathic Medical Society was held at the Evans Memorial Building on Thursday evening, Dec. 7, at 8 o'clock. The program was:

Bloodless Tonsillectomy, Everett Jones, M.D.; The Use of Stock Vaccines, George C. Anthony, M.D.; The Comparative Value of Stock and Autogenous Vaccines, C. A. Eaton, M.D.

THIRTIETH ANNIVERSARY OF WESTBOROUGH STATE HOSPITAL

Westborough State Hospital celebrated its thirtieth anniversary on December 7, 1916, and a very interesting program was presented, Dr. N. Emmons Paine, Chairman of the Board of Trustees and a former Superintendent of the Hospital, presiding.

The program was as follows:

Morning Session

- 1 Greetings. Historical Retrospect. Dr. N. Emmons Paine.
- 2 Some Early Experiences as a Member of the Hospital Staff. Dr. Amos J. Givens, Stamford, Conn., First Appointee as Asst. Physician, Westborough State Hospital.
- 3 The First Transfer of Patients to Westborough State Hospital. Dr. L. A. Dewey, Member Mass. Commission on Mental Disease; formerly Asst. Physician, Northampton State Hospital.
- 4 The Inauguration of the Acute Service in 1898. Dr. Henry I. Klopp, Allentown, Pa., formerly Asst. Supt., and First Physician in Charge of this Service.
- 5 The Consulting Board of Physicians and the Hospital. Dr. John L. Coffin, Member Consulting Board; formerly Chairman Board of Trustees.
- 6 Boston University Medical School and Westborough State Hospital. Dr. John P. Sutherland, Member Consulting Board and Dean Boston University Med. School.
- 7 For Former Trustees of the Hospital. Miss Eliza T. Durfee, Fall River, Trustee from 1888 — 1915.
- 8 Three-minute Remarks by Former Members of the Medical Staff.
- 9 Response for the Present Organization of the Hospital. Dr. H. O. Spalding, Supt.

Afternoon Session

- 1 Observations on the Alcoholic Psychoses. H. O. Spalding, M.D.
- 2 Varieties in the Structure of the Cerebral Cortex in Man. E. Lindon Mellus, M.D., Brookline, formerly Pathologist, W. S. H.
- 3 Does a Formal Education Alter the Course and Outcome of Psychoses? (A study of academically educated persons admitted to Westborough State Hospital during the past ten years.) M. M. Jordan, M.D., Asst. Supt., and Alberta S. Guibord, M.D., formerly Asst. Phys., W. S. H.
- 4 Adrenalin Mydriasis as a Somatic Symptom of Dementia Præcox and Organic Disease of the Brain. S. C. Fuller, M.D., Pathologist and Clin. Director, and R. M. Chambers, Asst. Phys., W. S. H.

- 5 Multiple Sarcomatous Growths of the Cerebrum, Mid-brain and Medulla with Comparatively Few and Insignificant Mental and Neurological Symptoms until Late in the Course of the Affection. Frank C. Richardson, M.D., Director Evans Memorial for Clinical Research, and S. C. Fuller, M.D.
- 6 Sensory Changes in a Case of Friedreich's Ataxia. H. B. Ballou, M.D., Senior Asst. Phys., W. S. H.
- 7 The Treatment of General Paresis. S. C. Fuller, M.D., and R. M. Chambers, M.D.
- 8 The Simultaneous Occurrence of the Lesions of Paresis and Multiple Sclerosis in the Same Subject. S. C. Fuller, M.D.
- 9 A Study of Mesoblastic Connective Tissue Proliferation in the Cortex of Cases Dying of Paresis. S. C. Fuller, M.D.
- 10 The Cellular Neuroglia of the Cerebral Cortex in Paresis and Senile Dementia as Displayed by the New Chloride of Gold Method of Ramon y Cajal. S. C. Fuller, M.D.
- 11 Multinucleation of the Purkinje Cells of the Cerebellum, with Reference to their Diagnostic Value for the Hereditary and Acquired Forms of Paresis. (A Critical Study of the Westborough Material and an Analysis of Published Cases.) S. C. Fuller, M.D., and Emily Robinson, Assistant in the Laboratory, W. S. H.
- 12 Obscure and Familial Syphilis. C. C. Burlingame, M.D., formerly Asst. Physician, W. S. H.
- 13 Serum Changes in Relation to Epileptic Attacks. P. G. Weston, M.D., formerly Investigator in Pathological Laboratory W. S. H.
- 14 The Results of Certain Intelligence Tests upon Committed Alcoholics and Drug Habitues. Eleanor A. McC. Gamble, Prof. Psychology, Wellesley College, Special Investigator, W. S. H.
- 15 A Study of the Results of Diversional Occupation in the Insane. H. I. Klopp, M.D., Supt., Pennsylvania State Hospital, formerly Asst. Supt., W. S. H.
- 16 A Statistical Study of Narcotic Habitues Admitted to Westborough State Hospital. Alice G. Cutler, M.D., Assistant Physician, W. S. H.
- 17 Is the Present Care of the Chronic Insane Adequate? H. B. Ballou, M.D.
- 18 Multiple Arteriosclerotic Coarse Brain Lesions Associated with Mental Symptoms Simulating Manic Attacks of Manic-Depressive Psychosis. M. M. Jordan, M.D., and S. C. Fuller, M.D.

FREE PUBLIC HEALTH TALKS

Under the Auspices of the Massachusetts Homœopathic Hospital, to be Given at the Department of Clinical Research and Preventive Medicine, Evans Memorial, 80 East Concord St., Boston, Mass., on Tuesday Evenings, At Eight O'clock.

1917

- Jan. 2. — "Exceptional Children." Miss Mary McSkimmon., Pierce School, Brookline.
- Jan. 9. — "Care of the Crippled." Charles F. Painter, M.D., Boston.
- Jan. 16. — "Deafness." Harold L. Babcock, M.D., Assistant Aural Surgeon, Massachusetts Homœopathic Hospital.
- Jan. 23. — "Fear and Its Relation to Disease." Edward B. Lane, M.D., Superintendent, Adams Nervine, Jamaica Plain.
- Jan. 30. — "Disease and Crime." Rev. Arthur J. Derbyshire, Advisory Committee, Massachusetts Parole Board.
- Feb. 6. — "Insight — the Keynote of Sane Living." Alberta S. B. Guibord, M.D., Instructor in Psycho-Analysis and -Therapy, Boston University.
- Feb. 13. — "Eye Strain." George A. Suffa, M.D., Ophthalmic Surgeon, Massachusetts Homœopathic Hospital.
- Feb. 20. — "Fatigue and Rest." Percy G. Stiles, M.D., Instructor in Physiology, Harvard University.
- Feb. 27. — "Conservation and Efficiency." Mr. M. W. Alexander, Efficiency Expert, General Electric Company, West Lynn.

- Mar. 6. — "Nursing." Mrs. Alice H. Flash. Superintendent of Nurses, Massachusetts Homœopathic Hospital.
- Mar. 13. — "The Practical Phases of Inebriety." Irwin H. Neff, M.D., Superintendent, Norfolk State Hospital.
- Mar. 20. — "Heart Disease." Conrad Wesselhoeft, M.D., Pharmacological Laboratory, Evans Memorial.
- Mar. 27. — "Constipation." Frederick B. Percy, M.D., Emeritus Professor of Clinical Medicine, Boston University.
- Apr. 3. — "The Problem of Child Bearing." Eliza B. Cahill, M.D., Boston.
- Apr. 10. — "The Crime of Uncleanliness." Lyman A. Jones, M.D., Director, Division of Hygiene, State Board of Health.
- Apr. 17. — "Grippe." Nelson M. Wood, M.D., Associate Professor of Clinical Medicine, Boston University.
- Apr. 24. — "Summer Care of Babies." Orville R. Chadwell, M.D., Assistant Visiting Physician, Children's Department, Massachusetts Homœopathic Hospital.

WARNING TO OUR SUBSCRIBERS

We wish to warn our subscribers not to give any credit or to make any payments to persons who represent themselves as agents authorized to collect subscription bills. We have recently learned of a fraud perpetrated upon us and a subscriber in the West, by two young men who claimed that they were in an educational contest and authorized to take subscriptions and collect payment on a long list of magazines and periodicals, and that such collections and subscriptions were credited to them as worth so many votes in the educational contest. They gave the name of a bogus "Society for Education." Needless to say, the whole thing was a straight fraud.

PERSONAL AND GENERAL ITEMS

The Pittsburgh Homœopathic Hospital has been successful in raising more than five hundred thousand dollars to pay for additions to the building, which is already crowded, and a new wing is to be added to the present structure.

Dr. Harry A. Watts (Hahnemann Med. Coll., Philadelphia, 1897) has removed to 606 Main St., Malden, Massachusetts, and has opened a Boston office at Warren Chambers, 419 Boylston Street.

Dr. Elwin D. Lane, Boston University, 1912, has removed his home and offices from Main St. to 9 Locke St., Andover, Massachusetts.

Dr. William H. H. Gary, class of 1904, Boston University School of Medicine, has removed from Winthrop, Massachusetts, to 1140 Columbus Avenue, Boston.

The *Gazette* learns with much regret that Dr. Edwin M. Kent, class of 1909, Boston University School of Medicine, is much out of health and is a patient at Saranac Lake, New York. For several years after his graduation Dr. Kent was in medical missionary work in China.

Dr. Franklin S. Jewett (Hahnemann of Philadelphia, 1894) of Providence, R. I., died on October 24 at the age of fifty-nine years. Dr. Jewett was a member of the Rhode Island Homœopathic Medical Society and also of the American Institute of Homœopathy.

Ex-President William E. Huntington, who since 1911 has been Dean of the Graduate School of Boston University, has resigned the latter office, and Professor Arthur W. Weyssse, head of the Department of Biology, was elected on December 14 as Acting Dean for the balance of the academic year.

Recent graduates of Boston University School of Medicine will learn with regret that Dr. Edwin M. Kent, class of 1909, is a patient at Saranac Lake, N. Y., bravely fighting against pulmonary tuberculosis. For several years after his graduation he was in medical missionary service in China, but has been in this country for about two years past. His condition is not hopeful.

Dr. Edwin Lighter Nesbit has removed from Bryn Mawr to the Coulter Building, Greensburg, Pennsylvania, for the practice of general medicine and pedology.

Dr. Huntington entered Boston University forty-six years ago as a student, and in 1904 he was chosen as President of the University, succeeding President William F. Warren, now Dean of the School of Theology. Upon his resignation from the presidency in 1911, Dr. Huntington was made Dean of the Graduate School.

Dr. George E. Evans of Branford, Connecticut (N. Y. Homœo. Med., 1896) has recently been a patient in Elm City Hospital, New Haven, for an operation on his foot.

Dr. M. Edna Wallace, class of 1915 Boston University School of Medicine, has been appointed school supervisor in Stafford, Kansas, her home town, where she is now practising. She has also been elected to membership in the county medical society, a real pioneer, as the society never before has admitted a woman to membership. The *Gazette* extends its congratulations to Dr. Wallace and wishes her the highest degree of success.

Dr. E. E. Case of Hartford, Connecticut, was the victim recently of an automobile accident and had a narrow escape from very serious injury. The automobile struck him as he was alighting from a street car, breaking several ribs. We are happy to report that Dr. Case has recovered sufficiently to resume his practice.

The *Gazette* is informed unofficially that Palo Alto, California, offers an excellent field for a good homœopathic physician. The place has a population of five to six thousand and is near Leland Stanford University.

The New York Medical College and Hospital for Women sends out word that there will be three vacancies there for the position of interne for the year 1917-18, one to begin June 1, 1917, and the other two July 1, 1917. The positions are open to women only, and carry board and lodging but no salary. Applications should be sent at once to Dr. Elizabeth Jarrett, Executive Officer, 418 Central Park West, New York City.

The second in the course of concerts for the benefit of Boston University School of Medicine is to be given on the evening of January 10, Jacob Sleeper Hall, corner Boylston and Exeter Streets, Boston, by Heinrich Gebhard, noted pianist, and Josef Malkin, first 'cellist of the Boston Symphony Orchestra. Tickets are for sale at the Medical School office or can be obtained of Dr. J. Emmons Briggs, Chairman of Finance Committee, 477 Beacon St., Boston, or at the door on the night of the concert. Give yourself and someone else an evening of fine music and at the same time help out the Endowment Fund. Price of tickets, one dollar each.

A young woman medical student is studying at the University of Minnesota who expects to practice with her father in Nome, Alaska. She is looking forward eagerly to her graduation six years hence, when she can return to her "Farthest North" and a strenuous out-of-doors life. She drives when at home a team of eight sledge dogs, and the prospect of being called from bed at midnight (and midnight lasts a long, long time at the latitude of Nome), with the temperature at 40 or 50 degrees below zero, to drive across packed and drifted snow wastes for twenty or thirty miles, inspires her with nothing but pleasure.

Boston newspapers of December 27 gave the shocking news of the death by fire, on December 26, of Dr. Sarah A. Jenness, a graduate of Boston University School of Medicine of the Class of 1889. The papers state that her home was burned to the ground and her body found in the ruins. Dr. Jenness was formerly in practise in Boston. She was in her seventy-fourth year, born in Wolfboro, N. H., a graduate of Abbott Academy, Andover, Mass., Class of 1864, and for twenty years before taking up the study of medicine taught school in Georgia, Baltimore, Abbott Academy, in the West. The last of her teaching was the subject of literature, in the N. E. Conservatory of Music. She was unmarried and for the past twenty years had made her home in East Wakefield, N. H.

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ORIGINAL COMMUNICATIONS

THE SURGICAL ASPECT OF CERVICAL ADENITIS IN CHILDREN*

By THOMAS E. CHANDLER, M.D., Boston, Mass.

Cervical adenitis is still a subject of perennial interest, although not at present coming up for consideration as often as in days gone by. This happy result has been achieved by a better understanding and treatment of tonsillar and adenoid disease, of aural and dental conditions. It is rare now to see a person on the street with large disfiguring scars or suppurating wounds, the "scrofula" of our youth.

Cervical adenitis or inflammation of the cervical lymph nodes is truly a reaction of the tissues to injury. Placed so as to interrupt any infection entering through the tonsils or about the teeth, they most graphically illustrate the saying of Prudden that inflammation is a "beneficent; a conservative activity" in its final analysis. Of what moment is it if a few glands break down and discharge, if the process is arrested at this point and the individual is saved?

In considering the surgical aspects of cervical adenitis we always look upon the infection as entering through the buccal or aural cavities.

The infection may be from the tubercle bacillus or from any of the ordinary pus-producing organisms, or a mixture of the two. The organism producing syphilis rarely causes trouble in children and can hardly be classed as an inflammatory disease.

Infection from tubercle bacilli, while being the most common, causes the least trouble so long as it remains a single infection. It is the secondary infection of a tuberculous focus which causes most of our troubles in tuberculous diseases, no matter whether it be a cervical, axillary, mesenteric, or any other kind of adenitis. So long as infection of any organ or tissue remains purely

* Read before the Mass. Surg. and Gyn. Society, Nov. 1916.

tuberculous, so long is there hope for that individual, unless we except the brain and meninges. A tuberculous focus plus pyogenic bacteria spells trouble.

The purely tuberculous glands generally become apparent slowly; they cause but little reaction, febrile or other. They are suddenly discovered, which often deceives us as to the rapidity of onset. They nearly always will disappear in the same way, but may continue to caseation or calcification. In this event they do no harm and may be allowed to remain without danger to the patient except that they furnish a particularly ripe field for the development of a secondary infection. Glands can be removed with greatest ease before secondary infection has occurred, and if an operation for prophylactic or cosmetic reasons is contemplated, it had best be done at this time. There is generally no haste in the matter, and a little delay may save an operation to the patient if he is put upon the usual anti-tuberculous treatment.

In event of operation, rigid care must be taken to obtain asepsis. Minus secondary infection, primary healing is the usual result. Bear in mind that the bacillus of tuberculosis is not pyogenic.

The case of mixed infection is the one most frequently met by the surgeon. In these cases the nodes have been infected by the bacillus of tuberculosis some time previously and have gone unnoticed or have given rise to no particularly alarming symptoms. Suddenly, as a result of tonsillitis, aural or dental infection, the nodes are burdened with additional responsibility and break under the strain. The infection may be mild or severe, depending upon the character of the infective organism and the resisting powers of the individual.

If mild, the additional burden may cause but slight additional enlargement of the glands plus a degree or two of fever. If severe, the symptoms rapidly grow alarming and call for immediate surgical interference. It is unusual for nodes once enlarged and secondarily infected to subside. When they do subside, it is likely because they have been entered by the bacterial poison rather than by the pyogenic organisms themselves.

Surgical interference, being practically inevitable, should be early and thorough, every gland removed under aseptic conditions and primary healing striven for, a result easily obtained if care be taken. It is remarkable how healing takes place under these conditions. It has been my practice for some time past thoroughly to flush out the wound with hydrogen peroxid and saline solution, then to suture by means of buried removable silk-worm gut, the wound being drained with a very small rubber tube or by gutta-percha tissue. Even when the parts

have been bathed in pus, it is the exception to have a wound heal other than primarily.

The pyogenic infection of cervical lymph nodes, when not engrafted upon a tuberculous process, generally follows close upon a tonsillitis or some other infection of the buccal or aural cavities, or upon the acute exanthemata. It is a very constant complication of scarlet fever and frequently requires surgical interference.

The nodes rapidly swell and all the acute symptoms are marked and often alarming. The temperature ranges high together with the pulse rate. Malaise is marked and the aspect is one of serious illness. Evidence of suppuration appears early, and with it a slight reduction in the severity of the symptoms, only to grow more alarming unless the pus is given vent.

The treatment of this last-named class of cases requires a high degree of judgment rather than that of skill. It is quite possible for these nodes to be infected with pyogenic agents and yet be able to control the situation and afterwards to subside and be ready for the next attack. The severity of the attack is in direct proportion to the virulence of the agent and the resistance of the patient. One patient may have the resistance to combat a virulent streptococcus and the next one unable to resist a weak staphylococcus. No one can set down a safe rule to follow, as each case must be judged on its merits after careful study.

If a case needs operative measures, it is best to make them thorough. In this class of cases we can rarely hope to remove all the enlarged nodes and secure primary healing. The symptoms are so severe and the danger of spreading the infection so great that it is best to temporize by simple incision with the idea of later returning to clean up the nodes if any remain swollen after a reasonable period has elapsed. Control the acute condition and rarely will any glands remain for excision. If any do, it is a pretty sure sign that they were enlarged previous to the recent acute onset and that what you have are the so-called tuberculous glands secondarily infected.

Do not condemn these little nodes as being only of use to the surgeon who pockets the fee for removing them. They are useful and are often sacrificing themselves in a perhaps vain attempt to save the individual. The way to keep them out of trouble is a simple one. Remove from them the burden of straining a foul buccal cavity and you have largely solved the problem. Removal of enlarged tonsils should always precede by several months the removal of enlarged glands. Even then, if they do not subside, it is best to scour the mouth for a possible nidus of infection about the teeth. Every enlarged

gland is not of necessity a tuberculous gland. It may be taking care of the toxins from some focus of infection in the mouth or ear distinctly non-tuberculous.

But these truths are so well-known to you that it seems but folly to reiterate. You have practised them so well that we rarely have a case these days, when in former times no general surgical clinic could be conducted without one or more cases each day.

Before closing, it would seem incumbent upon me to say a word about lympho-sarcoma, or Hodgkins' Disease. From statistics it appears that this dreaded disease is on the increase, and in diagnosis we must not make the mistake of confusing it with cervical adenitis.

Early radical excision is the recognized treatment for lympho-sarcoma. Therefore, if you have a case of enlarged glands, coming on rapidly without febrile activity and in an otherwise healthy individual, it is best to take out one or more glands for diagnosis.

Syphilis is another disease that is upon the increase, and we must eliminate the possibility of luetic adenitis by the Wassermann reaction.

Just in passing, let me state that although this very elementary paper was limited by its title to cervical adenitis, such truths as are contained herein can be applied to axillary and inguinal adenitis with equal usefulness. And similar principles govern similar conditions in adults as well as in children.

VACCINS*

By C. A. EATON, M.D., Boston, Mass.

Having personally prepared and administered the first vaccins or bacterins ever employed at the Massachusetts Homœopathic Hospital as therapeutic agents, a little over eight years ago, I felt more or less in duty bound to accept the invitation of your president to prepare a short paper on the subject of "Vaccins, their value as a curative agent, and the relation of the autogenous to the stock vaccin."

The first few years of my experience were confined almost exclusively to patients in institutions and out-patient clinics. During the past five years, opportunity has been afforded to study a large number of cases from the standpoint of the general practitioner, also as a consultant. You may ask what difference there might be as regards whether a given patient

* Read before the Boston District of the Mass. Hom. Med. Society, Dec. 7, 1916.

received vaccin treatment in a hospital or at home. To me there were many conditions that were entirely different, some of which are obvious, others manifested themselves in given cases.

In an institution, the immunologist is requested by the attending physician to give a certain patient the benefit of vaccins if such seem indicated. Cultures are taken and the proper vaccin prepared and administered. All the while, the attending physician is prescribing and caring for the patient. Each physician has a very limited knowledge of what the other is doing, except what is recorded in the bedside notes. I refer particularly to ward patients in a large hospital. In the case of patients sent to the clinics, a little more intimate knowledge of their condition and needs may be ascertained, but here one sees the patient but once each week and the physician knows very little of what the real workings of their internal economy may be, largely owing to the fact that no systematic thorough examinations are made prior to the administration of vaccins.

Even the best autogenous or stock staphylococcus vaccin will not cure or very materially benefit a carbuncle associated with diabetes, unless the underlying cause is first detected and treated at least simultaneously.

Chronic, or even acute, infections will not respond to vaccins if the system into which they are introduced is handicapped by a sluggish circulation, a high arterial tension, chronic constipation with autointoxication, kidney lesions, etc. The above complications, together with many more which might be enumerated, should be taken into consideration when determining the dosage as well as the interval for the administration of vaccins.

Personally, I believe that accurate knowledge should be obtained as to the condition of a patient's heart, blood, and kidneys before calling upon these organs to absorb, utilize and eliminate bacterial toxin introduced into the tissues in excess of that with which the patient is already, to a certain extent, autoinoculated by reason of an infection being present.

Since so many factors enter into the condition called infection, we are of necessity dealing with a very complex problem. I refer to the natural resistance of the patient, overwork, fatigue, virulence of the infecting organism, habits, diet, occupation, mode of living, history of previous illnesses with their after-effects, all of which contribute to the degree of lowered resistance which we attempt to raise actively with bacterial vaccins or toxins.

When we consider that, as yet, even after years of care^{ful} study and research, the exact *modus operandi* of bacterial toxi^{ns}

introduced into the human organism has not been definitely determined, the promiscuous use of such therapeutics should be greatly deplored.

Not alone this, but the size of the dose is at such a variance among different immunologists of repute, that the general practitioner is at a loss to know what is wise or even safe to administer for a given infection.

What is even more deplorable is the extensive commercialization by drug houses and laboratories which this still new and little understood form of medication has received.

True it is that vaccins have conclusively demonstrated their value particularly in homœopathic therapeutics. They have not, as yet, however, demonstrated their entire worth.

They will stimulate the production of protective antibodies against definite infections, when judiciously prescribed. It has also been shown that some drugs in certain strengths possess similar properties.

I shall not attempt to discuss the various theories of immunity which are fast undergoing great changes as compared with those advanced a few years ago. Neither shall I dwell upon the laboratory or research side of the question, purposely trying to avoid any pretense at a scientific dissertation.

Vaccins in prophylaxis have long since established an enviable reputation for themselves, as you well know. The remarkably healthy condition of State troops from all parts of this country upon their recent return from a climate and conditions conducive to disease is a wonderful tribute to the immunizing properties of bacterial toxins against infection, particularly typhoid. The comparative rarity of typhoid and tetanus in the present European war is almost entirely due to the protection afforded by vaccins and antitoxin. We know that vaccins protect when administered to a presumably healthy organism, although even here there may be contraindications for their use.

We do not know how small a dose, or how often repeated, will protect for how long. We have no definite knowledge as to how large a dose may cause a so-called "physiological" reaction. Some of the established prophylactic doses of vaccin, especially typhoid, have caused such violent reactions as to seem more or less dangerous. In fact, many laboratory workers agree that four or five smaller inoculations of typhoid vaccin administered at shorter intervals offer equally as good, if not better, protection for as many years as the so-called army dose. With these smaller doses the patient suffers practically no discomfort and escapes the possibility of a severe systemic disturbance.

When applied to the field of therapeutics, the subject of vaccins occupies a chapter in medical literature, as long and variable as it is interesting. The subject is not, however, confined to literature. In actual practice today there are wider gaps with greater variances of opinion between laboratory men as regards the uses and abuses of vaccins, than exist between homœopaths and allœopaths as regards drug prescribing.

To whom, then, must the general practitioner appeal for aid should he feel that one of his patients might possibly be benefited by the use of bacterial toxins?

A great many physicians have the idea that all vaccins are essentially alike, and that they differ only in respect to the kind of organism employed. There are fundamental differences in vaccins, particularly as to their preparation, potency, standardization, and sterilization.

Take, for instance, the simplest case of furunculosis; you will be advised to administer from 50 to 500 million staphylococci as an initial inoculation, according to who is prescribing. Some will insist on an autogenous vaccin prepared from the patient's discharging boil; while others will maintain that equally good results may be obtained from the stock preparation which may be procured in many varieties from the nearest drug store.

Again, in the case of tuberculin, the average dosage as recommended by half a dozen of the most reliable commercial houses in this country is from one tenth to one ten-thousandth of a milligram, while Wright reports most striking results from one five-hundred-thousandth to one millionth of a milligram repeated at two and three week intervals.

As to the relative value of the stock vaccin as compared with the autogenous, much might be said. My own experience with typhoid vaccin, first in your own institution, later in private practice, as well as in consultation with other physicians, has fully convinced me that typhoid fever is materially altered from its usual course by the use of typhoid vaccin therapeutically. Thus far, the stock preparation has been used almost exclusively. We are not yet sure, however, that with improved methods of obtaining early blood cultures in this disease, autogenous preparations might not prove more beneficial.

In cases of tuberculosis, it would not be at all feasible, and, in most instances quite impossible, to attempt the use of an autogenous preparation of tuberculin. On the other hand, in a recent case of puerperal septicæmia seen with another physician, cultures from the blood stream as well as from the uterine cavity showed a growth of pure streptococcus. My belief is that the autogenous vaccin prepared from these cultures saved the patient's life, while the benefits which could have been

derived from any stock streptococcus would have been extremely doubtful.

In severe cases of acute tonsillitis, cultures taken from the highly inflamed tonsils, and the first growth employed in preparing an autogenous vaccin, provided the infection is streptococcic or pneumococcic, will, in most cases, prove decidedly beneficial. The effects of such an autogenous preparation are, to my mind, far-reaching, as the active immunity thus produced may save the patient repeated attacks of throat infection as well as rheumatism, cervical adenitis, or even endocarditis. Conversely, in cases of acute and even chronic rheumatism, cultures taken from the throat will frequently reveal streptococcus carriers, when an autogenous vaccin will materially benefit the rheumatism.

In such instances, I do not believe we have any right to expect Messrs. So & So's polyvalent stock preparation of several kinds of organisms, compounded into a so-called rheumatism or coryza or any other fanciful vaccin, will benefit our patients. Neither do I think it scientific medicine. It is decidedly poor homœopathy.

In many chronic infections there seems to be something quite promising in the value of complement fixation from the clinical standpoint. Miller has recently shown that in obscure cases of tuberculosis, complement fixation seems to have as definite a clinical value as in syphilis and gonorrhœa, both from the standpoint of diagnosis and prognosis. If this can be definitely proven, we will have made a real scientific gain in the rationale of vaccin therapy. It would also seem to supply the missing link whereby the *modus operandi* of this form of therapeutics can be clearly demonstrated according to the law of homœopathy. Certainly there is no greater or more promising field for truly scientific research today than along these very lines.

What greater tribute to the underlying principles of homœopathy could be paid than to prove this problem right in your own research laboratories.

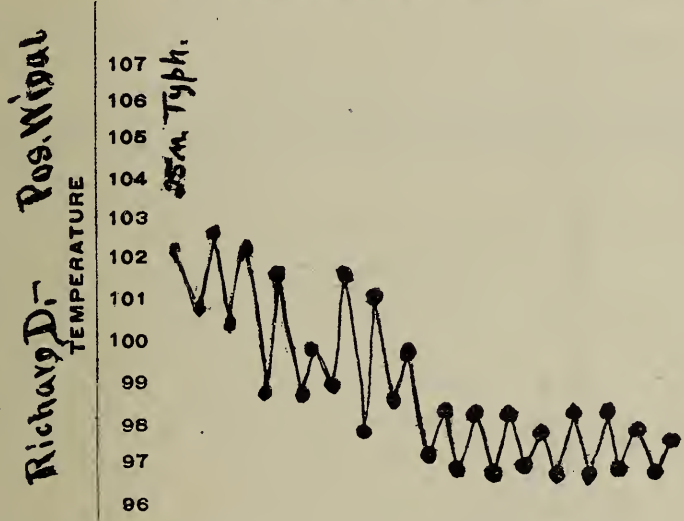
This all absorbing topic of vaccin, toxin, and serum therapy to my mind is a version of Hahnemann's "psora" and "vital force" theories. It is all summed up in the one word "immunity." It matters not whether active immunity is produced by drugs of high or low potency, or by vaccins in maximum or minimum dosage, so long as immunity is produced. We have been led to believe, however, that the minimum dose of the single remedy, when properly prescribed, will yield best results. The same holds true of any other form of medication, including vaccins. The smallest possible dose of an autogenous vaccin

ought theoretically to be the ideal prescription for any specific infection *per se*. It ought to be the duty of every homœopathic laboratory to prove this law. If Hahnemann had had the facilities and the instruments and methods of studying disease, the opportunity of measuring the degree of resistance, that we have today, he would have put us all to shame, and I believe would have established his visionary laws beyond all skepticism which exists even at the present time.

In order to demonstrate more clearly my ideas of the value of vaccins from the clinical side, I will cite briefly a few cases and illustrate my points with slides on the screen.

Case 1. Richard D., age 7. Physician reports "a moderately severe case of typhoid fever apparently much benefited by a single inoculation of

Sept	DAY OF MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1916	DAY OF DISEASE	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
	TIME	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.



vaccin. Hardest struggle to control the boy's appetite. Felt free from malaise and was crying for something to eat 48 hours following inoculation."

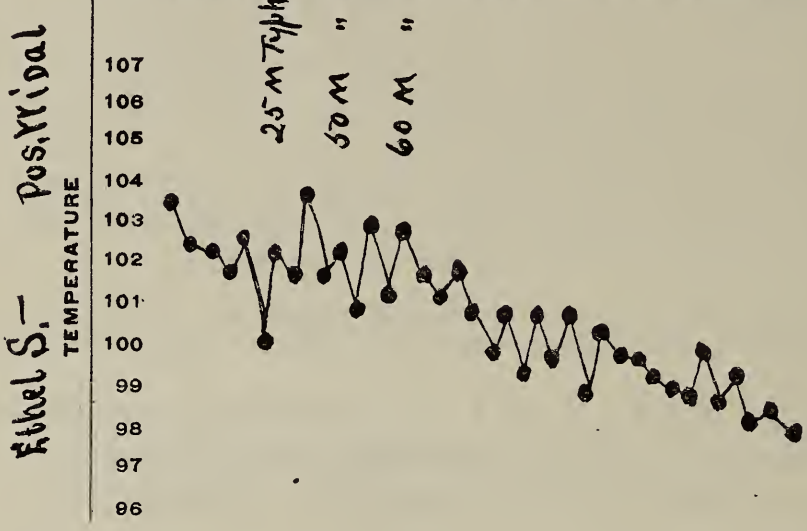
Case 2. Ethel S., age 25. Positive Widal. Was a well-marked case clinically with severe symptoms. Following the three inoculations shown in the chart above, all discomfort rapidly subsided and an unusual convalescence terminated this case with marked freedom from sequelæ.

Case 3. Frank M., age 63. Had two previous attacks of erysipelas, eight and ten years ago, of unusual severity. Was told by his physician that he never would survive another attack. Started in region of left eye, and spread so rapidly that in 72 hours the entire face was involved. Eyes so swollen and œdematous that the blisters burst.

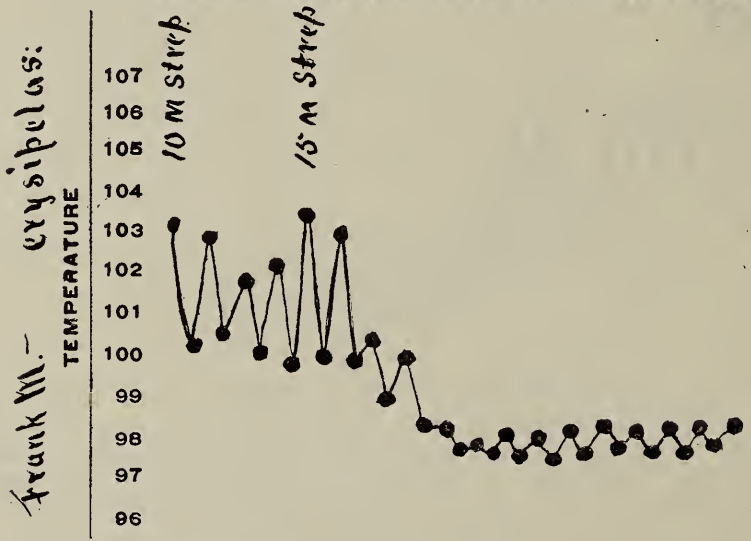
The above chart speaks for itself. Patient made a rapid and uneventful recovery.

Case 4. Mrs. O., age 35. Infected cheek, followed by sore throat with enlarged cervical glands. Throat cultures showed a streptococcus infection which proved to be of such severity as to cause constitutional symptoms to develop from the toxæmia. Almost immediately following this attack, acute iritis developed. An autogenous streptococcus vaccin seemed to clear up the whole situation in an unusually short time. The eye specialist reported remarkably rapid improvement in eyes. Glands disappeared promptly.

Aug 1916	DAY OF MONTH	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	DAY OF DISEASE	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
	TIME	A.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.



Feb 1916	DAY OF MONTH	24	25	26	27	28	29	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
	DAY OF DISEASE	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
	TIME	A.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.



Case 5. Mrs. M. P., age 32. (Puerperal septicæmia.) About five or six days following a hard labor; usual chills followed by hyperpyrexia. Patient anæmic. Blood count: Hæmoglobin, 75 per cent; erythrocytes, 4,500,000; leukocytes, 18,000; neutrophils, 88 per cent. Blood culture showed streptococci. Intrauterine culture showed streptococci. An autogenous vaccin was prepared, and the uterus swabbed with iodin. Patient made a good recovery. Attending physician was positive that vaccin saved patient's life.

Case 6. Mrs. A. (Chronic rheumatism.) Enlarged joints, unable to use hands or feet for some time, confined to bed. Had been treated for nearly three years by several physicians, but growing worse. Had several attacks of tonsillitis not cured by local treatments. Cultures showed streptococci. Heart non-compensating. Urine at one time 9 ounces in 24 hours. Autogenous vaccin prepared and administered in doses of 2, 5, 10, and 20

million at five-day intervals. Patient out of bed, able to ride, and can use hands for knitting. Swelling in joints subsiding.

Case 7. Miss H., age 65. (Chronic enterocolitis.) After several weeks' stay at Peter Bent Brigham Hospital, was discharged as incurable and hopeless. Virulent strain of streptococcus isolated from bloody discharge from bowels. Colon bacilli very active. Autogenous vaccins have so far benefited patient as to enable her to go out for an occasional ride, and she is up and dressed every day. Condition of bowels much improved.

Case 8. Mrs. C. (Chronic laryngitis.) Singer. Vocal cords badly congested, swollen, œdematous. Systemic symptoms: loss of weight, malaise, unable to sing, at times aphonia. Treated by throat specialist for one year with local treatments, with no results. Autogenous vaccins from throat cultures completely restored singing voice. Patient apparently perfectly well.

Case 9. Miss A. D., age 36. (Tuberculous adenitis.) First signs of enlarged glands fifteen years ago. Has had numerous operations for removal of broken-down glands in neck and axilla, both sides. Last operation in June, following which, more enlargements appeared before wounds healed. Minute doses of tuberculin, together with violet ray locally, not only controlled active condition, but nodules are gradually disappearing. Physical and nervous condition markedly improved.

In conclusion, the few points which to me seem clearly demonstrated and worthy of further consideration are as follows:

Vaccins are capable of producing active immunity against specific infections.

The dosage varies greatly in different individuals, but in a large majority of cases the amount administered is too large.

The mixed vaccin is not a scientific preparation, and its use is decidedly uncertain.

An autogenous vaccin is the ideal form of therapeutics for both acute and chronic infections.

Stock vaccins as prophylactic agents do offer protection against certain definite infections.

Much further study is needed to establish a rational basis for this most promising form of therapeutics.

PRACTICAL WAYS OF INCREASING THE IRON CONTENT OF THE DIET*

BY CAROLINE L. HUNT, Scientific Assistant, Office of Home Economics, States Relations Service, U. S. Department of Agriculture, Washington, D.C.

This paper does not deal with iron metabolism nor with the comparative availabilities of the iron compounds present in different food materials. Nor is its purpose to recommend that a greater effort be made to introduce iron into the diet. It simply brings together a few recipes for iron-rich dishes which were used by the writer while, for experimental purposes, she was living on a special ration containing very little fat, and was at the same time trying to keep up the iron content of her food

* Presented before the American Institute of Homœopathy, at Baltimore, June, 1916.

in the hope of avoiding the anæmic condition which sometimes follows the use of certain special diets.

The ration, which is of interest here only as showing how a large amount of iron can be crowded into a low calorie diet, consisted of 10 food materials only. It was taken for 9 days, during which about 4 pounds in weight were lost, and was then abandoned, not because it proved unpalatable or monotonous, but because of the inconvenience that always attends the preparation and use of special diets, and because there was no longer reason to continue it for experimental purposes.

The experiment was unaccompanied by blood tests or by analyses of undigested residues. Its only value, therefore, lies in suggesting practicable iron-rich rations for use in experiments on iron metabolism. In the absence of any exact information about the fate in the body of the iron compounds of food, it may possibly be useful also in preventing or overcoming anæmia. The dishes of which it was composed include soups, meats, sauces, and desserts. These may be used together to form a diet exceptionally rich in iron or may be introduced from time to time into an ordinary diet to insure a little extra supply.

The following table gives the food materials used, the iron per 100 calorie portion, the amount of each eaten per day, and the iron provided by each:

FLESH REDUCING IRON-RICH RATION HAVING FUEL VALUE OF ABOUT 1,900 CALORIES.*

Iron Content 30 Milligrams.

Food Materials	Iron Per 100 calorie portion	Weight	Fuel Value	Protein	Fat	Carbo- hydrates	Iron
	Milli- grams						
Round of beef (without visible fat)	3.0	6 170	200	40.4	4.3	—	6.0
Whole wheat bread	0.6	6 170	414	16.5	1.5	84.5	2.4
Egg yolks (8 yolks)	2.3	5 144	514	22.0	46.2	—	11.8
String beans	3.8	4 113	47	2.6	0.3	8.4	1.8
Lettuce	3.8	2 57	11	0.7	0.1	1.4	0.5
Celery	2.7	2 57	11	0.6	0.1	1.9	0.4
Pineapple	1.1	8 227	98	0.9	0.7	22.0	1.1
Dates	1.0	2 57	198	1.1	1.6	44.7	2.0
Figs	1.0	2 57	181	2.4	0.2	42.3	2.0
Raisins	1.0	2 57	196	1.5	1.9	43.4	2.0
			1,870	88.7	56.9	248.6	29.8

It will be noticed that the diet had a fuel value of less than 1,900 calories and contained about 30 milligrams of iron, or about 1.6 milligrams per 100 calorie portion, as distinguished

* Figures based on Bulletin 185, Office of Experiment Stations, U. S. Department of Agriculture and Food Products by H. C. Sherman,

from 0.5 milligram in the ordinary mixed diet. In order that it might, in spite of these facts, provide sufficient protein and also be sufficiently fat and sweet to be palatable, the food materials were selected from the following groups, which are represented in all well-chosen diets.

Group 1. In which protein provides a larger percentage of the fuel than it does in the diet as a whole. This includes milk, cheese, eggs, and most of the flesh foods.

Group 2. In which fat provides a larger percentage of the fuel than it does in the diet as a whole. This includes butter, cream, oil, fat meats, and egg yolks.

Group 3. In which starch provides a larger percentage of the fuel than it does in the diet as a whole. This includes cereals and potatoes.

Group 4. In which sugar provides a larger percentage of the fuel than it does in the diet as a whole. This includes sugar (cane and maple), syrups, honey, candy, figs, dates, raisins, and other dried fruits.

Group 5. In which mineral water and mild acids are large in amount, as compared with fuel value. This includes fresh vegetables and fruits.

The foods in each of the above groups which contain most iron are:

Group 1. The lean portions of flesh foods which have little fat between the fibers, particularly round of beef without visible fat and certain other cuts of beef, veal, lamb, chicken, cod, haddock, white fish, and others.

Group 2. Whole wheat preparations, oatmeal and potatoes.

Group 3. Egg yolks.

Group 4. Dried fruits, particularly figs, dates and raisins.

Group 5. Spinach, dandelion greens, string beans, lima beans, asparagus, cabbage, lettuce, celery, pineapple, strawberries, huckleberries and grapes. All fruits and vegetables are in fact good sources of iron, not so much because they contain more pound for pound than many other food materials, but because they contain so little besides that they can be eaten in almost unlimited quantities without effecting greatly the fuel value of the diet. This is especially true of the succulent vegetables ordinarily used for salads, but also to a great extent of other vegetables and of fresh fruits, though the latter have a higher fuel value owing to the sugar they contain. Though all the vegetables are good sources of iron, spinach occupies a place by itself, having 2 or 3 times per 100 calorie portion as any other.

It may be noted that the foods chosen for the above ration were the highest in their respective groups with the exception of

string beans, which were used in place of spinach because of personal preference.

This diet may be brought up to ordinary fuel value by the addition of butter, sugar and potatoes in the amounts usually eaten. Even if the calories were raised to 3,000 by means of the addition of foods which, like those mentioned, contain little or no iron, there would still be one milligram of iron per 100 calories, or twice as much as in the ordinary mixed diet.

SUGGESTIONS FOR USING THE ABOVE FOOD MATERIALS

Iron-rich Soups.

Palatable soups may be made out of an iron-rich vegetable, whole wheat bread, meat stock, and egg yolks. An ounce each of egg and bread ($\frac{1}{2}$ slice) in a cupful of liquid thickened with 1 egg yolk is enough for one person and contains 2 or more milligrams of iron, depending on the vegetable used and whether water or meat stock is the liquid. Soups made with vegetable pulp and milk, thickened with flour and enriched with butter, contain very little iron, particularly if the liquid in which the vegetable is cooked is thrown away.

Iron-rich Meat and Fish Dishes.

Round of beef has always been recognized as an important food for the anæmic. If all superficial fat, which contains little iron, is cut off, and the meat is chopped and mixed with egg yolks, which provide fat as well as iron, the iron content of a given weight may easily be doubled.

The lean portions of most lean flesh foods are rich in iron. If these are served with a sauce made of egg yolks, the necessary fat is supplied and much iron also added. A sauce corresponding closely with the ordinary Hollandaise sauce may be made by allowing 2 egg yolks and a teaspoonful of lemon juice to $\frac{1}{4}$ cupful of water. When cold this sauce can be used for salad dressing. The flavor may be varied by the addition of finely chopped chives, parsley, pickles or olives, capers, horse-radish and anchovy sauce or tomato juice boiled down till thick; or tarragon vinegar may be substituted for lemon juice. In cases of persons whose digestion is impaired, such substances, of course, cannot be used.

Iron-rich Substitutes for Butter and Cheese.

A custard made of egg yolks with an allowance of 1 table-spoonful of liquid to each yolk may be used with bread as a substitute for butter or cheese. If used for the latter purpose it should be well-seasoned with some of the substances mentioned for seasoning the iron-rich sauces.

Iron-rich Sandwiches.

There is a large variety of sandwiches which can be made from whole wheat bread, lettuce and egg yolks, either hard-cooked or made into salad dressing. Where yolks are used in the form of cheese or butter substitute and also in the form of salad dressing in these sandwiches, as they well may be, the iron content is very high.

Other Uses For Egg Yolks.

Egg yolks may be satisfactorily scrambled if mixed with water in the proportion of 1 tablespoonful of water to each yolk. No additional fat is needed in cooking. Croquettes of hard-cooked eggs may be made by mashing and seasoning them and adding enough raw egg yolk to "bind" them.

Iron-rich Sweets.

Equal weights of dates, dried figs and seeded raisins finely chopped and mixed make a good confection. Each pound of such a sweet contains 16 milligrams of iron, while ordinary candy contains none. This mixture at ordinary prices costs about 15 cents a pound. It may be used in place of marmalade for breakfast and as a filling for sandwiches. If a thin slice of bread is used, and large amounts of marmalade, it makes a good substitute for cake.

A thick custard made of egg yolks and sweetened with dates may be frozen and used as ice cream. Orange juice helps to mask the flavor of the egg.

CONGENITAL DEBILITY AS A FACTOR IN INFANT MORTALITY*

By C. SIGMUND RAUE, M.D.

Professor of Pediatrics, Hahnemann Medical College, Philadelphia

According to recent statistics¹ a child born in 1916 has about ten times the expectation of life as its predecessor of 1886. This great saving in the lives of infants has been mainly achieved by brilliant and persistent efforts in child welfare work, especially in the advances that have been made in infant feeding, in local and state regulation of the milk supply as well as private efforts in this direction, and in the propaganda for the encouragement of maternal nursing.

In spite of the directly preventable cases of infant mortal-

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ity, however, there remains a prominent factor which is not altogether controllable. I refer to the cases of so-called *congenital debility*, which contribute a large share to the death rate in infant mortality statistics.

Holt and Babbett² in a report on ten thousand consecutive births at the Sloane Hospital for Women, New York, cite a total of 143 deaths from congenital weakness, in a grand total of 291 deaths from eleven tabulated causes.

Congenital debility, *debilitas vitæ*, is defined by von Reuss³ as a condition in which an infant reacts pathologically to physiological stimuli; it becomes injured and its development is hindered by stimuli which are readily overcome by a healthy organism. This deficient resistance and tolerance may be gradually overcome; on the other hand it may be of such a degree as to be incompatible with a continuance of life. Evidently the condition is one of function, but it must be of hereditary origin, whether nutritional, toxic or the transmission of a frail, degenerate physical type.

The diagnosis of congenital debility is undoubtedly erroneously made in many instances, especially when there is lacking sufficient evidence of a pathological condition for making a correct diagnosis. We must be careful to differentiate this purely constitutional defect from such conditions as prematurity, accidents of labor, atelectasis, congenital heart disease and congenital syphilis.

The congenitally feeble infant is underweight and undersized but not to the degree of the distinctly premature infant. An infant may be safely considered premature if it measures less than 18 in. and weighs under 5 lbs. Such an infant, however, may thrive splendidly under proper care while another infant near the average size and weight may be unable to digest and assimilate its normal food and may succumb to its environment as soon as it is deprived of the direct nourishment of the placental circulation and the protection of its mother's womb.

These infants are usually pale and do not present the erythema (rubor) characteristic of the normal infant, which is especially noticeable on crying. The cry is weak and the infant may also fail to nurse properly; indeed, this is one of the chief difficulties encountered in these cases, as a result of which they promptly develop inanition.

In the ætiology of congenital debility factors may enter which cannot be corrected, namely, extreme youth or age of either one or both parents; excessive child bearing; frailty of constitution of the mother; pernicious vomiting and nephritis of pregnancy. On the other hand, many of the conditions associa-

ted with child bearing which tend to result in handicapped offspring and premature labor can be remedied or entirely overcome. This thought has opened up a new field for the hygienist and social worker, and of late years almost every well-equipped maternity hospital and settlement house has its prenatal clinic. Organized charity may here be brought into play and eliminate the element of insufficient food and excessive labor on the part of the mother. Legislation in some countries prohibits women in the factories during pregnancy.

The prospective mother, as soon as pregnancy has begun, is referred to a physician who learns the history of past illnesses and confinements and who makes a careful examination of the teeth, heart, lungs, blood pressure, and urine. Exact methods of studying the pelvis and size of the child's head may become a prominent factor in reducing the number of serious forceps operations. The early recognition of constitutional diseases in the parent may be the means of preventing the same from developing in the offspring. The improvement in the personal hygiene of the mother and the betterment of the home surroundings will reflect decidedly to the benefit and the chances of the coming infant. A full discussion of the development of the plan for prenatal care in the United States can be found in the *Trans. Amer. Assn. for Study and Prevention of Infant Mortality, 1914.*

¹ Bolduan, Bulletin N. Y. State Board of Health, April, 1916.

² *Trans. Amer. Assn. for Study and Prevention of Infant Mortality, 1914.*

³ *Die Krankheiten des Neugeborenen, Berlin, 1914.*

TRANSFUSION OF BLOOD

By SANFORD B. HOOKER, A.M., M.D., Boston, Mass.

Under the difficult conditions imposed by the older methods, the use of blood transfusion was limited to rare emergencies. Carrel's work on the suture of blood vessels and Crile's transfusion by means of metal cannulas served to arouse an interest which has been steadily widening and an attention which has led to the development of far simpler technics. These new methods involve practically only vein puncture and in many other ways are much superior to the complicated anastomotic procedures: anæsthesia is not required—an incision being rarely necessary; the amount of blood transfused is readily measurable, so hypertransfusion becomes less likely; mutilation of vessels is minimized and repeated transfusions into the same vein are made possible, since the necessity of ligation is done away with except perhaps when the veins of infants have to be isolated; donors are more easily obtained; immediate emergencies can be more quickly met and there is a large saving of time to the donor, the recipient, the operator and his assistants.

THE DANGERS OF TRANSFUSION AND THEIR AVOIDANCE

The mechanical dangers are so obvious and so very rare in the experience of intelligent operators that they only need be mentioned. Thrombus formation, which had to be reckoned with in the early methods, has not been reported in any case transfused by the syringe methods. Introduction of an embolus, air or blood clot, is avoided by precautionary attention and observance of simple technical manœuvres.

The dilation of an already enfeebled heart by rapid transfusion of too large an amount of blood, or by too great pressure exerted during the introduction, is much less likely to occur with the modern procedures that allow accurate measurement of the amount transfused and that do not require undue haste to avoid coagulation in the syringe.

The very real dangers, however, which are due to the use of a donor whose blood is incompatible with that of the donee, need to be very thoroughly understood. Of these dangers, the chief, and only one which has been carefully studied, results from the use of bloods which when mixed lead to agglutination or lysis, or both, of the erythrocytes.

Isohæmagglutinins and isohæmolysins. The isohæmagglutinins were first described in human blood in 1900 by Landsteiner and Shattock independently. Their work and the sub-

sequent investigations of others soon demonstrated that all human bloods belong to four distinctly separable and, for each individual, permanent, groups, according to the way in which they interagglutinate. It has been noted that these agglutinins are inheritable according to the Mendelian law—a fact of great interest as being the only instance in which the male parent is a factor in the transmission of circulating antibodies. The grouping is not uniformly established at birth, however, and only in about 85 per cent. at the age of 1 to 2 years. It is usually settled by the time the child is 10 years old.

Besides the isohæmagglutinins some bloods contain isohæmolysins. Whenever lysins are present agglutinins always accompany them, but the reverse is not true. In view of this fact, the lysins are useless for classificatory purposes and the grouping, as stated above and illustrated below, is based upon interagglutination. The following table illustrates the usual arrangement of the groups.

TABLE OF ISOHÆMAGGLUTININS*

Sera

GROUP	<i>Sera</i>			
	I	II	III	IV
I	0	0	0	0
II	+	0	+	0
III	+	+	0	0
IV	+	+	+	0

+ = agglutination
0 = no agglutination

The cells of the first group are not agglutinated by any normal human serum; group I sera, however, agglutinate all other cells. The cells of the fourth group are agglutinated by sera from the other three groups, but group IV sera do not agglutinate any cells. Groups II and III are reciprocals. Humans fall into the groups in about these percentages; Group I, 43; II, 40; III, 7; IV, 10,

A number of acute deaths and very serious non-fatal reactions, especially with hæmoglobinuria, following transfusions have been reported. From careful observations of these accidents, by theoretical considerations and by experiments, it has been determined that these severe or fatal reactions with hæmoglobinuria occur only when bloods are mixed that are incompatible for the reason that lysins are present.

*Some authors have reversed the numbering of groups I and IV.

The lysins are much more toxic than are the agglutinins, and their presence, especially in the recipient's serum, is an absolute contraindication to transfusion from those prospective donors whose cells are laked by that serum. It is strongly inadvisable to use as a donor one whose serum hæmolyzes the cells of the recipient, but the reaction in such a case is less likely to be serious for these reasons: the blood of the donor, and with it the lysin, is considerably diluted by the recipient's blood; moreover there exist rather weak antihæmolysins in the serum of blood whose cells are hæmolyzed by the serum of another group, and the recipient's antihæmolysins are comparatively little diluted by the transfusion. In case that the recipient's serum is lytic to the donor's cells, the donor's antihæmolysin is markedly diluted when introduced into the recipient's circulation, and this means of protection becomes nullified.

With regard to the mixing of agglutinative with agglutinable bloods, it might be deduced that extensive embolic and thrombotic processes would ensue; none such, however, has been demonstrated. But, agglutination is likely to, and frequently does, vitiate the results of transfusion because the agglutinated cells are rapidly phagocyted, removed from the circulation and the purpose of their introduction defeated.

It is essential, then, for best results, to use donors who belong to the same "group" as does the recipient. In case of desperate emergency it is important to remember that the agglutination of the donor's cells by the recipient's serum is more important to *avoid* than the reverse.

The untoward symptoms that result from lysis and agglutination can be absolutely eliminated by careful preliminary tests, in vitro, under the supervision of a competent serologist.

A number of "rapid" and "simple" technics have been devised for the purpose of detecting isohæmagglutination and isohæmolysis. "Final readings" are made at various times, 15 minutes to 18 hours, after the tests are set up. The early readings are usually made microscopically. Whole citrated bloods may be mixed or the serum may be separated and the cells washed before the mixtures are made. The latter procedures are to be preferred except that they require more time and manipulation. Any of these technics is probably trustworthy for the avoidance of very severe or fatal reactions. However, it is instructive to compare the 9 per cent. of *mild* reactions (chill and fever) obtained by Lindeman, who personally supervised the macroscopic readings of his tests, with the 25 to 35 per cent. of *mild* reactions reported by a number of other

observers who used different "simplified" methods of determining lysis and agglutination.

Usually a donor who belongs to the same "group" is chosen. When doing transfusions on infants, whose grouping may not be fixed, it is advisable to test each prospective donor's blood with the blood of the infant. Theoretically the mother's blood may be incompatible because the child may inherit the agglutinating or lytic factors from either parent, but Cherry and Langrock, as a result of thirty-four negative tests on mothers and babies, have concluded that all mothers can be used as donors for their infants.

The blood of patients who are to be transfused repeatedly must on each occasion be tested with the bloods of prospective donors. This is necessary because "immune," as distinguished from "normal," lysins are sometimes developed by the recipient; hence a donor who was satisfactory for the first transfusion may be wholly unsatisfactory for the second because the recipient's serum may have become lytic as a result of the first injection of alien blood.

Incompatibilities other than from agglutination and lysis. While it is universally conceded that hæmolysis and hæmagglutination tests are of primary importance, their inadequacy is suggested by numerous citations of toxic reactions varying in degree of severity which have been observed when these tests were wholly negative and no lysis or agglutination occurred *in vivo*. Reasoning by analogy from recent discoveries in anaphylaxis, colloid chemistry and coagulation processes, Satterlee and Hooker have considered three hypotheses, any or all of which may be elucidative of these reactions of mysterious origin.

1. "It is possible that the trypsin-antitrypsin balance in the circulating blood of the recipient may be so disturbed by the commingling with the donor's blood as to result in the immediate formation of serotoxin (anaphylatoxin) from cleavage of serum protein."

2. "It is possible that the action of protective colloids in the body cells of the recipient may be so disturbed that these cells are thereby exposed to a reaction of antigen and antibody present in the circulation of the recipient but harmless to the protected cell."

3. "There is possibility of a toxic disturbance in the circulation of the recipient by the introduction of blood which, though perfectly fluid, may nevertheless be undergoing incipient coagulative changes due to the physical influences to which it is subjected in process of transfer."

Reactions that may be due to such causes, *i.e.*, other than

agglutinative or lytic incompatibility, are infrequent and seem to occur only with the transfer of a large amount of blood. Lindeman, in his extensive experience, has noted that even *mild* reactions, chill and fever, do not occur when the amount transfused is less than 800 cc. As it is very rarely necessary to use more than this amount at one time the possibility of such reactions need occasion little uneasiness.

It is important to bear in mind the chance of transmitting disease from donor to recipient. Donors should, of course, be as "normal" as possible and must have negative Wasserman reactions. A Wasserman reaction may be negative even though a primary sore (and infective blood) be present.

TECHNIC OF TRANSFUSIONS

At present it is impossible to say just what method of transfusing is the best. Each method has its enthusiastic followers. Among the devices which have been used with success in numerous cases are the syringe cannula set of Lindeman; paraffined cylinders or bulbs, Unger's syringes with a four-way stopcock which allows connection of either syringe with the vein of either donor or donee; ordinary large syringes used for aspirating and injecting which may contain a proper amount of some anticoagulant, or which may be filled with blood from the donor's vein, the blood then being expelled into a jar containing citrate solution and from this receptacle transferred with another syringe to the recipient. Any of the superficial veins at the bend of the elbow may be chosen. In selecting donors, the prominence of these veins is an important consideration. The external jugulars are sometimes more accessible in infants and injections have been made without harm into the superior longitudinal sinus by way of the anterior fontanel.

The choice of these methods depends largely upon the experience and technical facility of the operator. The transfer of whole blood by the syringe methods involves numerous and expert assistants and the exercise of considerable haste in order to avoid clotting.

The use of anticoagulants. Defibrination renders the blood extremely toxic. Recent studies upon various anticoagulants¹ have disclosed valuable facts. Herudin (leech extract) is excellent for purposes of laboratory experimentation but unfortunately many preparations are toxic in the amounts that have to be used to prevent coagulation.

A number of workers have reported observations on sodium citrate, which is anticoagulative because of its calcium-converting

¹ Paraffin serves well as an insoluble anticoagulant, but the paraffined receptacles are rather unwieldy and their use has found only scattered favor.

property, and their findings, although somewhat at variance, indicate that this agent can be safely used in a final percentage of 0.2 to 0.3.

Weil and Brem have reported on the successful use of citrated blood that had been stored in the cold for several days, but others have attributed untoward results to the use of such blood and it cannot yet be unqualifiedly recommended for clinical use.

The amount of blood to be transfused. This is determined by a consideration of several factors: the respective weights of donor and recipient, the nature of the disease and the condition of the patient. No danger has arisen when not more than one-fourth of the donor's blood has been taken.¹ It is probably unwise for the recipient to be given more than one-fourth as much blood as a person of his weight normally has. A single donor will usually collapse before he can supply enough blood to cause circulatory embarrassment in a full-grown adult.

Following acute hæmorrhage, an endeavor should be made to replace nearly all of the lost blood. In cases of poisoning, especially from carbon monoxid, the indications would be for phlebotomy and a very large transfusion. Moderate amounts (500 cc to 1000 cc) are usually sufficient in cases of hæmorrhagic disease and anæmias. Repeated moderate-sized transfusions are preferable to a single large transfusion in pernicious anæmia, hæmophilia and some infections. In such cases no more should be expected of a single transfusion than from a single mercury inunction in a case of syphilis.

Lindeman advises that when a large volume of blood is taken from a single donor, at least two-thirds of that volume should be replaced with salt solution.

INDICATIONS FOR BLOOD TRANSFUSION

In a general review of the subject based upon their experience in 212 transfusions on 189 cases, Ottenberg and Libman subdivide the special indications according to the following scheme:

- I. Transfusions for simple hæmorrhage.
 1. Gastric and duodenal ulcer.
 2. Dysentery.
 3. Typhoid hæmorrhage.
 4. Ectopic pregnancy.
- II. Transfusions in connection with surgical operations.
 1. Preliminary to operation.
 2. For postoperative hæmorrhage.
 3. For shock.

¹ The blood normally makes up one-nineteenth of an adult's weight.

- III. Transfusions for the cure of hæmorrhagic conditions.
 - 1. Purpura hæmorrhagica.
 - 2. Hæmophilia.
 - 3. Hæmorrhages secondary to
 - (a) Blood disease.
 - (b) Severe infections.
 - (c) Jaundice (cholæmia).
- IV. Transfusions for blood diseases.
 - 1. Pernicious anæmia.
 - 2. Leukæmia.
- V. Transfusions for infections.
 - 1. Infections with pyogenic organism.
 - 2. Subacute streptococcus endocarditis.
- VI. Transfusions for intoxications.
 - 1. Acute poisoning.
 - 2. Diabetic coma.
- VII. Transfusions for debilitated conditions.
 - 1. Cancer.
 - 2. Malnutrition.
 - 3. Simple anæmia.

RESULTS OF BLOOD TRANSFUSION

For an account *in extenso* of the usefulness of blood transfusions, reference should be made to the articles by Ottenberg and Libman, Peterson, Lindeman, and others.

From weight of numbers alone the statistics of Ottenberg and Libman derive considerable authority and their results may be thus briefly summarized. In about half of the cases there was no improvement. In 22 per cent. transfusions were judged to be life-saving and these were cases of acute anæmia from hæmorrhage, poisoning, serious chronic anæmias and hæmorrhagic diathesis. In the last, especially in hæmophilia, the transfusion led to particularly noteworthy results and might be termed specific therapy. The average death rate in hæmophilia is high. If each hæmophilic had in reserve several compatible donors willing, when needed, to give blood for transfusion the majority of bleeders might be helped to lead a life of normal duration.

In ectopic pregnancy, in typhoid fever and in gastric and duodenal ulcers accompanied by hæmorrhage, transfusions were remarkably successful; they were most efficacious when there was repeated or prolonged bleeding. It is recommended that "in all typhoid cases the first appearance of blood in the stools should be an indication to make preparations so that a transfusion can be done, if needed, at very short notice." In massive hæmorrhage from rupture of a large vessel of course little could be expected except a temporary stimulating effect.

Of the transfusions preliminary to surgical operation on patients in desperate condition, about 33 per cent. were successful. There were three brilliant recoveries out of five cases transfused for postoperative hæmorrhage, but in the treatment of shock no benefit was observed.

Contrary to expectation, in chronic lymphatic leukæmias there was exerted sufficiently favorable influence to warrant further trial of systematically repeated transfusions.

In pernicious anæmia, transfusion has not been found to be curative but is the best therapy at our present command. It is a symptomatic remedy more reliable than any other in overcoming the chief symptom, the anæmia. Moreover in about half of the cases it initiates a prompt remission, being about as effective in this way as is removal of the spleen. Splenectomy reduces blood destruction and prevents the appearance of extreme blood crises but should probably be reserved as a final method of producing remission when transfusion will no longer do so. Considering the course of the disease, splenectomy is entirely justifiable. *Transfusions should be an early rather than a late resort and should be persistently repeated* in order to save the patient's bone-marrow function as long as possible and to prevent the development of a marked grade of anæmia. Inasmuch as anæmia *per se* reduces resistance to infections, by transfusion many of the secondary causes of death may be avoided.

In acute intoxications by poisons such as benzol and carbon monoxid that in considerable amounts are contained in or act on the blood, transfusion combined with blood-letting is the most nearly specific treatment that has yet been devised.

Benefit from transfusion has been often observed in debilitated conditions due to many causes. As a temporizing measure, at least, to relieve anæmia and to improve nutrition and general resistance, transfusion should certainly be considered.

In a review of the recent literature on blood transfusion there are several facts which stand out impressively.

Transfusion is no longer a last resort but its applicability has been extended to a large number of varied conditions in which normal whole blood may hasten recovery or at least tide the patient over a temporary relapse.

It is wholly practicable for the laboratory to determine the agglutinative groups of numerous healthy donors and to keep in touch with them so that there may be quick response for emergency transfusions. Such donors need lose little or no time from work, there is no danger and but a minimum of pain, especially if cocain be used, they feel that the money is easily earned, and the patients are under no unpleasant obligation to them.

Fresh whole blood is hæmostatic and hæmatopoietic, sometimes antitoxic and bactericidal; it is a living tissue and transfusion should be regarded more as a transplantation than as a mere transfer of a physical and chemical mixture. Mechanically, transfusion is easy; in point of safety it is quite remarkable, provided that sufficiently appreciative regard is held for certain preliminary requirements.

As Crile has remarked: "Judiciously employed, transfusion will surely prove a valuable, often a life-saving, resource; injudiciously employed, it will surely become discredited."

The following list of recent articles on blood transfusion is very incomplete. Many of the more important contributions are cited, however, and from them may be obtained an extended bibliography.

- Brem, W. V.: Blood transfusion with special reference to group tests. *Jour. A. M. A.*, 1915, lxiv, 582.
- Cherry, T. H., and Langrock, E. G.: The relation of hemolysis in the transfusion of babies with the mothers as donors. *Ibid.*, 1916, lxvi, 626.
- Garbat, A. L.: Intravenous injections of sodium citrate with reference to transfusion. *Ibid.*, 1543.
- Helmholz, H. F.: The longitudinal sinus as the place of preference in infancy for intravenous aspirations and injections, including transfusions. *Am. Jour. Dis. Child.*, 1915, x, 194.
- Lewisohn, R.: Blood transfusion by citrate method. *Surg. Gynec. and Obst.*, 1915, xxi, 37.
- Lindeman, E.: Simple syringe transfusion with special cannulas. *Am. Jour. Dis. Child.*, 1913, vi, 28. Blood transfusion. *Jour. A. M. A.*, 1914, lxii, 993. Reactions following blood transfusion by the syringe cannula system. *Ibid.*, 1916, lxvi, 624.
- McClure, R. D.: Pernicious anemia treated by splenectomy and systematic, often repeated transfusion of blood. Transfusion in benzol poisoning. *Ibid.*, lxvii, 793.
- Minot, G. R.: Methods for testing donors for transfusion of blood and consideration of factors influencing agglutination and hemolysis. *Bost. Med. and Surg. Jour.*, 1916, clxxiv, 667.
- Ottenberg, R., and Libman, E.: Blood transfusion: Indications; results; general management. *Am. Jour. Med. Sci.*, 1915, cl, 36.
- Peterson, E. W.: Results from blood transfusion in the treatment of severe posthemorrhagic anemia and the hemorrhagic diseases. *Jour. A. M. A.*, 1916, lxvi, 1291.
- Rous, P., and Turner, J. R.: The preservation of living red blood cells *in vitro*. II The transfusion of kept cells. *Jour. Exp. Med.*, 1916, xxiii, 239.
A rapid and simple method of testing donors for transfusion. *Jour. A. M. A.*, 1915, lxiv, 1980.
- Saterlee, H. S., and Hooker, R. S.: Transfusion of blood with special reference to the use of anticoagulants. *Ibid.*, 1916, lxvi, 618.
- Simons, I.: Experiences with the sodium citrate method of indirect transfusion of blood (Lewisohn). *Ibid.*, 1915, lxxv, 1339; also, 1664.
- Unger, L. J.: A new method of syringe transfusion. *Ibid.*, lxvi, 582.
- Weil, R.: Sodium citrate in the transfusion of blood. *Ibid.*, 425.
- Zingher, A.: A simple syringe method for the transfusion of citrated blood in children. *Med. Record*, 1915, lxxxvii, 440.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the *GAZETTE* only and preferably to be typewritten — personal and news items should be sent *THE NEW ENGLAND MEDICAL GAZETTE*, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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THE NEW BARANY EAR TESTS

Within the past three or four years there has been developed a system of examination of the auditory nerve (especially the vestibular portion) and its intra-cranial tracts, whereby certain conditions which until now have remained very obscure, can be brought to light. The tests consist of stimulating the semi-circular canals, separately and collectively, and observing the resulting nystagmus, vertigo, past-pointing, and falling reactions.

The semicircular canals may be stimulated by turning an individual in a smoothly revolving chair, or by douching the ear with either hot or cold water. When the individual is turned with the head in the upright position, the horizontal canals are stimulated. When he is turned with the head forward or backward, the vertical canals are stimulated. Naturally the turning involves the labyrinths of both sides. Douching, on the other hand, influences only one ear. Douching the ear with the head upright stimulates the vertical canals, whereas douching with the head either forward or backward stimulates the horizontal canal.

This work was developed by Robert Barany, a brilliant young otologist of the Vienna school, who in 1914 was awarded the Nobel Prize for research work in medicine. At the beginning of the European War, Barany enlisted in the Austrian army and the work was taken up by a small group of otologists in the Medical School of the University of Pennsylvania. Using Barany's results, supplemented by that of the Spanish anatomist, Cajal, who recently has demonstrated histologically that fibers from the vestibular portion of the eighth nerve enter Deiter's nucleus and continue from the inferior cerebellar peduncle into the cerebellum itself, this group of workers has been able to bring the methods of examination to a point of

efficiency where they are of great practical value in furnishing facts of importance in diagnostic symptomatology.

First, the cause of vertigo, that symptom which so frequently confronts not only the neurologist and otologist, but also physicians at large, is often a perplexing problem. No matter where the primary seat of the affection which causes vertigo may be situated, whether in the stomach, kidney, liver, pancreas, tonsils, or the brain outside of the vestibular apparatus, the resulting toxæmia, the abnormal nervous stimulus, or the cardiovascular disorder does not produce vertigo until the vestibular apparatus—the labyrinth and its associated pathways and encephalic centers—is involved. The Barany tests furnish us with the means for studying this vestibular apparatus.

Secondly, these tests enable us to say with more positiveness that an intracranial tumor, abscess or other lesion is situated in the third ventricle or in the cerebellopontine angle, is limited to the pons or the cerebellum or is labyrinthine. Tests by Barany methods therefore are of value, not only to the otologist, but to the neurologist, ophthalmologist, surgeon, and general practitioner.

H. L. B.

THE GAZETTE'S QUESTIONNAIRE

A few months ago we asked our subscribers the following questions :

The *New England Medical Gazette* contemplates the compilation of a complete annual index of current homœopathic periodical literature ; do you think this worth while ?

What department of the *Gazette* is most interesting and valuable to you, and why ?

What improvements or additional features would you suggest ?

The tabulation of the replies brings to light a number of interesting points.

With regard to the advisability of compiling the index, 70 per cent. of the answers favored, 20 per cent. opposed, and 10 per cent. were indifferent to, such a compilation.

Of those who commented upon the different departments of the *Gazette* the *per centum* vote on the most interesting and valuable department stood as follows : Original contributions, 33 ; all departments equal, 27 ; personal items, 15 ; editorial, 11 ; clinical, and current literature criticism, 7- each.

There was a considerable number of suggestions that more attention be given to applied homœopathy ; one subscriber

asked for more reports of homœopathic "cures," none asked for reports of homœopathic failures — an omission that causes us to stop and ponder. Usually we learn more from our failures than from our successes. . . . There were also several requests for more case reports, particularly of those cases which are checked by necropsy findings. One man in general practice asked that the clinical department should not be confined to psychiatry and obscure neuroses.

Other individual suggestions were that there be no more reprinting of articles which appear in other journals; that more attention be given to instances of sporadic and unconscious homœopathy in old school practice; that a department of therapeutic hints be established — which we take to illustrate an unfortunate willingness of some physicians to "try anything once" on brief consideration and scanty evidence; that New England men be featured more prominently — the names of Doctors Sutherland, Packard and Watters, and the "active workers," being specifically mentioned; that the Billy Sunday literature be eliminated; that there be published a series of up-to-date resumé's on topics of importance; that more personal, school and hospital news be supplied; that articles be shorter; that the editorials be more "original"; that more space be given to research on treatment, drugs, immunity; there was one request that the potency question be dragged from its fearsome closet; and finally, the specialists desired more attention.

The editorial staff will strive earnestly to fulfill as many of these requests as it can, but no editor can insure the success of a journal. It depends upon the excellence of contributed papers and the enduring support of the subscribers. You are the contributors. The *Gazette* will be what *you* make it. Further comment and suggestions as to what *we* can do will be gladly welcomed.

S. B. H.

CLINICAL DEPARTMENT

Conducted by A. H. RING, M.D.

Case from the service of W. F. WESSELHOEFT, M. H. H.

Mrs. B. W., *æt.* 36, entered the M. H. H. Dec. 11, 1916 giving the following history:

Family history: Father died of old age. Mother died of pneumonia in her 49th year. One sister and two brothers living and well.

Previous history: Has had usual children's diseases with uneventful recoveries. Has had frequent colds and has taken cough syrups and opiates for relief.

Menstrual history: For past year or more flow has been excessive and periods have been irregular, coming every two or three weeks. Patient was operated on, not in this hospital, last April, for cancer of the cervix.

Habit: Used wine and beer with meals. Appetite usually good — bowels regular. *Occupation:* has been doing theatrical work.

Present illness: Took a heavy cold last June, coughed constantly and suffered from sharp shooting pains in right axillary region. Cold did not let up and patient was forced to sit up to sleep — lying down smothered her. During past six weeks body has swollen and right leg has been very painful. Masseur was engaged, and after a few treatments right foot and leg became black and cold. Patient has lost her appetite and feels exhausted from coughing.

Physical examination: Pupils dilated and sluggish in action. Nose negative. Teeth in good condition. Tongue flabby and coated heavily. Pharynx raw and inflamed, showing a peculiar white area. Cervical glands slightly enlarged. Axillary glands normal. Lungs show slight hypostatic congestion. Respiration labored and shallow.

Heart — hypertrophied downward and to the left, marked arrhythmia. No organic murmurs — heart-beat at apex 60 per minute. Pulse at radial artery 30 per minute. Temperature 95.2 degrees.

Abdomen distended and contains a large amount of ascitic fluid. Liver and spleen not palpable. Buttocks are very œdematous and around anus are a dozen or more small, indurated, punched-out ulcers. Vagina very œdematous — cervix has been amputated, uterine body partly immobile.

Both thighs show marked œdema. Right leg shows greenish black discoloration from middle of leg to ends of toes. Leg

is cold and clammy and causes patient much discomfort. Left leg is very œdematous but free from other visible pathology.

Urine analysis of first sample passed showed specific gravity of 1.011. Urea increased. Slight trace of albumin — no sugar — no acetone. Microscopically many leukocytes, few small round cells — hyalin casts and a few granular casts — many squamous cells and a few red blood cells.

Blood count:

Hæmoglobin,	75 per cent.
Erythrocytes,	4,000,000 per cmm.
Leukocytes,	30,000 per cmm.
Lymphocytes,	6 per cent.
Polynuclear neutrophils,	94 per cent.
Wassermann,	strongly positive.

A diagnosis of syphilitic endarteritis and heart block with general anasarca was made.

Treatment: Morphin sulphate in 1/4 gr. doses to stimulate the heart and to relieve the pain — these injections were given at 3 P.M., 9 P.M., and 2 A.M. for two or three days. The patient was immediately given: anasarcin tablets 5 grs. every three hours, alternating with fat free tincture of digitalis in 10 drop doses every 3 hours. Enemata were used to clean intestinal tract and cascara in 10 gr. doses was given each day to produce watery stools. Patient was given milk only for nourishment.

In 8 days practically all the anasarca had disappeared and patient was feeling fine except for pains in right foot and leg.

The digitalis and anasarcin were discontinued and protoiodid of mercury 1/10 gr. tablets 3 every 3 hours, day and night, with 15 drops of saturated solution of potassium iodid in one half glass of milk, were substituted. Pulse at this time was 80 by radial artery and heart was slightly more regular.

After four days the patient began to suffer from dyspnoea and a choking sensation; the potassium iodid was discontinued and the mercury increased to 4/5 gr. every 3 hours. The improvement in breathing was immediate and the patient received much needed rest.

Mercurial ointment had been used in treating ulcers around anus since mercury had been taken internally and the ulcers healed very rapidly.

The right foot and leg would not yield to treatment and continued to cause patient a great deal of suffering. On the thirteenth day after admission it was deemed advisable to amputate the right leg, and this was done. Ether and oxygen was used as an anæsthetic and the leg was amputated at the junction of the middle and lower thirds of the thigh. The

patient stood the operation well and suffered no ill effects therefrom. The wound has healed very nicely and stump is almost free from pain. The circulation in the stump is very good, although not as ample as in the left thigh.

The mercury has been continued as noted above with but one upset of cramps in abdomen and vomiting — at which time the dose was cut in half and gradually increased to $\frac{4}{5}$ of a gr. at a dose. Potassium iodid has been given in 5 and 10 drop doses for a few days but seems to cause marked dyspnœa and it has been used for only 4 or 5 days at a time.

At present the patient is able to sit up in a wheel chair and enjoy three meals daily, is free from pain, but has a sore throat, which is doubtlessly due to action of medicine. Patient is sleeping well in a semi-prone position — pulse 80 to 90, very much more regular and more forceful. Cough is practically gone and dyspnœa a thing of the past. Patient is very happy and confident of a complete recovery.

HOMŒOPATHIC PERIODICAL LITERATURE

The Clinique, December, 1916

1. *Some of the difficulties in the study and teaching of Materia Medica.* 577–580. Branen, F.

The author suggests a more interesting method of teaching materia medica, namely, quizzing and commenting on drugs studied by the students at home, rather than enumerating symptoms categorically. Another feature worth noting is the mention of the lack of interest in materia medica displayed by many specialists, especially the surgeons. There are surgeons, graduates of our homœopathic schools, who use the indicated remedy before and after operation with satisfactory results. But unfortunately there are some surgeons who, although graduates of homœopathic schools, and making a large share of their income through this association with homœopathic institutions, not only refuse to give the indicated remedy a chance to show what it can do, but openly scoff at its use. Such men are sorry examples of loyalty to the teachings of their alma mater and to the principles of the founders of the institutions whose existence is largely responsible for their prosperity. Worse enemies to homœopathy do not exist than these, the traitors in our midst.

The Chironian, December, 1916

2. *Memorial: Bukk, G. Carleton.* 207-211.

3. *The orthopedic treatment of infantile paralysis.* 212-222.
Bingham, A. H.

An excellent review of the subject. The author is convinced that a combined faradic and galvanic sinusoidal current is of value. Stress is laid on the importance of muscle-training in regaining lost functions.

4. *Wounds and rupture of the spleen.* 232-234. Lyman, H. C. A review.

5. *The spleen and its relation to blood diseases.* 235-238
Williams, F. F., Jr.

W. O.

The Journal of the American Institute of Homœopathy. January, 1917

6. *Report of a series of operations for uterine fibroids.* 779-791. Ward, F. N.

The author's conclusions from a study of 101 cases are as follows:

(1) The marked frequency of uterine fibromata, one operation out of every seven pelvic operations being undertaken for their relief.

(2) Sterile women are more predisposed to uterine fibromata than women who have borne children, — 53 per cent. of women in this series being sterile.

(3) The largest tumors are most frequently found in the nulliparous women.

(4) In the women who have borne children, however, over 91 per cent. had complicating pathological conditions in the pelvis.

(5) The treatment of uterine fibroids is essentially surgical, as proven by the low mortality rate and the restoration to health following operation.

7. *Coffee in the alimentary regime.* 791-795. Gomes, T.

8. *Gall-stones.* 795-800. Wilcox, S. F.

9. *Congenital debility as a factor in infant mortality.* 801-808. Raue, C. S.

10. *A study of atropin with particular reference to the proving of alkaloids.* 808-814. Bellows, H. P.

Bellows concludes that a proving of belladonna gives a more complete symptom list than does a composite made up from provings of its individual alkaloids, viz., atropin, hyoscyamin, atropamin, belladonnin and hyoscin. It is suggested that

in the separation of the alkaloids from the plant, something of vital importance may be lost.

(The less extensive provings of these alkaloids may account for the disproportion when certain groups of symptoms are compared with those obtained from the profuse records of belladonna provings. — ED.)

11. *Symposium. The individual college and its appeal to the student.* 814–831.

This article is made up of informal reports of the doings, equipments and outlooks of nine of the homœopathic medical schools in the United States.

12. *Homœopathic medical education and propaganda.* 831–841. Nesbit, E. L.

A well-considered and well-expressed essay on this subject viewed as a business proposition from the standpoint of the public welfare and of the rank and file of the homœopathic profession.

The three distinct propositions into which Nesbit has condensed his argument follow:

“Resolutions in support of a more positive homœopathic medical education and propaganda.

“*Whereas*, The inevitable tendency of any medical practice laws which do not recognize the distinctive therapeutic claims of any sectarian grouping of medical practitioners, is actually only to reduce all reputable medical practice to the one dead level of therapeutic mediocrity; to discourage sectarian initiative and therapeutic resourcefulness; and thereby, indirectly but effectually, to force the public to resort to practitioners less erudite, perchance, but more effective;

“*Be it resolved*, That the American Institute of Homœopathy directs its Council on Medical Education to demand that every such medical practice act, which now requires but one uniform minimum educational standard from graduates of all colleges of all sectarian schools of practice alike, shall be supplemented by a further specific sectarian requirement that every applicant for a license to practice shall also show a minimum sectarian standard of practical proficiency in therapeutics according to the distinctive sectarian practice with which he or she proposes to treat the public.

“*Whereas*, The sole convincing claim remaining to the homœopathic medical college for a continued and separate support from the profession and the public of today rests upon any positive and distinctive contribution in applied therapeutics which they might thus be enabled to make to the public welfare; and, in order to induce these homœopathic colleges to

prosecute systematic and continued investigations and demonstrations in their own particular field of medicinal therapeutics;

“*Be it resolved*, That in order to be officially recognized as such by the American Institute of Homœopathy, any homœopathic medical college shall be required to show annually that it has expended one tenth of its annual budget, at the very least, upon experimental research in pharmacodynamics (not mere pharmacology) and upon applied therapeutics characteristically and distinctively homœopathic; and that this minimum expenditure be made in addition to and irrespective of funds which may have been specifically designated for such work.

“*Whereas*, The continued and sufficient support of homœopathic institutions by the homœopathic profession and its patronage which might be benevolently inclined, must finally be secured upon the basis of their necessity and practical utility to the rank and file of the homœopathic profession in its service to the public welfare;

“*Be it resolved*, That the American Institute of Homœopathy directs its propaganda to execute a definite and systematic campaign to conserve the patronage of the second and third generations of homœopathic families through securing the official recognition and appointment of homœopathic school physicians in every private school and college in the country.”

In conclusion, what the men and women “on the firing line” of actual homœopathic practice need from our homœopathic institutions today — and need badly — is action, not journalistic apologies and convention politics and oratory. In order to get distinctive and noteworthy bedside results we need pathogeneses and propaganda — definite, clear-cut, verified pathogeneses; and propaganda that is modernized, progressive and productive. Such output alone indispensable will make the support of our colleges and societies a necessity to every practitioner of homœopathy.

13. *Why the homœopath should be a diagnostician.* 841–844. Koons, H. E.

The Homœopathic Recorder, December, 1916

14. *Is hecla lava useful in the treatment of osseous growths?* 533–534. Haines, O. S.

A brief report of a case which clinically was one of osteosarcoma of the lower jaw. The tumor disappeared some months after hecla lava 3x was prescribed.

S. B. H.

The British Homœopathic Journal, December, 1916

15. *Outside help.* 441–448. Hawkes, A. E.

The Homœopathic World, December, 1916

16. *The internal secretions of the ductless glands: "Every man his own pharmacopœia."* 533-540. Burford, G.

17. *A proving of indol, with special reference to its relation to the excretion of indican in the urine.* 540-548. Griggs, W. B.

Indol is believed to be a valuable agent for many cases of auto-intoxication that are the result of various forms of intestinal putrefaction.

In the proving, seven men were under observation for sixteen weeks. The sixth centesimal dilution was used.

S. B. H.

Iowa Homœopathic Journal, December, 1916

18. *Gelsemium.* 25-28. Spreng, T. D. H.

W. O.

The Polycrest, January, 1917.

19. *The homœopathic surgeon.* 11-18. Beebe, H. E.

The author points out the value of the indicated remedy in surgical conditions. He quotes with approval one of the aims of the College of Homœopathic Medicine of Ohio State University as being "to teach the student to do surgery when surgical interference is necessary, and to show him that the properly prescribed homœopathic remedy is an accompaniment of the operation and facilitates the recovery of the surgical patient." Twenty-five drugs are considered with especial reference to their indications in surgical conditions. The paper might be read with benefit by some of our allegedly homœopathic surgeons.

20. *Pathological entities produced by drugs.* 19-22. Hindsdale, A. E.

Abstract of the results of animal experimentation in the Materia Medica Laboratory at the Ohio State University.

21. *Ophthalmia neonatorum, or preventable blindness.* 23-27. Feree, J. A.

A review.

W. O.

BOOK REVIEWS

Diseases of the Nervous System. By John Eastman Wilson, A.B., M.D., Professor of Diseases of the Nervous System in the New York Homœopathic Medical College, etc. Pp. 682. 2d Edition. 1916. Boericke and Tafel.

The student or practitioner will find in Dr. Wilson's book an excellent treatise on nervous diseases and their treatment. The anatomy and physiology of the central nervous system are taken up first, then a few general considerations of symptoms. Next follow chapters on the peripheral nerves and on the various affections of the spinal cord and brain. Separate chapters are devoted to syphilis of the central nervous system, functional nervous diseases, neurasthenia, occupation neuroses, and paralysis agitans. The arrangement of the material in each chapter is as systematic and logical as is that of the chapters themselves.

Especially to be commended are the paragraphs on diagnosis, differential diagnosis, and treatment. Under the latter caption the author enumerates useful homœopathic remedies, giving a few significant indications for each.

The chapter on anterior poliomyelitis is exceptionally good, and of especial interest in view of the recent epidemic. The use of electricity, preferably static or sinusoidal, is highly recommended as having a deeper action than massage. The latter, nevertheless, is advised in addition to the electricity.

The author's statements are as a rule unexceptionable. One can hardly agree fully, however, that "loss of faradic and lowered response to galvanic is a sign of multiple neuritis." (P. 112.)

A larger number of illustrations might, perhaps, have enhanced the value of the book. The general excellence of the text, however, does its share to overcome this objection.

The book is worthy of hearty recommendation to one in search of a general work on Nervous Diseases. Dr. Wilson, by this, his latest production, reflects credit not only on himself, but on the whole homœopathic school.

W. O.

Essentials of Laboratory Diagnosis. Designed for students and practitioners.

By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine and Assistant to the Professor of Clinical Medicine, Medico-Chirurgical College, etc. Philadelphia, Pa. Sixth revised edition, 1916. F. A. Davis Company, Philadelphia. Pp. 450. Price \$3.00 net.

This manual is a concise and compact presentation of those analytic methods which have been found to be the most useful and reliable in the clinical laboratory. The physician who has his small private laboratory, and medical students, especially should find this book helpful.

As is required by the importance of the subjects, the most space is given to the blood, urine and gastric function; there are, however, valuable chapters on bacteriologic methods, the microscope, the sputum, animal parasites, sphygmomanometry and sphygmography, the fæces, body fluids, etc. The illustrations are fairly numerous and are good. Reproductions of sphygmographic tracings would have considerably enhanced the worth of the explanation of pulse curves.

A particularly commendable feature is the incorporation of pertinent references to important contributions in periodic literature.

S. B. H.

SOCIETIES

Boston District of the Massachusetts Homœopathic Medical Society

The annual meeting and ladies' night of the Boston District of the Massachusetts Homœopathic Medical Society was held on Thursday evening, January 4, at the Evans Memorial Building, East Concord Street.

The report of the committee on nominations was read, the result of the election being as follows:

President, Dr. Wesley T. Lee, Boston.

First Vice-President, Dr. E. P. Ruggles, Dorchester.

Second Vice-President, Dr. Katharine French, Framingham.

Secretary, Dr. Harold E. Diehl, Quincy.

Associate Secretary, Dr. Roland O. Parris, Brookline.

Treasurer, Dr. Edwin W. Smith, Boston.

Dr. Edwin D. Lee, of Medford, and Dr. Grace D. Reed, of Arlinton, were elected to membership in the Society.

After the transaction of necessary business and the address of the retiring president, Dr. Loring, the audience listened with much enjoyment and appreciation to an unusually interesting illustrated lecture on "Chile, the Strait of Magellan, and the Wondrous Fuegian Archipelago," by Charles Wellington Furlong, F.R.G.S. Mr. Furlong, a Boston man, is an artist-explorer and author of international reputation, and his lecture included brief descriptions and lantern slides showing some of the most primitive inhabitants of the world to-day in these southernmost settlements of the world. He is soon to go on an expedition to Central Africa as a member of a commission sent out by the Smithsonian Institute at Washington.

At the close of Mr. Furlong's lecture the audience adjourned to the Medical School building, where an inviting buffet spread was served and a very pleasant social hour spent.

HAROLD E. DIEHL, M.D., *Secretary*.

OBITUARY

Elroy Bidwell Whitaker, M.D.

Dr. Elroy B. Whitaker, a member of the Vermont Board of Medical Registration and deputy grand commander of the grand commandery of Vermont, Knights Templar, passed away at his home, 16 Merchant Street, Barre, Vt., on December 7, 1916, at the age of seventy-one years.

Dr. Whitaker's death removes one of the most prominent physicians in the State and a figure well known in Vermont Masonry for many years. Barre loses a professional man of the older generation and one who was held in high regard by its citizens.

Dr. Elroy Bidwell Whitaker was born in Bethel, Vt., Dec. 29, 1845, a descendant of one of the oldest New England families, which came from England before the middle of the 17th century. His parents moved to Pittsford when he was two years old and his boyhood was passed in that village. After finishing his education in the public schools, he received a few years of college instruction under a private tutor. He took one year at the Homœopathic College of Cleveland, O., and then went to New York Medical Homœopathic College, where he was graduated in 1868.

He settled in Hinesburg and built up an extensive practice throughout Chittenden and Addison Counties. He remained there until 1892, when he moved to Richmond. In 1895 he removed to Barre and has resided there since. He was one of the most widely known and successful medical practitioners in the State. He served as president of the Vermont Homœopathic Medical Society and for many years had been a member of its executive board.

When Vermont first adopted the law instituting the State Board of Medical Registration, Dr. Whitaker was one of the first to be appointed by the governor, and he remained a member of the Board until his death, having been its treasurer for several years.

Clarence H. Leland, M.D.

One of Lowell's busy practitioners for many years, died of double pneumonia on January 15th, 1917 at his home, after a sickness of two weeks. Dr. Leland has known for eight years that he had a serious heart trouble, but, although relaxing somewhat in his work, he has continued in active practice up to the end. It was his earnest wish, not to be gratified, that he could continue in practice until his elder son, Harold L. Leland, now a senior in Boston University School of Medicine, could take up his work.

Dr. Leland was born in Winchester, Massachusetts, on September 9, 1848. He graduated from Hahnemann Medical College of Philadelphia in 1873, and at once settled in Lowell, Massachusetts, where he had practiced ever since. He was married in 1875 to Emma J. Daggett of Lowell, Massachusetts. She and two sons survive him. One daughter, Grace E., died in infancy, and the second son, Raymond, is now a student in Worcester Polytechnic School.

Dr. Leland was always a regular attendant at the meetings of our medical societies, and was a Senior in both the Massachusetts Homœopathic Society, and the American Institute of Homœopathy. He also belonged to the Massachusetts Surgical and Gynæcological Society, and for many years was an active officer in the Lowell Hahnemann Club. He was an Odd Fellow, and a delegation from Highland Veritas Lodge attended his funeral. He was an active member of the Worthen Street Methodist Church of Lowell, of which he was formerly Treasurer, and at the time of his death a steward. Owing to the fact that his wife lay sick of pneumonia at home the funeral services were held at the church where he had worked so many years, and a large number of his friends and patients gathered to take a last look at their departed friend.

The funeral was in charge of Dr. G. Forrest Martin, and his bearers were Doctors Howard W. Jewett, John H. Lambert, George L. Van Deursen, and J. Arthur Gage, all members of the Staff of the Lowell General Hospital, on whose Medical Service Dr. Leland had served since 1893. His pastor summed up his character tersely, when he said, that he was a "good physician, and a Christian gentleman." Him have we lost.

G. F. M.

MORTALITY FROM CANCER AND OTHER MALIGNANT TUMORS

WASHINGTON, D. C., *January 15, 1917.* — The mortality from cancer and other malignant tumors in the death-registration area of the United States has been increasing almost continuously for the past fifteen years. It is greater in urban than in rural localities; among females than among males; among whites than among Negroes; and among persons in middle life and old age than among those in early life. Deaths due to cancer of the stomach and liver represent more than three-eighths of the total.

These are among the significant facts brought out in a special report, "Mortality from Cancer and Other Malignant Tumors in the Registration Area of the United States, 1914," soon to be issued by Director Sam. L. Rogers of the Bureau of the Census, Department of Commerce.

The total deaths from cancer and other malignant tumors throughout the registration area (which contains approximately two-thirds of the total population of the United States) in 1914 numbered 52,420, corresponding to a death rate of 79.4 per 100,000 population. This figure represents an almost continuous increase — amounting to 26 per cent for the entire period — since 1900, when the rate was 63. How much of this increase has been due to more accurate diagnoses and greater care on the part of physicians in making reports to registration officials, and is thus apparent rather than real, it is impossible to estimate. For registration cities having 10,000 inhabitants or

more in 1910 the rate averaged 88 per 100,000, but for smaller places and rural localities in the registration states it averaged only 69.6.

High and Low Rates for States

Among the states, the lowest five rates—45.8, 46, 48.9, 51.5, and 57.8 per 100,000 population—are shown for Utah, Kentucky, Virginia, Montana, and North Carolina, respectively; and the highest five—109.9, 107.6, 101.2, 100.8, and 97.9—for Vermont, Maine, Massachusetts, New Hampshire, and California, respectively. (The rate for North Carolina relates only to places which had 1,000 or more inhabitants in 1910.)

At least a part of the difference between the high and low rates is accounted for, first, by the fact that in some states the average age of the population is considerably greater than in others, cancer being a malady much more likely to attack persons at advanced ages than those in the earlier periods of life, and second, by the fact that in several of the states named there are considerable proportions of colored population, among whom the mortality from cancer is apparently lower than among whites.

Color, Sex, and Age

The death rate for whites throughout the registration states was 80 per 100,000, as against only 56.2 for the colored population.

The death rate from cancer among women, 96.8 per 100,000, was more than 50 per cent greater than the corresponding rate for men, 62.4.

For persons under 25 years of age the death rate was only 2.8 per 100,000 corresponding population; but for the higher ages it is very much greater, increasing rapidly from each age group to the one next above. Thus, for persons 25 to 34 years of age, it was 13.9 in 1914; for those 35 to 39, 42; 40 to 44, 78.6; 45 to 49, 128.6; 50 to 54, 199.7; 55 to 59, 305.9; 60 to 64, 393.1; 65 to 69, 516; 70 to 74, 672.3; 75 to 79, 766.6; 80 to 84, 889.6; and 85 and over, 875.6.

Cancer of the Stomach and Liver

Among both males and females, cancer of the stomach, liver, pharynx, and esophagus accounted for a greater proportion of the total deaths from cancer—approximately 47 per cent among males and 32 per cent among females—than is shown for any other group. The death rates from this class of cancers were 29.6 per 100,000 for males and 30.7 for females.

Classification of Deaths from Cancer

The following table shows, for the death-registration area, the number of deaths from cancer and other malignant tumors in 1914, classified according to the organ or part of the body affected, together with the rate per 100,000 population and the percentage which the deaths from each class and subclass of cancers formed of the aggregate:

SEAT OF DISEASE.	Deaths, Registration Area 1914.		
	Number.	Rate per 100,000 popula- tion.	Per cent of aggre- gate.
Cancer and other malignant tumors (aggregate).....	52,420	79.4	100.0
Cancer of the buccal cavity (total).....	2,270	3.4	4.3
Cancer of the —			
Lip.....	376	0.6	0.7
Tongue.....	614	0.9	1.2
Mouth.....	230	0.3	0.4
Jaw.....	851	1.3	1.6
Others of this class.....	199	0.3	0.4
Cancer of the stomach, liver (total).....	19,889	30.1	37.9

Cancer of the —			
Pharynx.....	58	0.1	0.1
Esophagus.....	605	0.9	1.2
Stomach.....	12,768	19.3	24.4
Liver and gall bladder.....	6,458	9.8	12.3
Cancer of the peritoneum, intestines, rectum (total).....	6,745	10.2	12.9
Cancer of the —			
Mesentery and peritoneum.....	485	0.7	0.9
Intestines (except rectum).....	4,055	6.1	7.7
Rectum and anus.....	2,171	3.3	4.1
Others of this class.....	34	0.1	0.1
Cancer of the female genital organs (total).....	8,152	12.4	15.6
Cancer of the —			
Ovary and fallopian tube.....	451	0.7	0.9
Uterus.....	7,470	11.3	14.3
Vagina and vulva.....	184	0.3	0.4
Others of this class.....	47	0.1	0.1
Cancer of the breast.....	5,423	8.2	10.3
Cancer of the skin.....	1,957	3.0	3.7
Cancer of other organs or of organs not specified (total).....	7,984	12.1	15.2
Cancer of the —			
Larynx.....	341	0.5	0.7
Lung and pleura.....	371	0.6	0.7
Pancreas.....	686	1.0	1.3
Kidneys and suprarenals.....	538	0.8	1.0
Prostate.....	784	1.2	1.5
Bladder.....	1,014	1.5	1.9
Brain.....	141	0.2	0.3
Bones (except jaw).....	497	0.8	0.9
Testes.....	121	0.2	0.2
Others of this class.....	3,491	5.3	6.7

BIRTH AND DEATH RATES IN 1915

WASHINGTON, D. C., *January 17, 1917.* — In the recently established birth-registration area of the United States — comprising the six New England states, New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia, with an estimated population of 31,150,000, representing 31 per cent of the total for the United States — 776,304 infants were born alive in 1915, representing a birth rate of 24.9 per 1,000 of population. For every state in the registration area and for most of the cities there was a substantial excess of births over deaths, but this excess was most pronounced in those localities in which the proportion of foreign population is largest. The mortality rate of infants under 1 year of age averaged 100 per 1,000 births, ranging from 70 in Minnesota to 120 in Rhode Island, and, among places having 25,000 inhabitants or more, from 54 in Brookline and Malden, Mass., to 196 in Shenandoah, Pa. These are among the significant facts presented in a preliminary statement just made public by Director Sam. L. Rogers of the Bureau of the Census, Department of Commerce.

This statement — giving, as it does, the first Federal statistics of births ever published — makes possible a comparison of birth rates in the registration area of the United States and in foreign countries, and throws light on such matters as the extent to which the populations of the states and cities in the birth-registration area are increasing through excess of births over deaths, the relation between the birth rate and the rate of infant mortality, the relation between the birth rate and the racial composition of the population, etc.

Comparison of Birth and Death Rates

The birth rate for the birth-registration area as a whole in 1915 — 24.9 per 1,000 population — exceeded the death rate for the same area — 14 per 1,000 — by 10.9 per 1,000, or nearly 78 per cent. That is to say, if

the birth and death rates prevailing in that year were to remain unchanged, and if no migration were to take place to or from the area to which the figures relate, its population would increase annually by 10.9 per 1,000, or by nearly 1.1 per cent. The birth rates of the registration states ranged from 21.1 in Maine to 26.7 in Connecticut and Michigan; and the death rates ranged from 10.1 in Minnesota to 16.1 in New Hampshire. The highest death rate was thus much lower than the lowest birth rate. The greatest excess of births over deaths—14.4 per 1,000 population—appears for Minnesota, and the smallest—5.5 per 1,000—for Maine.

The statistics cover 96 cities and towns having, at the last census, 25,000 inhabitants or more. Of these, there were only three—Kingston and Troy, N. Y., and Norristown, Pa.—in which the deaths exceeded the births in 1915, and in each case the excess was small, being greatest—1.1 per 1,000 population—for Troy.

The cities showing the highest five birth rates are: Detroit, Mich., 37.9; Chicopee, Mass., 37.6; Niagara Falls, N. Y., 37.5; New Britain, Conn., 36.4; and Chelsea, Mass., 34.5. The death rates for these cities—15.7, 14.7, 16, 11, and 14.3, respectively—were, with the single exception of that for New Britain, higher than the average for the birth-registration area but were far below the maximum death rate shown for any city in the area—21.7, for Norristown, Pa.

The lowest five birth rates appear for Brookline, Mass., 12.7; York, Pa., 17.5; Kalamazoo, Mich., 18.2; Kingston, N. Y., 18.5; and Troy, N. Y., 18.6. The death rates for the first-named two places were lower than the average for the registration area, and those for the first-named three were lower than the corresponding birth rates; but for Kingston and Troy the death rates—18.6 and 19.7, respectively—exceeded the birth rates.

Birth Rates of White and Colored Races

The relation between the birth rate and the constitution of the population in respect of race and nativity is of great interest. For the six cities in the registration area in which the colored population at the last census either numbered more than 10,000 or represented more than 10 per cent of the total, separate figures are given for the white and colored races; and in all but one of these cities—Washington, D. C.—the birth rates shown for the colored population were lower than those for the whites. It is probable, however, that the registration of births is less nearly complete among colored than among white persons, and that therefore the rates shown for the former class are too low. The death rates for the colored population are higher, and in many cases much higher, than those for the whites.

Births among Native and Foreign Elements of the Population

The birth statistics do not, of course, show the number of children per family, but some indication of the fecundity of the native and foreign elements of the population may be obtained from a comparison between the proportion which the number of foreign parents formed of the total number of white parents to whom children were born in 1915 and the proportion which foreign-born persons represented of the total white population in 1910. From such a comparison it appears that far more births occur annually to foreign-born parents, proportionally to their number, than to native parents. In Connecticut approximately 30 per cent of the white population in 1910 was of foreign birth, but nearly 63 per cent of the white parents to whom children were born in 1915 were reported as natives of foreign countries. The corresponding percentages for the other states and the District of Columbia are as follows: Maine, 15 and 28; Massachusetts, 31 and 58; Michigan, 21 and 35; Minnesota, 26 and 33; New Hampshire, 22 and 44; New York, 30 and 56; Pennsylvania, 19 and 40; Rhode Island, 33 and 59; Vermont, 14 and 25; District of Columbia, 10 and 17.

Thus, on the assumption that the proportions of native and foreign-born persons in the total white population did not change materially between 1910 and 1915, it appears that the birth rates for the foreign-born population in most of these states and in the District of Columbia are nearly or quite twice as high as the rates for the native and foreign elements combined, and

that, on the other hand, the rates for the natives are considerably lower than those for the entire white population, being little more than half as high in the case of Connecticut and less than two-thirds as high in the case of Massachusetts. On the basis of these figures—which of course represent only an approximation to the facts—the excess of the birth rate among the foreign-born population over that among the natives ranges from about 40 per cent in Minnesota to about 300 per cent in Connecticut. It should be borne in mind, however, that the proportion of the population in the reproductive period of life is considerably greater for the foreign born than for the natives.

Infant Mortality

The rate of infant mortality—that is, the number of deaths of infants under 1 year of age per 1,000 born alive—is of particular interest. This rate, for the registration area as a whole, was 100 in 1915. This is practically equivalent to saying that of every ten infants born alive, one died before reaching the age of 1 year.

Among the ten States these rates ranged from 70 for Minnesota to 120 for Rhode Island; and among the 96 cities and towns it varied from 54 for Brookline and Malden, Mass., to 196 for Shenandoah, Pa. The maximum rate was thus nearly four times as high as the minimum.

It might be expected that a high rate of infant mortality would accompany a high birth rate, but an examination of the figures fails to disclose any well-defined relationship of this character. Among the States, both the highest and the lowest infant-mortality rates—120 for Rhode Island and 70 for Minnesota—are found in connection with birth rates—23.1 and 24.5 per 1,000 population, respectively—which are below the average for the registration area; and, moreover, the birth rate in the State with the lowest infant mortality is higher than that in the State with the highest infant mortality.

Among the cities and towns the lowest infant-mortality rate—54 per 1,000 births—is shown for both Brookline and Malden, Mass. The former place had the lowest birth rate—12.7 per 1,000 population—given for any city or town in the registration area, but the birth rate of the latter—23.5 per 1,000—was not far below the average for the area. The highest infant-mortality rate—196 per 1,000 births, for Shenandoah, Pa.—is accompanied by a birth rate—32.7 per 1,000 population—which is far above the average, although considerably below the maximum. Of the ten cities in which the birth rates were highest, three show infant-mortality rates lower than the average, and of the ten places in which the birth rates were lowest, five show infant-mortality rates higher than the average.

Birth and Infant-mortality Rates in Foreign Countries

The table given below presents a comparison of the birth and infant mortality rates for the registration area of the United States with those for

Country	Birth rate.	Infant mortality rate.
United States (registration area only: 1915).....	24.9	100
England and Wales (1913).....	24.1	108
France (1912).....	19.0	78
German Empire (1912).....	28.3	147
Austria (1912).....	31.3	180
Russia in Europe (excluding Finland and the provinces of the Vistula and of the Caucasus: 1909).....	44.0	248
Italy (1913).....	31.7	137
Spain (1913).....	30.4	...
Norway (1913).....	25.3	65
Sweden (1912).....	23.8	71
Denmark (1913).....	25.6	94
Belgium (1912).....	22.6	120
Holland (1913).....	28.1	91
Switzerland (1913).....	23.1	96
Japan (1911).....	34.1	157
Australia (1913).....	28.3	72

foreign countries. The figures for the registration area of the United States relate to 1915, since that is the only year for which such statistics are available; but those for the foreign countries—taken from the annual report of the Registrar-General of England and Wales, 1914—refer in each case to the last calendar year which terminated prior to the outbreak of the European War and for which data as to both classes of rates are available. The birth rates represent the number of infants born alive per 1,000 of population, and the infant-mortality rates represent the number of deaths of infants under 1 year of age per 1,000 born alive.

The following table shows, for the birth-registration area, by states and by cities and towns having more than 25,000 inhabitants in 1910, the number of births in 1915, the birth rate, the death rate, the number of deaths of infants under 1 year of age, and the infant-mortality rate. The figures for the white and colored populations are shown separately for cities whose colored inhabitants in 1910 either numbered 10,000 or more or formed 10 per cent or more of the total. It is probable that the figures relating to the colored races (which include not only Negroes, but also Chinese, Japanese, Indians, and other non-whites) are less reliable than those for the whites.

AREA	Calendar Year 1915				
	Number of births. ¹	Rate per 1,000 population		Deaths of infants under 1 year of age. ¹	Deaths of infants under 1 year of age per 1,000 births.
		Births.	Deaths.		
The registration area	776,304	24.9	14.0	77,572	100
Registration States:					
Connecticut	32,627	26.7	14.9	3,494	107
Maine	16,193	21.1	15.6	1,706	105
Massachusetts	93,198	25.4	14.5	9,414	101
Michigan	80,576	26.7	13.4	6,930	86
Minnesota	55,121	24.5	10.1	3,871	70
New Hampshire	10,002	22.7	16.1	1,096	110
New York	241,836	24.0	14.6	24,004	99
Pennsylvania	217,979	26.0	13.8	23,933	110
Rhode Island	13,905	23.1	14.8	1,673	120
Vermont	7,840	21.6	14.7	670	85
Registration Cities of 25,000 Population or over in 1910.					
Connecticut					
Bridgeport	3,908	33.0	15.4	378	97
Hartford	3,596	33.0	17.6	390	108
Meriden town	828	24.5	16.3	70	85
New Britain	1,900	36.4	11.0	179	94
New Haven	4,427	30.1	15.7	387	87
Norwich town	666	22.8	19.7	86	129
Stamford town	862	25.3	15.1	100	116
Waterbury	2,151	25.4	13.8	308	143
District of Columbia					
Washington (total)	7,027	19.6	18.1	781	111
White	4,814	18.5	15.1	398	83
Colored	2,213	22.3	26.2	383	173
Maine					
Lewiston	752	27.3	16.8	75	100
Portland	1,392	22.1	16.1	139	100

Massachusetts

Boston (total).....	19,722	26.5	16.1	2,042	103
White.....	19,376	26.6	16.0	1,987	103
Colored.....	346	21.5	23.0	55	159
Brockton.....	1,530	23.3	10.5	126	82
Brookline town.....	406	12.7	10.3	22	54
Cambridge.....	2,615	23.4	13.1	243	93
Chelsea.....	1,518	34.5	14.3	103	68
Chicopee.....	1,080	37.6	14.7	148	137
Everett.....	916	23.9	9.5	62	68
Fall River.....	3,910	30.8	15.9	653	167
Fitchburg.....	1,203	29.2	13.3	113	94
Haverhill.....	1,182	24.7	14.1	94	80
Holyoke.....	1,605	25.1	14.9	269	168
Lawrence.....	2,948	30.0	14.3	405	137
Lowell.....	2,943	26.2	16.2	460	156
Lynn.....	2,110	21.0	11.7	162	77
Malden.....	1,177	23.5	10.3	64	54
New Bedford.....	3,534	30.8	15.0	505	143
Newton.....	894	20.7	12.3	67	75
Pittsfield.....	1,088	29.0	14.3	98	90
Quincy.....	1,061	28.5	11.6	79	74
Salem.....	1,028	21.5	10.5	80	78
Somerville.....	1,961	22.9	11.8	144	73
Springfield.....	3,100	30.0	14.7	276	89
Taunton.....	950	26.4	20.8	147	155
Waltham.....	705	23.4	14.3	49	70
Worcester.....	4,502	28.0	15.4	418	93

Michigan

Battle Creek.....	630	21.9	15.6	48	76
Bay City.....	1,041	21.9	13.9	92	88
Detroit.....	21,040	37.9	15.7	2,202	105
Flint.....	1,245	23.9	10.3	126	101
Grand Rapids.....	3,148	25.0	12.5	224	71
Jackson.....	806	23.2	14.3	67	83
Kalamazoo.....	861	18.2	16.3	66	77
Lansing.....	869	22.3	12.1	83	96
Saginaw.....	1,075	19.6	13.4	109	101

Minnesota

Duluth.....	2,094	22.8	10.0	189	90
Minneapolis.....	8,528	24.1	11.5	608	71
St. Paul.....	5,291	21.9	10.9	413	78

New Hampshire

Manchester.....	2,276	29.6	14.9	342	150
Nashua.....	670	24.7	16.4	99	148

New York

Albany.....	2,236	21.6	20.0	271	121
Amsterdam.....	994	27.5	13.6	116	117
Auburn.....	748	20.2	16.2	100	134
Binghamton.....	1,377	25.9	20.1	183	133
Buffalo.....	12,632	27.4	14.9	1,364	108
Elmira.....	844	22.2	17.8	95	113
Jamestown.....	847	23.7	12.2	56	66
Kingston.....	493	18.5	18.6	47	95
Mount Vernon.....	936	26.0	11.5	78	83
New Rochelle.....	723	19.9	11.4	73	101
New York (total).....	140,177	25.6	13.9	13,850	99
White.....	137,591	25.7	13.7	13,333	97
Colored.....	2,586	22.7	23.7	517	200
Newburgh.....	553	18.9	16.2	61	110
Niagara Falls.....	1,360	37.5	16.0	167	123
Poughkeepsie.....	753	25.1	17.0	74	98
Rochester.....	6,768	27.0	13.9	568	84
Schenectady.....	2,082	21.9	10.7	199	96
Syracuse.....	3,536	23.2	13.2	347	98
Troy.....	1,445	18.6	19.7	175	121
Utica.....	2,413	28.8	17.0	301	125
Watertown.....	555	18.9	14.6	75	135
Yonkers.....	2,470	25.6	11.6	270	109

Pennsylvania					
Allentown.....	1,692	27.3	16.1	235	139
Altoona.....	1,466	25.4	12.3	133	91
Chester (total).....	1,256	30.7	16.1	134	107
White.....	1,152	32.1	14.7	114	99
Colored.....	104	20.7	25.7	20	192
Easton.....	693	22.9	15.6	72	104
Erie.....	2,117	28.7	15.7	178	84
Harrisburg.....	1,366	19.3	14.2	137	100
Hazleton.....	838	29.9	18.7	128	153
Johnstown.....	2,175	32.7	14.1	253	116
Lancaster.....	1,124	22.4	16.1	114	101
McKeesport.....	1,395	29.8	13.6	155	111
New Castle.....	1,157	28.7	12.7	107	92
Norristown.....	652	21.1	21.7	80	123
Philadelphia (total).....	40,676	24.2	15.6	4,233	104
White.....	38,623	24.3	15.1	3,861	100
Colored.....	2,053	21.2	23.4	372	181
Pittsburgh (total).....	16,077	28.1	15.3	1,765	110
White.....	15,490	28.5	15.1	1,670	108
Colored.....	587	21.2	19.1	95	162
Reading.....	2,401	22.3	13.5	263	110
Scranton.....	3,992	27.7	14.7	474	119
Shenandoah.....	938	32.7	13.7	184	196
Wilkes-Barre.....	2,197	29.2	16.2	264	120
Williamsport.....	665	19.9	16.6	87	131
York.....	885	17.5	12.5	83	94
Rhode Island					
Newport.....	592	20.0	12.8	42	71
Pawtucket.....	1,296	22.3	14.4	197	152
Providence.....	5,841	23.4	14.6	621	106
Warwicktown ²	825	28.0	17.8	107	130
Woonsocket.....	1,123	25.9	13.3	167	149

¹ Exclusive of stillbirths.² Includes West Warwicktown.

PRINCIPAL CAUSES OF DEATH

Census Bureau's Summary of Mortality Statistics for 1915

WASHINGTON, D. C., *November 11, 1916.*—According to a preliminary announcement with reference to mortality in 1915, issued by Director Sam. L. Rogers, of the Bureau of the Census, Department of Commerce, and compiled under the direction of Mr. Richard C. Lappin, chief statistician for vital statistics, nearly one-third of the 909,155 deaths reported for that year in the "registration area," which contained approximately 67 per cent. of the population of the entire United States, were due to three causes—heart diseases, tuberculosis, and pneumonia—and nearly two-thirds were charged to twelve causes—the three just named, together with Bright's disease and nephritis, cancer, apoplexy, diarrhea and enteritis, arterial diseases, diabetes, influenza, diphtheria, and typhoid fever.

The deaths from heart diseases (organic diseases of the heart and endocarditis) in the registration area in 1915 numbered 105,200, or 156.2 per 100,000 population. The death rate from this cause shows a marked increase as compared with 1900, when it was only 123.1 per 100,000. The increase has not been continuous, the rate having fluctuated from year to year.

Tuberculosis in its various forms claimed 98,194 victims in 1915, of whom 85,993 died from tuberculosis of the lungs. The progress made in the prevention of this dreaded malady during recent years has been most gratifying. In only a little more than a decade, from 1904 to 1915, the death rate from tuberculosis in all its forms fell from 200.7 to 145.8 per 100,000, the decline being continuous from year to year. This is a drop of more than 25 per cent. Before 1904 the rate had fluctuated, starting at 201.9 in 1900. Even yet, however, tuberculosis has the unenviable distinction of causing

more deaths annually than any other form of bodily illness except heart diseases, and about 46 per cent. more than all external causes—accidents, homicides, and suicides—combined.

Pneumonia (including bronchopneumonia) was responsible for 89,326 deaths in the registration area in 1915, or 132.7 per 100,000. This rate, although lower than for most of the years from 1900 to 1911, inclusive, is higher than for 1912, 1913, and 1914. The rate for 1914, 127 per 100,000, was the lowest on record. The death rate from this disease, like that from tuberculosis, has shown a marked decline since 1900, when it was 180.5 per 100,000. Its fluctuations from year to year, however, have been pronounced, whereas the decline in the tuberculosis rate has been nearly continuous.

The only remaining death rate higher than 100 per 100,000 in 1915 was that for Bright's disease and acute nephritis, 104.7. The total number of deaths due to these maladies in 1915 was 70,500; of this number, 64,480 were caused by Bright's disease and 6,020 by acute nephritis. The mortality rate from these two causes increased from 89 per 100,000 in 1900 to 103.4 in 1905, fluctuated more or less between 1905 and 1912, and has shown little change since the last-mentioned year.

Next in order of deadliness come cancer and other malignant tumors, which caused 54,584 deaths in 1915. Of these, 21,221, or nearly 39 per cent. resulted from cancers of the stomach and liver. The death rate from cancer has risen from 63 per 100,000 in 1900 to 81.1 in 1915. The increase has been almost continuous, there having been but two years, 1906 and 1911, which showed a decline as compared with the years immediately preceding. It is possible that at least a part of this increase is due to more correct diagnoses and greater care on the part of physicians in making reports to registration officials.

Apoplexy was the cause of 53,397 deaths, or 79.3 per 100,000. The rate from this disease has increased gradually, with occasional slight declines, since 1900, when it stood at 67.5.

Diarrhea and enteritis caused 48,325 deaths in 1915, or 71.7 per 100,000. This rate has shown a marked falling off in recent years, having been 90.2 in 1913 and 79.4 in 1914; and has declined very greatly as compared with the corresponding rate for 1900, which was 133.2. Nearly five-sixths of the total number of deaths charged to these causes in 1915 were of infants under 2 years of age.

Arterial diseases of various kinds—atheroma, aneurism, etc.—caused 15,685 deaths in 1915, or 23.3 per 100,000. This rate, although somewhat lower than the corresponding ones for 1912 and 1913, is higher than that for 1914, and is very much higher than that for 1900, which was 6.1.

Diabetes was the cause of 11,775 deaths, or 17.5 per 100,000. The rate from this disease has risen almost continuously from year to year since 1900, when it was 9.7 per 100,000.

Influenza caused no fewer than 10,768 deaths in the registration area in 1915, the rate being 16 per 100,000. The rate from this malady, which fluctuates very considerably from year to year, was higher in 1915 than during several years preceding, but was somewhat lower than the average between 1901 and 1910.

No other epidemic disease produced a death rate as high as 16 per 100,000 in 1915. The fatal cases of diphtheria and croup—which are classed together in the statistics, but practically all of which are of diphtheria—numbered 10,544, or 15.7 per 100,000, in that year, the rate having fallen from 43.3 in 1900. This decline of more than 60 per cent. is relatively greater than that shown by any other important cause of death except typhoid fever. The rate has not fallen continuously, but has fluctuated somewhat from year to year.

The mortality rate from typhoid fever has shown a most gratifying and remarkable decline since 1900, having dropped from 35.9 per 100,000 in that year to 12.4 in 1915, the decrease amounting to nearly two-thirds. This decline is greater, relatively, than that shown for any other important cause of death. The total number of deaths due to typhoid fever in 1915 was 8,332. Improved methods of sanitation, including the betterment of the water supply and sewerage systems, the campaign against the fly, and other preventive

measures, have proved their efficacy in a striking manner by a reduction of almost two-thirds in the typhoid death rate during a period covering but a decade and a half.

Whooping Cough, Measles, and Scarlet Fever

The principal epidemic maladies of childhood — whooping cough, measles, and scarlet fever — were together responsible for 11,489 deaths of both adults and children, or 17.1 per 100,000, in the registration area in 1915, the rates for the three diseases separately being 8.1, 5.4, and 3.6, respectively. In 1913 measles caused a greater mortality than either of the other diseases, but in 1914 and 1915 whooping cough had first place. In every year since and including 1910, as well as in several preceding years, measles has caused a greater number of deaths than scarlet fever. The mortality rates for all three of these diseases fluctuate greatly from year to year. The rates for measles and scarlet fever in 1915 were the lowest since 1900, while that for whooping cough was somewhat above the lowest recorded rate for this disease, 6.5 in 1904, although far below the highest, 15.8 in 1903.

Effects of the "Safety-first" Campaign

That the "safety-first" campaign, inaugurated a few years ago, has borne good fruit is brought out by the figures for accidental deaths. For 1913, 54,011 deaths were reported as due to accident; for 1914 the corresponding number was reduced to 51,770, and for 1915 to 51,406; and during this period there was not only an increase in the population of the registration area as it existed in 1913, but an increase in the extent of the area itself. The rate per 100,000 population for accidental deaths fell from 85.3 in 1913 to 78.5 in 1914 and to 76.3 in 1915. There has been a very considerable reduction in fatalities due to railway, street-car, mine, and machinery accidents, and the increase in those resulting from automobile accidents has not been as rapid as the increase in the number of machines in use.

Deaths due to railway accidents and injuries totaled 6,652 in the registration area in 1915, or 9.9 per 100,000. This number includes fatalities resulting from collisions between railway trains and vehicles at grade crossings. This death rate is the lowest on record and shows a marked decline during the past 10 years.

Deaths resulting from street-car accidents and injuries numbered 1,555, or 2.3 per 100,000. This rate, like that for railway fatalities, is the lowest on record and shows a material falling off during the past 10 years.

Automobile accidents and injuries caused 3,978 deaths in 1915, or 5.9 per 100,000. There has been an increase in this rate from year to year, but, as already mentioned, the increase has not been so rapid as that in the number of machines in use.

The number of deaths from mine accidents and injuries in the registration area in 1915 was 2,009, corresponding to a rate of 3 per 100,000. This rate shows a material decline as compared with the corresponding figure for 1913, 3.6, and a very great decline as compared with that for 1907, 4.8, which is the highest on record.

Deaths caused by machinery accidents in 1915 numbered 1,257, or 1.9 per 100,000. This rate also shows a marked decline during recent years, the corresponding figures for 1913 and 1914 being 2.4 and 2, respectively. The highest recorded rate from this cause is 2.5, for 1907.

Suicides

The number of suicides reported for 1915 was 11,216, or 16.7 per 100,000 population. The suicide rate has not varied very greatly during the past 10 years.

Deaths Caused by Firearms

The Census figures bring out the astonishing fact that during the year 1915 firearms caused more deaths than railroad accidents, more than five times as many as street-car accidents, nearly as many as railroad and street car accidents combined, and more than twice as many as automobile accidents. The total number of deaths due to the use of firearms in the registration area in 1915 was 7,994, corresponding to a rate of 11.9 per 100,000.

Of these deaths, 3,608 were suicides, 2,885 were homicides, and 1,501 were accidental (including those concerning which the status as to suicide, homicide, or accident was in doubt). The suicidal use of firearms has increased from year to year since 1913; the frequency of accidental deaths due to their use shows a slight decline during recent years; and the homicidal use of firearms shows a decline as compared with 1913 and 1914 but an increase as compared with 1910, 1911, and 1912. No separate data as to homicides by firearms for the years prior to 1910 are available.

RECIPES FOR IRON-RICH DISHES

(Supplementary to paper by Caroline L. Hunt, page 71 of this issue. For the convenience of the mother or nurse.)

An Iron-Rich Soup

2 heads of lettuce or an equivalent amount of the outer and tougher leaves.

1 thin slice of onion.

3 slices, or 3 ounces, of whole wheat or graham bread.

4 cupfuls of meat stock or water.

6 egg yolks.

Salt.

Lemon juice, if desired.

Put the lettuce and onion through a meat chopper with the bread to absorb the juice, cook 20 minutes in the water or stock, thicken with the egg yolks and season. Or, cut the lettuce into small pieces and after cooking it put through a sieve. In thickening the soup, beat the yolks well and mix them with a little of the hot liquid before putting them into the remainder of the liquid. After the yolks are added, heat the soup only enough to thicken it; not enough to curdle it. A double boiler may be used to advantage in making this soup.

Spinach, kale, cabbage or almost any other vegetable may be used in the same way. Such soups are good food for anæmic children. It should be possible to get very cheap outer leaves of lettuce that the market man takes off in making lettuce-hearts.

Iron in the above soup, exclusive of that in the meat stock, about 12 milligrams. If made with spinach it contains 14 or 15 milligrams. Soups made of milk and vegetable pulp, thickened with flour, contain little iron, particularly if the water in which the vegetables are cooked is thrown off.

Iron-Rich Meat Cakes

1 pound of round of beef.

3 egg yolks.

1 teaspoon of salt.

A few drops of onion juice.

Remove all fat from meat and chop lean portion. Add well-beaten egg yolks and seasonings, form into cakes, handling lightly, and broil. Or bake in a hot oven. Iron in the above about 20 milligrams. Iron in same weight of meat cakes without removing fat and without egg yolks about 13 milligrams.

Baked Fish with Iron-Rich Sauce

Cut bass or halibut into fillets weighing 4 ounces or less. Salt and pepper them, place in a greased pan, cover with a greased paper and cook 15 minutes in a hot oven. Serve with the following:

Iron-Rich Sauce

6 egg yolks.
 3 teaspoonfuls of lemon juice.
 $\frac{3}{4}$ cupful of water.
 $\frac{3}{4}$ teaspoonful salt.

Mix the ingredients by stirring rather than by beating and cook over boiling water until thick, stirring constantly. Serve hot on meat or fish, and cold on salads. Iron about 9 milligrams; iron in oil salad dressing, none.

Thoroughly chilled asparagus with hot sauce makes an extremely palatable dish. Spinach cooked, chopped, seasoned and molded into individual portions may be served cold with the above sauce. The addition of hard-cooked egg yolks raises the already high iron content of this dish. They may be sliced and laid in the bottom of the mold or put through a ricer and sprinkled over the spinach after it is turned out of the mold. Or all such refinements of serving may be omitted, if it is not necessary to tempt the appetite.

Savory Iron-Rich Sauces for Meat or Fish

To the above sauce add capers or finely chopped chives, parsley, pickles or olives; or add horseradish, anchovy sauce or tomato juice boiled down till thick; or use tarragon vinegar in making the sauce instead of the lemon juice. These must be omitted, of course, in the case of persons of impaired digestion.

Iron-Rich Substitute for Butter

4 egg yolks.
 $\frac{1}{4}$ cupful of water.
 $\frac{1}{2}$ teaspoonful of salt.

Mix the ingredients and pour into a cup, set in hot water; cover and bake in a moderate oven until firm.

Iron about 6 milligrams. Iron in butter, none.

Iron-Rich Substitute for Cheese

To the ingredients in the above recipe add 2 teaspoonfuls of lemon juice and a few drops of onion juice, or $\frac{1}{2}$ teaspoonful of finely chopped chives. Iron same as in iron-rich substitute for cheese. Iron in cheese, practically none.

Iron-Rich Substitute for Cream

A custard made with egg yolks may be used on fruit in place of cream. It is particularly palatable served very cold with stewed plums.

Iron-Rich Sandwiches

No. 1. — Between two slices of whole wheat bread put crisp leaves of lettuce and hard-cooked egg yolks mashed and seasoned with salt and lemon juice or vinegar, or with the iron-rich salad dressing. If made with $1\frac{1}{2}$ ounces of bread, 1 ounce of lettuce and 2 egg yolks, this contains about 4 milligrams of iron.

No. 2. — On a slice of whole wheat bread toasted on one side lay a leaf of lettuce spread with salad dressing and a thick slice of the butter or cheese substitute. Eat with a knife and fork as you would a club sandwich.

Other Uses for Egg Yolks

Salad dressings may be made out of egg yolks, either raw or hard-cooked, by seasoning them with salt and pepper and vinegar, or lemon juice. Yolks may be satisfactorily scrambled if mixed with water in the proportion of one teaspoonful to each yolk. No additional fat is needed in cooking them. Croquettes of hard-cooked eggs may be made by mashing and seasoning them and adding enough raw egg to "bind" them. Every yolk contains about $1\frac{1}{2}$ milligrams of iron.

An Iron-Rich Sweet

Chop and mix together equal weights of dates, dried figs, and seeded raisins. Buy for the purpose figs intended for cooking purposes. Soften them by washing and drying them in a slow oven. This mixture may be used in place of marmalade at breakfast, as a filling for sweet sandwiches, or as a substitute for candy. For the last purpose roll it out and cut into pieces the size of small caramels. This candy may be wrapped in paraffin paper or served in paper cases. Or the pieces may be rolled in powdered sugar. This is a good form of sweet for children or for any person suffering from constipation.

Iron in 1 pound about 16 milligrams. Iron in 1 pound of sugar or ordinary candy, none.

Iron-Rich Ice Cream

$\frac{1}{2}$ cupful finely chopped dates.
 $1\frac{1}{2}$ cupfuls of water.
 6 egg yolks.
 $\frac{3}{4}$ teaspoonful of salt.
 $\frac{1}{2}$ cupful orange juice.

Cook the dates and the water for half an hour in a double boiler. Beat the yolks of the eggs and pour the cooked dates over them. Return to the double boiler and cook until the mixture thickens. Cool, flavor and freeze.

By Caroline L. Hunt,

Scientific Assistant, Office of Home Economics, State Relations Service, U. S. Department of Agriculture, Washington, D. C.

RAVAGES OF TYPHOID FEVER

Health experts estimate that during the last ten years Germany has saved as many men from typhoid as she has lost by death at Verdun. They point out, on the other hand, that fewer men were killed in the Civil War, on both sides, than have died from typhoid in the United States during the last ten years, and that our typhoid rate is four times that of Germany and England. The economic loss inflicted on the country by this preventable disease is apparent from the fact that in 1914, 200,000 Americans had typhoid, being sick on an average for from five to seven weeks.—*The Nation's Business*.

REDSKIN NO LONGER A VANISHING RACE

The American Indian no longer is a vanishing race, but under improved health conditions is increasing in number, according to the annual report yesterday of Commissioner Sells of the Indian Bureau. There were 209,224 Indians when the report was written, an increase of 1,522 over a year ago. Health and educational campaigns, the report says, reduced the general death rate this year from 35.55 in one thousand to 23.33, and cut down the number of infant deaths from 2,391 two years ago to 1,303 this year. Deaths from tuberculosis were reduced 40 per cent.

A "QUICK" ANSWER

"What little boy can tell me the difference between the 'quick' and the 'dead'?" asked the Sunday-school teacher.

Willie waved his hand frantically.

"Please, ma'am, the 'quick' are the ones that get out of the way of automobiles; the ones that don't are the 'dead.'" — *Exchange*.

RANDOM REMEDIES IN RHYME*

BY LEWIS PINKERTON CRUTCHER, M.D., Long Beach, Cal.

Nux Vomica is mean,
 Sulphur is lean,
 Pulsatilla is sad,
 Chamomilla is mad,
 Platinum is "horrid,"
 Phosphorus is florid,
 Calcarea Carb. is chubby,
 Ignatia suspects "hubby."

Stramonium is crazy,
 Sulphur is lazy,
 Pulsatilla is weepy,
 Opium is sleepy,
 Nux Vomica is dizzy,
 Bryonia is busy,
 Graphites hair mats,
 Belladonna sees rats.

Aconite is afraid,
 Baptisia is abed,
 Arsenic is burning,
 Natrum Mur. isn't learning,
 Lachesis is left-sided,
 Phosphorus, too — provided!
 Sepia is spotted,
 Nux Vomica is besotted.

Lycopodium is right,
 Mercurius — at night,
 Rhus Tox is moving,
 Puls. pains are roving,
 Cactus is squeezing,
 China is freezing,
 Zincum is fidgety,
 Baryta is midgety,
 Belladonna is throbbing,
 Nux Moschata is sobbing.

Hepar Sulphur is boily,
 Natrum Mur. face is oily,
 Arnica is bruised,
 Ignatia is abused,
 Nux Vomica is urged,
 Aloe is purged,
 Belladonna is dilated,
 Lycopodium is satiated,
 Gelsemium is stupid,
 Ignatia hates Cupid.

Platinum is troubled,
 Colocynth is doubled,
 Hyoscyamus is suspecting,
 Ipecac is ejecting,
 Podophyllin is prolapsed,
 Camphor is collapsed,
 Cimex is contracted,
 Coffee is distracted,
 And so are you, perhaps.

* Printed in the December 1916 issue of the *Pacific Coast Journal of Homœopathy*.

GIFT OF SCHOLARSHIP FUND TO BOSTON UNIVERSITY

An anonymous donor has given to Boston University the sum of one hundred thousand dollars for a scholarship fund for young men, to be designated as the "Prof. Augustus Howe Buck Scholarship Fund." The gift was made in honor of Professor Emeritus Buck, at the head of the Department of Greek in Boston University from 1874 to 1901 and now living in Germany.

The fund is to be used for the aid of young men of unusual promise but lacking financial resources, to obtain a college and professional education. Preference is to be given to candidates who do not desire a career primarily for its financial advantages. The awards are to be made entirely free from denominational influence or political bias.

ANNOUNCEMENT OF THE EDWARD L. TRUDEAU FOUNDATION FOR RESEARCH AND TEACHING IN TUBERCULOSIS

Announcement is made that an endowment fund has been created as a memorial to the late Dr. Edward L. Trudeau, to perpetuate his name and to continue the scientific investigations that were a life-long interest of the American pioneer in tuberculosis research. The income is to be devoted to the following purposes:

1. To maintain laboratories and carry on research into the nature, causes and treatment of tuberculosis
2. To maintain regular courses of instruction for physicians and others in the most advanced knowledge of the above subject, under the name of the Trudeau School of Tuberculosis.
3. To offer young physicians the opportunity to engage in research work, while undergoing treatment for the disease, through the establishment of Fellowships.

The Trustees of the Trudeau Sanatorium are to administer this fund, with the aid of an Advisory Council of distinguished investigators and teachers, consisting of Professor William H. Welch and Professor Theodore C. Janeway of Johns Hopkins University; Dr. Herman M. Biggs, New York State Commissioner of Health; Dr. William H. Park, Director of Research Laboratory, New York City Health Department; Professor Theobald Smith, Director, Department of Animal Pathology, Rockefeller Institute, Princeton, N. J.; Professor Warfield T. Longcope, Columbia University; Professor Thomas McCrae, Jefferson Medical College, Philadelphia, Pa.; Dr. John H. Lowman, Western Reserve University, Cleveland, O., and Dr. Vincent Y. Bowditch, of Boston.

The plans for researches in tuberculosis are rather comprehensive in their scope, including the fields of clinical and laboratory experimentation.

The scientific study and treatment of this disease under conditions favorable for the continued observation of patients with the best facilities obtainable, will be encouraged in every way. Clinical and laboratory work will be carried on under experienced direction with the aim of enlisting the interest of physicians and others in the solution of many problems awaiting study.

The facilities for research are as follows:

1. The Trudeau Sanatorium Medical Department (150 beds), including the Infirmary.
 - (a) The Clinical Laboratory.
 - (b) The Research Laboratory.
 - (c) The X-Ray Laboratory.
 - (d) The Statistical Department.
2. The Saranac Laboratory. (In the Village of Saranac Lake.)
3. By co-operation with the various tuberculosis sanatoria and hospitals in the vicinity, clinical and laboratory facilities are available in the following institutions:
 - (a) The State Sanatorium, Ray Brook, 350 beds.
 - (b) The Stony Wold Sanatorium, 150 beds.
 - (c) The Gabriels Sanatorium, 70 beds.
 - (d) The Reception Hospital, 20 beds.
 - (e) The Saint Mary's Hospital, 20 beds.

NEW MEDICAL PROVISIONS

For Health Insurance

Important advances in plans for organization of medical care under Health Insurance appear in the pamphlet entitled, "Medical Provisions of the Tentative Draft of an Act for Health Insurance," just published by the American Association for Labor Legislation at its headquarters in New York City. These provisions, in the opinion of the Council of the Medical Society of the State of New York, "safeguard the public interest, the public health and the welfare of the medical profession."

Gains have been made by providing specifically in the new sections of the act for adequate representation of the medical point of view. The physician member of the state commission is supplemented by a state medical advisory board elected by the state medical societies. This board passes upon regulations issued by the Commission affecting medical benefit, and hears and reports upon disputes appealed to the Commission. Medical interests also secure valuable participation in local organizations through the local medical committee, while the foresighted provision for the representation of different groups—health department, general practitioners and specialists—on the committee is assigned to maintain a just balance among the varying medical interests. This committee has the opportunity of discussing local medical regulations before they are put into operation by the directors of the local insurance fund, and also hears any cases of disagreement relating to medical benefit. If it is unable to settle the difficulty, appeal is taken to an arbitration committee composed of representatives of the physicians, of the local health insurance fund, and an impartial chairman.

Careful study of foreign experience pointed out the desirability of separating the functions of certifying an insured person as eligible for benefit and of actually treating him, in order to avoid the embarrassing situation in Germany where a physician acts as plaintiff and defendant at the same time. Therefore, medical officers, not permitted practice under the act, alone, have authority to issue certificates of disability and only if its insurance has been recommended by the attending physician. To assure that high grade men are appointed by the local funds, the bill provides that the medical advisory board, elected by the state medical societies, shall establish the qualifications and that the local medical committee shall have power to veto undesirable appointments. This procedure avoids certain disadvantages of a civil service examination and assures that the medical officer is selected, because of the confidence placed in him by the physicians with whom he will be associated.

THE MULFORD DIGEST

On this, the occasion of its twenty-fifth anniversary, the H. K. Mulford Company has sent out a commemorative number of the *Mulford Digest*.

It contains a description of the company's products and methods, and photographs of the attractive grounds and buildings. The laboratories are open at any time to inspection by the medical and pharmaceutical professions.

Special articles for this number have been contributed by Drs. A. L. Garbat, *Sensitization of Typhoid Vaccin*; P. S. Pittenger, *The Comparative Toxicity of Mercurialized Serum and Bichlorid of Mercury when injected Intramuscularly, Intraspinaly and Intravenously*; G. H. Robinson, *The Meningococcus and Its Anti-serum*; *On the Specificity of Bacterial Vaccins in Typhoid Fever*.

Much of the original research work reported was done by the company's staff of research workers.

This special number of the *Digest* is a credit to the Company.

PERSONAL AND GENERAL ITEMS

Dr. Harold C. Ober, who, after his graduation from Boston University School of Medicine last June, entered upon internship in the Massachusetts Homœopathic Hospital, has resigned from the latter and is now serving as intern in Boston City Hospital.

Dr. Laurence R. Clapp (B.U.S.M., 1908), who for the past three years has been at Melbourne Homœopathic Hospital, Melbourne, Australia, has recently undergone an operation for appendicitis, but Dr. Bouton reports that he is getting on well. It is expected that Dr. Clapp will return to the United States in the coming spring.

Dr. Henry C. Turner, Jr. (class of 1916, B.U.S.M), has located at Norwood, Mass.

Dr. Charles P. Haller, of Bridgeport, Conn., has changed his address from 464 State Street to 320 West Avenue.

A recent appointment in the Massachusetts Homœopathic Hospital is that of Dr. Marguerite L. Hunt, Chicago, to internship.

The dedicatory exercises of the new Martha G. Ripley Hospital (maternity), Minneapolis, were held on December 9, Dr. Henry C. Aldrich, recent President of the American Institute of Homœopathy, giving the dedicatory address.

The Hospital is a memorial to the life and labors of the late Dr. Martha G. Ripley (Boston University School of Medicine, 1883), and cost in the neighborhood of \$75,000.

Dr. Peyton F. Anderson has removed from Shelton, Conn., to 18 Pearl St., Waterbury, Conn.

Dr. Eleanor M. Anderson (B.U.S.M., 1916), entered upon internship January first in the Metropolitan Hospital, Blackwell's Island, New York City, for a period of eighteen months.

TO RENT. Office hours in a physician's office. Inquire at Suite B., 483 Beacon St., Boston, 3 to 5 p. m. Telephone Back Bay 8000.

FOR SALE: Ford Sedan, 1915. Newly painted; overhauled; new tires; shock absorbers; demountable rims. A bargain. Inquire of the *New England Medical Gazette*, 80 East Concord St., Boston.

Dr. Howard A. Streeter (B.U.S.M. 1898) has relinquished general practice in Marblehead, Massachusetts, having been appointed District Health Officer in the service of the State Health Department, for the Eighth District of Massachusetts (Berkshire County). He began his new duties on January 15, and is making North Adams his headquarters.

Dr. Belle J. Allen (B.U.S.M. 1904) is under appointment to the proposed Union Medical College for Women in India, but because of a newly enacted registration law which requires that all appointees be graduates of old-school medical colleges, she is taking a post-graduate year in the Woman's Medical College of Philadelphia.

Dr. Simon Flexner, Director of the Rockefeller Institute for Medical Research, New York, has been made a foreign associate member of the French Academy of Medicine, Paris.

The *London Lancet* in a recent issue predicts that "there must come a day when the necessary economy of medical men can be obtained only by mobilization of the whole of the available supply, so that calls can be made upon individual services when and where required."

The American Association of Industrial Physicians and Surgeons offers a prize of one hundred dollars for the best thesis on any subject related to Industrial Medicine and Surgery by any undergraduate medical student of the United States. The thesis must not contain more than 5,000 words and must be in the hands of the Secretary of the Association by May 1, 1917.

Address Harry E. Mock, M.D., Sec'y, 122 South Michigan Avenue, Chicago, Ill.

Dr. A. George Gigger (B. U. S. M. 1906), who for some years was located at Chatham, Massachusetts, after taking the Public Health Course given at Harvard Medical School and The Massachusetts Institute of Technology, has been appointed assistant pathologist for the State of Rhode Island.

Dr. A. S. Guibord began on February first a short course of lectures to the Senior class of Boston University School of Medicine on Psycho-Analysis and Psycho-Therapy, under Dr. Frank C. Richardson, Professor of Diseases of the Nervous System. Dr. Guibord is a graduate of the School, class of 1899.

Monson (Massachusetts) State Hospital offers the appointment of assistant physician, with a first year salary of nine hundred dollars, home and living, and regular increases up to twelve hundred per annum in three years, or less. Address Dr. Everett Flood, Supt., Monson, Mass.

Wanted.—At once a physician to assist me for a few weeks in my practice. For further information, address, Dr. Stevens, Frankestown, N. H.

HOSPITAL NOTES

The Homœopathic Hospital of Rhode Island has outgrown its present quarters at Jackson Street, Providence, and a modern building, with a capacity of 100 beds, together with accommodation for the Homœopathic Dispensary, is to be erected. Five acres of wooded land have been secured in Pleasant Valley section, opposite Davis Park—an ideal hospital site easily reached by trolley car from all parts of the city. A thoroughly organized appeal for funds will be made in April. A winter frolic recently held netted \$3,800, and in addition to this the Ladies' Hospital Committee has secured \$9,000 for furnishings. We congratulate the Rhode Island homœopaths on the success of their initial efforts, and wish them success in their new undertaking.

The Massachusetts Homœopathic Hospital is a beneficiary under the will of the late George Morrell of Sharon, Massachusetts, and is to receive \$25,000 as a trust fund to be known as the Kate A. Morrell Fund. After numerous bequests and trusts funds are disposed of, the residue of the estate is to be divided between the Hospital, the Boston Provident Association, the South End Association, the Children's Hospital, and the Massachusetts Society for the Prevention of Cruelty to Animals.

The Evans Memorial, Massachusetts Homœopathic Hospital, is to be congratulated upon the receipt in January of a very generous gift, a welcome addition to its endowment fund.

THE NEW ENGLAND MEDICAL GAZETTE

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ORIGINAL COMMUNICATIONS

QUO VADIMUS?*

THE TREND OF MEDICINE AND OF HOMŒOPATHY

By JOHN PRENTICE RAND, M.D., Worcester, Mass.

I have been asked to say a few words to you upon the trend of medical thought and practice, as it appears to me to-day, and especially upon the trend of that branch or school of medicine which this Society represents. It may be a coincidence or simply my conceit, but it seems to me that the thirty-six years just past that marks the time since I began to learn the anatomical difference between the *os calcis* and the *os uteri* has produced a most remarkable change in the attitude of the medical profession toward itself and toward all the varied interests it represents.

The old medicology like the old theology was essentially a human, or inhuman, document. It had no faith in God or Nature in the great plan of physical salvation. As some one has well said of the old theology: "Our fathers believed in total depravity and practiced it." It is interesting, almost pathetic, to note the old-time assurance of the medical profession in regard to the treatment of disease. I do not refer to the old "Brunonian doctrine" of the 18th century with its "sthenic" and "asthenic" pathology and its "depleting" and "stimulating" methods of treatment the carrying out of which is said to have caused the death of more people than the French Revolution and the wars of Napoleon combined. Physicians had the courage of their convictions in those days and the patients suffered accordingly. But our own physicians of forty years ago were almost as bad. We satirize the Kaiser for his "Me und Gott" attitude towards his dependents but the assurance and egoism of our doctor of the old school, or even of our old fash-

* Presented at the Boston District of the Massachusetts Homœopathic Medical Society, Feb. 1, 1917.

ioned homœopathic physician were little less. Who ever heard of a patient dying a "natural death" without medication in the "brave days of old?"

But we are gradually losing confidence in the remedial action of drugs and relying more and more upon general sanitation and other forms of treatment; and the State is gradually assuming the function of guardian, conservator and medical attendant of us all.

Whither are we going? Let us see! Among the comparatively recent acts of authority assumed by the State was the organization of the Board of Registration in Medicine in July 1894. Previous to that date there were no legal restrictions to the practice of medicine in Massachusetts. Anybody who had the nerve to make the attempt was free to do so and quacks of all denominations filled the State. It is true that the graduate physician had a certain medical prestige among the better classes, but this did not prevent the horde of non-graduates from reaping a bountiful harvest. The traditions and current belief of the people all turned towards internal drug medication in some form or another. The saner and better class patronized reputable physicians and everybody felt he must be taking something, as a sort of "spring house cleaning" at least, and the drug stores and patent-medicine vendors came in for a full share of the profit. But conditions have changed; the Pure Food Law has taken the mysterious element of secrecy out of the quack nostrum, and the popular magazine writer has exploited the futility of drugs in general to such an extent that the ordinary layman when he is ill can hardly decide whether to call a physician or take a bath, and often recovers with neither.

Our State Board of Registration in Medicine was organized ostensibly for the purpose of protecting the people from ignorant and unscrupulous practitioners, but certain ones who have been disturbed by it will never give up the belief that it was in reality an adroit move upon the part of the dominant school to gain complete control over the practice of medicine.

It would have been impossible at that time, as indeed it would be now, to get such an enactment through the Legislature without some recognition of the minority schools of medicine and so this law was framed to include representatives of the Homœopathic and Eclectic Societies. Previous to January 1895 any graduate physician could register for a nominal fee, and any non-graduate who had been continuously in practice for three years in the State was also allowed to register but under a separate class. Since 1895 all persons or physicians who have desired to practice medicine in the Commonwealth have been

obliged to pass a satisfactory examination before the State Board of Medical Examiners.

I am not criticizing the value or necessity of the Registration Act. It was an awkward piece of legislation and an attempt to remedy an evil condition at the wrong end. To charter a medical college for the education of students and give it authority to confer a medical diploma that carries with it no legal right to use that education, is one of the paradoxes of our modern legislation. To grant a man and woman the right to marry and then brand their children as illegitimate would not be more absurd. The State says in substance to the graduate of its chartered medical college: "You don't know enough to practice medicine and you shall not even make the attempt until you have passed another examination to the satisfaction of the State Board." In like manner the State says to all of its people, educated and ignorant alike: "You don't know enough to select a medical attendant. I will attend to that business for you. If you want to be rubbed or prayed for you can have a certain degree of option but if you want to take physic you have got to bow to the State's anointed."

We used to think of America as "The land of the free and the home of the brave" and Patrick Henry made a great hit with his "Liberty or Death" proposition, but now the average citizen is so tied up with legal restrictions that he can't go down town without danger of being "pulled in." He can't drive a hack without a license, he can't peddle milk or collect swill. These last two restrictions may not disturb us greatly as physicians unless some of us should get enough money together to buy a few acres of land outside and then set out to teach the hard-headed farmers how to make money by running a sanitary pig-pen or selling certified milk.

We have legislated ourselves into solitary confinement so far as a change of location into another state is concerned, by the passage of laws for the "protection of the people" though Dr. Perkins has suggested a modified form of reciprocity to the New England Federation of Examining and Licensing Boards by the adoption of uniform questions, uniform ratings and uniform percentages by all of the Boards that have their examination at the same date. The suggestion is an excellent one but I fear it may disturb the remains of the late eminent Secretary of our State Board who decried all forms of reciprocity, and exultingly said: "Massachusetts has its own way of doing things." And what was that way? For a score of years until May, 1915, it put all candidates for medical licensure upon an absolute level. Anybody who could rake up the required fee was allowed to take the State Examination. The graduate of

Harvard or Boston University had no preference over the man who never saw a medical college, and the State had and still has the arrogance to assume that the seven men appointed by the Governor are better qualified to determine the fitness of a candidate for the practice of medicine in three days than is the medical college that has had him under the closest observation for four years.

It may be an ungracious thing to suggest but I do not believe that the average member of our State Board of Registration would care to take the examination of his fellows, or attempt to answer his own list of questions six months from date.

Following the lead of the various states that have attempted to decree who should and who should not practice medicine, come the organized representatives of great wealth and influence like the Carnegie Foundation and the Council of the A.M.A. which have essayed to determine for the future not merely who should practice medicine but who should teach it, and who should be even allowed to commence the study of it. Through an elaborate system of medical inspection they have forced scores of medical colleges out of existence (in 1907 there were 161 colleges, in 1912 only 116) and raised the entrance requirements of the others so high that a man, without an academic degree or two years of academic college work, is not allowed to matriculate at all. Take our Homœopathic Colleges for instance; I said a moment ago that I did not believe the average member of our State Boards of Registration would care to take his own examination six months from date. How many of our college professors and instructors could turn around and gain admission as a medical student into their own colleges today? Possibly one in four; and yet every one of these men has been successful in practice and in the building up of a medical school, from which today, for lack of preliminary training, he would be barred out. The old query of Nicodemus confronts us here:—"How can a physician be born again when he is old? Can he enter the second time into his Alma Mater's womb and be born?" I am not decrying the advantages of a liberal education, but I truly deplore any act that would turn our medical colleges into a sort of a rich man's guild into which none but the favored few can enter.

Following close in the wake of Medical Registration came another act of paternalism, *viz.*, the medical inspection of our public schools throughout the State. If our school population sprang from old New England stock there would be little need for such supervision; in fact I think that the average New Englander who is fortunate enough to have children to attend

school feels that this custom of school inspection is a sort of impertinence upon the part of the State, and only submits to it for the sake of the "great unwashed" who have no intelligent oversight at home. Even the ignorant foreigner, accustomed to all sorts of tyrannical oppression sometimes resents this procedure as an infringement upon his political rights. But, as laws are made for the greatest good of the greatest number, we accept this jurisdiction for the sake of the bright little children of foreign parentage who some day may be our main, perhaps our only, support.

Closely allied to this subject of the medical inspection of our schools is the old old story of compulsory vaccination and police regulation for the prevention and control of contagious disease. I will not dwell upon the question here of the State's undoubted right to enforce vaccination as a preventive of small pox. Personally I believe in the efficacy of it, but if I did not I should most seriously object to the procedure being enforced by law. At present a physician's certificate will exempt a child of school age from vaccination which leaves a loophole through which the "Antis" may escape. But this straw has been threshed over in our State legislature every year for a long time and the end is not yet.

A more acceptable form of paternalism, though less effective, is the assistance which the State is trying to give its great army of tuberculous patients. What has brought this about would be very hard to tell, but it has come. Previous to 1898, when the State Sanatorium was established at Rutland, Massachusetts had never taken any active interest in the prevention or cure of consumption. In fact nobody believed that consumption was curable, and when some enthusiastic young doctor claimed to have succeeded in doing so, all the wiseacres shook their heads in a knowing way and declared that the so-called cure was simply a mistake in the diagnosis.

For a long time Massachusetts had maintained hospitals for surgical cases and various forms of curable disease. As a matter of public safety she had built asylums for the insane, but the poor consumptive had no place to go except the public almshouse and even there he was not welcome.

How changed are the conditions of today! Today Massachusetts has four great sanatoria, reserved especially for the incipient and hopeful cases of the disease, Rutland, 390 beds; Lakeville, 225 beds; North Reading, 225 beds; Westfield, 225 beds; total, 1065 beds, all for curable cases. Each of these four sanatoria maintains an outpatient department at which suitable patients may be examined and receive advice free of charge. In addition to these there has been established in

every city or town of 10,000 inhabitants or over, throughout the State, a tuberculosis clinic maintained by the local board of health and under the general supervision of the State Department of Health.

The State is also trying to look after the patients discharged from its four sanatoria and has in its employ a special agent whose duty it is to visit them at their homes, report upon their condition and give them needful advice.

As a result of State legislation and an awakened public interest we have the following twenty-seven municipal and private incorporated tuberculosis hospitals:

	Beds
Boston Consumptives' Hospital,	404
Boston Infirmary Department,	55
St. Monica's Home, Roxbury,	20
Channing Home, Longwood,	17
Cullis Consumptives' Home,	40
Free Home for Consumptives,	110
The House of the Good Samaritan, Brookline,	28
	16
Cambridge Tuberculosis Hospital,	88
Holy Ghost Hospital,	34
Chicopee,	20
Clinton,	21
Everett,	24
Fall River,	56
Fitchburg,	29
Haverhill,	24
Holyoke,	30
Lawrence,	88
Lynn,	60
New Bedford,	95
Northampton,	40
Pittsfield,	21
Salem,	18
Somerville,	18
Springfield,	26
Waltham,	17
Worcester,	55
Total,	1,454

If to this summary we add 1065 beds belonging to our four great sanatoria, we have as a result 2519 beds available for the use of our tuberculous population. And this does not include the private sanatoria of Dr. Bowditch at Sharon and Dr. Lapham at Rutland which are doing most excellent work. Nor does it include the great \$100,000 Community Health and Tuberculosis Demonstration, contributed by the Metropolitan Life Insurance Co., at Framingham.

These figures show most conclusively what the State has done and is trying to do to aid the people in their struggle against tuberculosis. The cause has been advanced much faster from the social and political standpoint than from a medical

and scientific one. Dr. Edward R. Baldwin, President of the National Society for the Study and Prevention of Tuberculosis, said only last winter:—“We have not made any really valuable advances in the last twenty years or more, but are pursuing the same routine. Many little points have been improved, but the fundamentals have not been changed and may never be changed.” Speaking of “Artificial Pneumothorax” as a remedy for certain forms of the disease, Dr. Baldwin said: “I think an experience of five years will be necessary before I shall be willing to commit myself from a conservative standpoint.”

But the public is being educated even if the profession has nothing new to offer: In 1915, 80,000,000 Red Cross Christmas Seals were sold, and last year 300,000,000 were printed for that purpose. Each seal was a reminder to somebody of the work that is being done. Already the Federal Government is being asked to take a hand in the matter of transporting indigent patients and assisting the individual states in taking care of them.¹ And thus the work goes on. Paternalism? Yes, but of a more acceptable type than some others which we have in mind, and should our tuberculous sanatoria be reduced to the level of twenty years ago I am sure that both the profession and laity would feel they had met with a great loss.

We come now to another instance of paternalism on the part of the State of more recent origin, The Workmen's Compensation Act, the object of which is to provide industrial accident insurance to every operative employee throughout the State. The law has hardly been in effect five years but the results have been so satisfactory to the great army of union voters that it is not likely to be repealed. Growing out of this law has arisen our Industrial Accident Board to adjust any differences that may arise between the Insurance Companies and the parties insured. This Board is endowed with great authority and from its rulings it is difficult to escape. Thus far it has been optional with a manufacturer to protect himself with accident insurance or not, but certain amendments are proposed by the Industrial Accident Board to be acted upon by our present Legislature which, if passed, will make it compulsory for all employers to be thus insured. Other amendments propose that questions of arbitration be heard and adjusted by a *single* member of the Board, and that a sum of \$100 for funeral expenses be allowed the dependents of an employee who is fatally injured; and petitions prepared by Dr. Samuel B. Woodward, President of the Massachusetts Medical Society are being circulated for an amendment to allow any employee the

¹ *Vide*, Bill introduced into Congress by Hon. Wm. Kent of California.

right to select his own physician. Thus is the authority of the State coming more and more in evidence every year.

I am not questioning the value of Industrial Insurance for the laboring man. It is a sort of an official weapon that cuts both ways. It provides the employee a partial compensation for injuries received by accident, and it makes the employer or corporation much more alert to prevent accidents. It is really father of the "Safety First" movement about which we read so much. It has also promoted the cause of total abstinence among the laboring classes. A drinking man is not a safe proposition for railroad or manufacturer to employ, and so the total abstainer is given the preference when he is looking for work. Some corporations will not hire a drinking man at all. Thus is the poor laborer's inherent right to eat or drink what he pleases being interfered with under the beneficent action of law.

I shall not dwell upon the matter of Industrial Insurance and I have only alluded to it for the sake of calling your attention to a new and much more radical example of paternalism that is coming up for action in our State Legislature this winter. I refer to the subject of Compulsory Health Insurance, which was so earnestly advocated by Governor McCall in his inaugural message this year. The Governor went still farther in his proposition to benefit the afflicted poor and advocated pensions of not more than \$200, each, for any old person of 70 years, without means and who has no relatives to support him.

It is fitting that this matter of health insurance should come up early in Massachusetts, for it was at the annual meeting of the American Association for Labor Legislation held right here in Boston in 1912 that it was first proposed and a committee was appointed to investigate the subject.

The whole subject has been brought before the Legislature this year by petition of Michael M. Davis, Jr., of Boston, and the bill prepared for the purpose is known as House number 1074, introduced by Representative Benjamin Loring Young, of Weston. The principal features of the bill call for *compulsory* health insurance for every regular employee whose wage or salary is not *over* \$100 per month. The expense of this insurance is to be divided between the State, the Employer and the Employee insured, the State paying $1/5$ and the Employer and the Employee each paying $2/5$ of the amount. In return for this the employee has his doctor's and urgent dentist's bills for himself and dependent members of his family paid together with additional expense for medical and surgical supplies, this last item being limited to \$50 for any single year. If his illness requires hospital treatment, in the judgment of his medical

attendant, the company settles the bill and pays the family of the insured one-half of his regular wages; the same rule obtains if he declines to go to a hospital. Sick benefits are allowed for a period of 26 weeks only in a year and funeral benefits are limited to \$100.

The proposition of Health Insurance, as presented by John B. Andrews, Ph. D., of New York, Secretary of the American Association for Labor Legislation, seems almost Utopian in its scope.

We are told by him that Germany adopted health insurance in 1883 and that the average duration of life in that country from 1870-1900, had increased 10.7 years for males and 12.4 for females.

England adopted the system in 1911, and within two years after its initiation she had 150 tuberculosis officers appointed and 3000 beds under construction for tuberculous patients; 150 new dispensaries were opened and 1000 shelters for out-of-door sleeping had become available. During the initial 18 months 48,000 insured tuberculous persons received gratuitous treatment. In addition to the above, Norway, Roumania, Russia, Serbia, and the Netherlands have adopted health insurance since 1909, while Austria, Luxemburg and Hungary had passed compulsory laws previous to that date. In this country tentative bills for health insurance were introduced last year in New York, New Jersey and Massachusetts and this year similar bills will be introduced into Wisconsin, Illinois and Ohio. In a study of 31,481 charity cases by the U. S. Immigration Commission for 1909, it was found that accidents were a factor in 3.8 per cent. of the total number, and sickness in 38.3 per cent. While dependency caused by disability of the breadwinner was six and one-half times greater from sickness than it was from accident, "yet the State requires insurance against industrial accident but not against sickness—the more urgent need."

Dr. Andrews argues further, that the slender savings of working men are inadequate to meet the burden of sickness, and until some means is found to prevent sickness and distribute its cost, the scourge will continue to produce "destitution, dependency, inefficiency, waste and death."

As a sop to the medical profession of Massachusetts, to whom this Health Insurance bill was unsatisfactory last year, provision has been made so that all physicians and surgeons legally qualified to practice in the State will be eligible for a "panel" from which the patient will have the privilege of selecting his attendant. Local "Carrier" funds may employ salaried physicians but they must also maintain the "panel."

The interests of the physicians are further protected by a Medical Advisory Board of 11 members in which the 2 principal schools of practice shall have representation. The whole system will be further supervised by a State Commission consisting of five members (one of whom shall be a physician) who shall devote their entire time to the work.

I have not time to speak further of the legislation proposed by Dr. Andrews. Those interested should read his article on Health Insurance, published in the annual Report for 1916, of the National Association for the Study and Prevention of Tuberculosis, or send to him, at 131 East 23d. St., New York, for further information on the subject.

Whether we like it or not there is no question whither we are drifting in the matter of industrial insurance. Soon we shall have the "old age pensions" to deal with and then, perhaps, be confronted with compulsory insurance against the emergency of "nothing to do," which may come in mighty handy for the general practitioner in the near future.

But seriously, are we ready to accept all this oversight and dictation upon the part of the State? Suppose Germany has lengthened the lives of her vassals for a few years in anticipation of future slaughter? Are we ready to give up our Western freedom for the political slavery of continental Europe? Shall the poor immigrant who comes to this country, to escape from tyrannical oppression and to provide for his family like a man, be throttled with compulsory health insurance because he cannot earn \$1200 in a single year? Is it fair? Is it democratic, to take one-twenty-fifth of a poor man's wages, as a guarantee against his becoming a public charge and allow his neighbor who is fortunate enough to command ten cents a day more to escape? To treat an adult like an infant is the surest way to keep him so and too much oversight and coddling is bound to breed helplessness and inefficiency in the end. We want neither. There is a difference between civic and military ideals. Germany has been an "Armed Camp" for forty years. She has organized and standardized her population until each citizen has become but a part of a great military machine. Efficient? yes, for military purposes, but what has been the cost? She has smothered the spirit of original thinking that has made America the proudest nation upon the face of the whole earth; not one of the great inventions that have revolutionized society originated in Germany; are we ready to follow her lead in social economics and subjugate the spirit of independence that belongs to our laboring classes, even for the sake of improving their physical health?

Should this proposed Health Legislation pass, the future

bard who essays to write an "Ode to Honest Poverty" unless his hero is capable of commanding more than \$100 per month, will have to say:

"He's but a 'ward' for a' that!"

We come now to another phase of our subject, and one of most vital interest to us as homœopathic physicians, and ask ourselves, whither we are going as a distinct school of medicine? Has our school performed its mission as others have done before? Is it about to lose its identity in the great onward march of medical progress?

Before attempting any direct reply to these queries let us note a few facts in regard to the practice of medicine in general, that are evident to us all.

(1) The dominant School of medicine is not so "dominant" as it used to be, and is now ready to concede that its old time practice, with heroic doses of medicine, was absolutely injurious to the patient. This change of attitude has not been brought about by any faith in *our* law of therapeutics or even in our methods of practice, unless it be the fact that they have seen serious cases recover with very little medicine, but it is due rather to a lack of faith in all forms of internal medication. As Dr. Richard Cabot so cogently said a few years ago: "There are only four diseases that we can cure!" This feeling of helplessness at the bedside has made them more tolerant toward milder forms of treatment and toward the man who uses them. As a very courteous old school physician said to me regarding a case of rheumatic fever: "The thing has got to have its run anyway; your medicines won't harm the patient, while ours will, so I should advise to keep right on as you have been doing." He treated me with the utmost consideration and left me free to continue in charge of the case.

(2) On the other hand we have grown less dogmatic in our therapeutic beliefs and consequently much easier to get along with. These little acts of courtesy between individual members of opposing ranks spoil the oldtime militant spirit and render a fight impossible. But it was not always thus. Thirty-four years ago the American Medical Association not only forbade its members to consult with homœopaths but even refused to recognize the delegates of the New York State Society because that Society allowed such consultations. The New York Society was the first to take a stand for medical tolerance and for a period of twenty years, until 1903, was debarred from affiliation with the national society on that account. It was not until 1912 that the American Medical Association really revised

its constitution which was adopted at its organization in 1848, and allowed its members freedom in practice.¹

In 1873 the Massachusetts Medical Society expelled eight of its members for practicing homœopathy, and thirty-five years later, in 1908, invited the same offenders back again.

This change of attitude of the "dominant school" towards us has been a most difficult problem to meet. Recent graduates of neither school have any real conception of the professional indignities that everywhere obtained a generation ago. They meet in a most fraternal manner and can see no sense or reason in keeping up the old sectarian spirit. The old Trojans however are more conservative; they suspect the "Wooden Horse" tactics of the Greeks and are not ready to tear down their walls and open up their city.

But human nature in all ages is essentially the same. The great generals behind the American Medical Association know what they are after, and time has taught them the best way to get it. Their hopes are to some extent being realized: It is said, by men high in authority, that there are more homœopathic graduates affiliated with the American Medical Association than with the American Institute of Homœopathy and right here in Boston there are more than a score of homœopathic physicians who have joined the Massachusetts Medical Society. What does this mean? You say it is simply an act of professional reciprocity and has no significance regarding the future of our school. Perhaps that is so, but it seems to work in only one direction, at any rate I fail to notice any corresponding increase in our membership from the ranks of the dominant school. We have been instructed and entertained many times by members of the Massachusetts Medical Society; how many of our members have been invited to address them? I am making no complaint that some of our members have seen fit to join the societies of the dominant school. Every man for himself these days! For years we have been the best customers of old school-text books that the publishers have had, but what is going to be the effect upon our homœopathic organizations when a *majority* of our physicians are linked up with the dominant school? Already we are finding it harder and harder to keep up the attendance in our State and District Societies! Not from lack of members, in our State Society at least. Our membership now is nominally much greater than it was twenty years ago but there is a distinct lack of interest in all of our medical societies that is painfully apparent. The only part of our State Society program that really attracts an

¹ *Vide* article by Burton J. Hendrick, in *World's Work*, Dec. 1916.

audience is the free dinner with some popular entertainer to follow.

Now I am not here to find fault with anybody or give advice, but the conditions I have described are not encouraging to a lover of our homœopathic institutions, and, as our Cereal Coffee friends say, "There's a reason" for it somewhere.

What is the matter with our medical societies? Have we grown too wise or too indolent to attend? I will tell you one thing I think is the matter, we have lost the faith our fathers had in the curative action of drugs. Faith in drugs is as essential for the study of materia medica as faith in the immortality of the soul is for the study of theology. Anything that weakens our faith in drugs as a therapeutic agent, and as homœopathic physicians, anything that weakens our faith in our homœopathic materia medica is blighting our enthusiasm and efficiency and threatening the perpetuity of our school. All of our time-honored institutions were built up upon faith in homœopathic therapeutics, and without that faith there is no sufficient reason for keeping what we have or building any more.

And what has disturbed our faith? There are several disturbing factors. One of them, I believe, is our slovenly method of prescribing. We do not use the single remedy as uniformly as we should. Ignorance and laziness go together. A patient has symptoms that seem to call for several remedies. We are not quite sure which and so we prescribe two drugs in alternation (some physicians do this so regularly that they have "alternately" printed on their office labels), or what is still worse use one of those insidious "combination tablets."¹ The patient recovers or dies in the course of time but the physician doesn't know what killed him or hastened his recovery. He has learned nothing from his successes or failures and has entered into the dismal slough of polypharmacy.

The majority of us, I fear, are sadly inconsistent in this matter of using the single remedy. We deplore the practice of the dominant school on this account. But "the pot should not call the kettle black." The old school deserves all the anathemas it gets for its inaccurate methods, but what about ourselves? I have on my desk catalogs of "combination tablets" put out by Halsey Bros. of Chicago and Buffington Pharmacy Co. of Worcester, and find that the former manufactures 132, and the latter 228, combination tablets, each of which contains two or more ingredients, for the use of the lazy practitioner. All our other homœopathic pharmacies are doing the same thing. They are making these tablets to sell. If they

[¹ It has been estimated that "combination tablets" form 59 per cent. of the output of homœopathic pharmacies. Ed.]

couldn't sell them they wouldn't make them, and the old school physicians are not the only ones who are buying them either.

The putting out of "combination tablets" creates a depraved habit that grows by what it feeds on, and the physicians rather than the druggists are to blame. The druggists cater to the frailties of the profession as the yellow newspaper does to the public. It is simply a matter of business with them. What does the traveling agent of our homœopathic pharmacies show you when he comes into your office? Not his elegant line of tinctures and triturate tablets containing a single ingredient, but he wants to call your attention to this or that "combination tablet" as almost a specific for this, that or the other disease. He then says: "You know Dr. Blank of Boston, or some other old town? I tell you he has a tremendous business! One can hardly get into his office at all! Well he buys this or that 'combination tablet' in 10,000 lots! And he gets results. Results are what you are after!" You swallow the bait, give him a trial order and from that day your destiny is sealed. The mongrel prescriber never knows a drug accurately and sooner or later loses both faith and enthusiasm in his work. How many of us have ever attempted seriously to test or prove a drug upon ourselves? (The late Conrad Wesselhoeft used to tell his students that drug proving was the duty of every homœopathic physician.) And when a drug has been tested, and tested properly, how many of us have studied the results sufficiently to use or profit by them? To be more explicit: How many of us can tell the difference between the pathogenesis of Belladonna, that was worked out so carefully, a few years ago, by Dr. Bellows and his collaborators and the older symptomatology as given in our text-books? Perhaps those who conducted the provings can, but how many others? I will not press the question for the sake of publishing the result. And that is only one drug; what of the hundred others in daily use? We say our provings are faulty; why don't we correct them? We have voted money for the purpose and something is being done on that line at Ann Arbor and Ohio University, but the results are comparatively insignificant.

It is mighty discouraging business to test drugs for the use of the homœopathic profession unless the profession will follow the experiments and utilize the results, and that is just what nobody seems inclined to do. *Quo vadimus?* We are drifting away from the homœopathic ideals of a generation ago. We may have followed our fathers in some particulars. We have fought a good fight, but we haven't kept the "faith" as they kept it and the stumbling block of polypharmacy is partly to blame.

Another element disturbing to our faith, at the present time, is the result of certain scientific investigations which have been carried on under the auspices of the Evans Memorial which prove, or seem to prove, the uselessness of some of our best known drugs as remedies for disease. I will not raise the question here of the character of these experiments or whether the physicians who are carrying them on have the proper attitude towards the tenets of the fathers to do it rightly. When we start in on a scientific investigation we ought to welcome the truth however disagreeable we may find it.

“No man, having put his hand to the plough, and looking back, is fit for the kingdom of God”

And yet it is not a pleasant experience to be told that you have been hugging a delusion all of your professional life in the supposed efficacy of certain medicinal plants or chemicals; that you have been giving your patients placeboes when you thought you were giving them medicine; that you have been fooling your patients and yourself at the same time; and when your informer backs up his assertions with scientific data and proves, as conclusively as scientific experiment can prove, that he is right and that you have been mistaken it makes one feel not simply poor, but bankrupt.

The results of these experiments may not influence the older physicians in their work, any more than the theory of evolution did the clergy of forty years ago, but there is no doubt of their influence upon the younger physicians and especially upon the undergraduate students. To have it demonstrated, that *Belladonna* for instance has no influence, either as a preventive or cure for scarlet fever, throws a shadow of suspicion over the whole of our *materia medica*. The undergraduate may cram certain portions of it for the sake of passing the subject but it will be only a cram, to be forgotten as soon as his examinations are over. He has not even tried to retain it for the State Board, for, incredible as it may seem, the State, previous to March, 1916, asked no questions in *materia medica* and what is the sense of learning a lot of symptomatology if the drugs themselves have no influence in disease? We move in the line of least resistance. “It is better not to know so much than to know a lot that isn't so!” — and a great deal easier.

Lastly, we are drifting nearer and nearer to the “fusing point” of medical affiliation through the influence of our various specialties in every department of medicine. The fundamental elements successful in every specialty, are the same: good judgment, mechanical dexterity, and careful antisepsis are common to them all. The man who combines these three with a

pleasing personality feels little need for internal medication. The American College of Surgeons to which homœopathic surgeons have been made eligible, while building up a great monopoly of surgical skill, is also forming a great neutral camp, or clearing house, for the exchange of surgical ideas.

Every new remedy or expedient that is appropriated and used by opposing schools is bringing them nearer together, (antitoxin, tuberculin, salvarsan, and scores of germicides and vaccins put up for various forms of infection,) and every old-time remedy discarded is having the same effect.

Our homœopathic institutions too are gradually losing their sectarian standing. The Hahnemann Medical College of San Francisco through the efforts of my friend, Dr. James W. Ward, has surrendered its charter and become a part of the University of California Medical School. In another year the amalgamation will be complete. In like manner the homœopathic Medical Colleges of Cleveland and Cincinnati have been merged into the Ohio State University, at Columbus. For years, homœopathic instruction in New England, Michigan and Iowa has been under the jurisdiction of great universities. May the time soon come when all of our Medical Colleges will be thus sheltered and preserved!

Whither are we drifting? We are drifting from a democratic to a centralized form of government. All of our State institutions are being mobilized under separate heads. We have a Commissioner of Health who is given almost military authority. Our various insane hospitals are under one Board. Westborough State Hospital is no longer allowed to be called a homœopathic institution and three of its seven Trustees are not homœopaths at all. In the beginning of this paper I alluded to the various forms of paternal authority that are being assumed by the State. Please do not understand me as trying to criticise these movements or oppose them in any way. Most of them are undoubtedly necessary. The congested population of a great city can never enjoy the comparative freedom of a rural district, but the legislative enactments, to which I have referred show the direction in which we are going. The centralization of political authority means the gradual assumption of medical authority and the centralization of medical authority, under a single cabinet official or military head, threatens the rights, if not the very existence, of the minority schools of medicine. But what are we going to do about it? "Eternal vigilance is the price of success." We have nothing to fear in regard to the great truths of homœopathy but we need an old fashioned revival to make them effective. All of our profes-

sional "friends" go into politics and secure such legislation as they desire and we must do the same if we wish to succeed. We must take a broader view of our fraternal obligations and be ready to sacrifice both time and money for the common good. We must stand by our State and National Societies in whatever they undertake. We must support our homœopathic journals and help them in every way we can. And we in New England must not forget the debt we owe to Boston University School of Medicine and the great honor her graduates conferred upon us before the State Board of Registration last year. Fourteen candidates passed, without a failure, with an average of 77.5 per cent. That is a record to be proud of even if we are a "minority" school of medicine. And there is need for Minorities yet! Is Boston University School of Medicine worth saving as a homœopathic institution? Then stand by the principle it was organized to defend!

THE NEED FOR HEALTH INSURANCE *

By IRVING FISHER, Professor, of Political Economy, Yale University

In the last six months, through the efforts of the American Association for Labor Legislation, a consciousness of the imperative need in this country for health insurance has dawned upon thinking Americans. Within another six months it will be a burning question in many states. As Dr. Blue, surgeon general of the United States Public Health Service, has said, it is the next great step in social legislation in this country.

At present the United States has the unenviable distinction of being the only great industrial nation without compulsory health insurance. For a generation the enlightened nations of Europe have one after another discussed the idea and followed discussion by adoption. It has constituted an important part of the policy and career of some of Europe's greatest statesmen, including Bismarck and Lloyd George. Germany showed the way in 1883 under the leadership of Bismarck. This act was the first step in her program of social legislation. Her wonderful industrial progress since that time, her comparative freedom from poverty, reduction in the death rate, advancement in hygiene, and the physical preparedness of her soldiery, are presumably due, in considerable measure, to health insurance.

Following the example of Germany, health insurance was adopted successively by Austria, Hungary, Luxemburg, Norway, Serbia, Great Britain, Russia, Rumania, and Holland. Other

* An expansion of a lecture on Health Insurance given at the Evans Memorial, November 13, 1916. Reprinted from the American Labor Legislation Review.

countries have adopted a subsidized voluntary system, namely, France, Belgium, Switzerland, Denmark, Sweden, and Iceland. Thus the only European countries which, like the United States, are without any general system are Italy, Spain, Portugal, Greece, Bulgaria, Albania, Montenegro, and Turkey.

Because we have a democratic form of government we have peacefully assumed that our civilization is more advanced than others, but while we have rested complacently on our oars, other nations have forged ahead of us. The war has at last startled us out of our Rip Van Winkle slumber, and we are now passing through a period of national self-examination.

There are special reasons to hope that health insurance may win favor rapidly. The war has made labor scarce and therefore dear. This fact will make not only for high wages, but also for the conservation of labor. Students of the history of slavery find that when slaves were abundant and cheap, masters worked them to death and replaced them when worn out. Consequently cruelty was condoned and fashionable. On the other hand, when slaves were scarce and dear, the masters took good care of them and a humanitarian sentiment developed to correspond. I believe it to be a correct economic portent that the world is about to enter upon a period of life conservation. The war has for a time withdrawn much of the world's labor supply and destroyed and maimed a large part of that which it has withdrawn. The world will seek the greatest possible salvage out of the wreck.

This impulse to conserve has at first been felt in terms not of industry, but of military preparedness. The strong impetus toward preparedness of all kinds has been the result. Witness the recent laws in New York for compulsory physical training in the public schools. Health insurance and other measures for health conservation will in turn be furthered by the same impulse toward conservation.

Fortunately we have already taken one step in a social insurance program. After a long and uphill fight, workmen's compensation has had a belated recognition in America. The American Association for Labor Legislation was foremost in this fight, and now at last it is ready for a similar fight to secure workmen's health insurance. For four years an able committee of this Association has been studying American conditions and foreign health insurance acts, and constructing a standard bill. This bill, with some variations, has been introduced into the state legislatures of Massachusetts, New York, and New Jersey, and commissions to consider the subject have been appointed in Massachusetts and California and are expected to report in January. It is significant that so large were the throngs which attended the public hearing of the Massachusetts commission on

October 3 that the meeting place had to be twice changed during the hearing to larger quarters. During the ensuing year it is expected that the bill will be introduced in about twenty state legislatures.

The United States Public Health Service has issued a special study on *Health Insurance* by Dr. B. S. Warren and Edgar Sydenstricker. The American Medical Association has a working committee on health insurance of which Alexander Lambert is chairman and I. M. Rubinow secretary. This association has published a report on social insurance. Several medical societies, including the Pennsylvania State Medical Society and the State Medical Society of Wisconsin, and several public health associations, have endorsed the principle of health insurance. The American Association for the Study and Prevention of Tuberculosis and many of its affiliated organizations have, through public meetings and otherwise, helped the movement. A number of charitable organizations have also favored the idea and forty-five organizations of various natures, including the American Academy of Medicine, the International Association of Industrial Accident Boards, the National Conference of Charities and Correction, the New York Chamber of Commerce, and the American Public Health Association have appointed committees to study and report upon health insurance.

The federal Commission on Industrial Relations recommended health insurance. In accepting favorably the report on health insurance of its industrial betterment committee the National Association of Manufacturers at its annual meeting last May put itself on record as favoring the project. The chairman of the same committee stated in July, 1914: "I give it as my opinion that sickness insurance of some kind, with compulsory contribution on the part of employers, will be enacted into law by many states of the union within the next five years." The Associated Manufacturers and Merchants of New York State have expressed their approval.

Many trade unions have taken up the subject. Some have strongly favored the idea; a few leaders have vigorously opposed it, apparently because of a groundless fear that in some way the power of the labor unions would be lessened. Thus some oppose health insurance as they at one time opposed compulsory workmen's compensation. On the other hand several international unions, including the International Typographical Union, have definitely gone on record as favorable. State federations of labor in Ohio, New Jersey, Massachusetts, Missouri, Nebraska, and Wisconsin are favorable. A number of local trade unions have taken favorable action. Many individual labor leaders of prominence have definitely approved it; these include John

Mitchell, Ignatius McNulty, Van Bittner, James H. Maurer, Andrew Furuseth, S. E. Heberling, John B. Lennon, James O'Connell, Austin B. Garretson, William Green, and James Duncan.

The cordial and almost unprecedented welcome which this movement has received in spite of the opposition of strong vested interests and their industrious and insidious efforts to misrepresent and injure the movement would seem to indicate that the time for health insurance in the United States is ripe.

The plan as put forth by the American Association for Labor Legislation is fully described in its draft of a standard bill and defended in its *Brief for Health Insurance*. The bill proposes the obligatory insurance of substantially all workingmen and women. In case of sickness the insured will receive medical or surgical service, medicines, and nursing, and a cash benefit amounting to two-thirds of the weekly wages of the insured for the period of illness up to six months. Maternity benefits are provided for childbirth, and funeral benefits for death.

Benefits are paid for at cost by the joint contributions of the insured employee, his employer, and the state. The cost to the employee will average about $1\frac{1}{2}$ per cent. of his wages. The cost to the employer will be an equal amount, while the state will pay half as much as either the employer or the employee. These are the main points covered in the standard bill. I am here concerned, however, not with the merits of this particular plan but with the need of some plan of universal health insurance for workmen.

The need for health insurance, like that for most other forms of insurance, is twofold. There is the need of indemnification against loss, and the need of diminishing the loss itself.

Indemnification is the essence of the insurance principle. It spreads the loss of each person in a group over them all. For each individual it converts large fluctuating haphazard losses into small regular and certain costs. Insurance aims to reduce fluctuations—to make the income stream more steady. It is more economical to pay a little premium for fire insurance each year than to suffer a big loss when the fire comes. This insurance principle is of the greatest importance in economics and in business. The well-to-do have long made use of it in fire insurance, marine insurance, life insurance, fidelity insurance, plate glass insurance, steam boiler insurance, and, to some extent, accident and health insurance. The capitalist has long endeavored to eliminate, or at least to reduce, every determinable risk. But the curious and melancholy fact is that outside of workmen's compensation the poor in this country have received,

as yet, very little benefits from the application of the insurance principle. Yet it is the poor whose need of health insurance is greatest, and for two important reasons. One is that the worker is more likely to lose his health than the capitalist; for it is well known from several lines of research that the death rate, and therefore the sickness rate, prevailing among the poor is from two to three times that prevailing among the well-to-do. The other reason is that any loss from sickness is a far more vital matter to the poor than to the rich. That low-paid workmen seldom insure against illness is undoubted.

No very exact or recent estimate on this point seems to be available, but according to a study of the Connecticut Bureau of Labor Statistics in 1891 the great bulk of membership in fraternal societies was at that time made up of the well-to-do; only a small fraction, from one-sixth to one-third, consisted of "low-paid mechanics and clerks." Moreover, these societies do not always provide health insurance. Certain it is that as yet the amount of voluntary health insurance in the United States such as that under fraternal societies, labor unions, establishment funds, and insurance companies, covers only a small fraction of workmen and women. Judging from the tentative estimates of Rubinow, only about 5 per cent. of our workmen needing insurance actually have it. The other 95 per cent. have been deterred by the high cost of such insurance under the voluntary system, by their lack of appreciation of its benefits, by the inertia of custom, and by the sheer desperation of poverty.

To ascertain the exact extent of health insurance in the United States we need further investigation, but we know with certainty that the amount is small. Even in England, where friendly societies have had voluntary health insurance for generations and developed it far beyond the United States or any other country, the number of the insured was never half that to be reached by the compulsory system. This was demonstrated by the fact that when the compulsory system was actually introduced in 1911 the number of the insured was at once more than doubled. Presumably the half that needed it most was the half that lacked it until the universal system was adopted. From these facts it is apparent that the present insurance facilities in the United States are, and, as far as we can see, always will be hopelessly inadequate.

It is also true that millions of American workmen cannot at present avail themselves of necessary medical, surgical and nursing aid. When they most need it they cannot pay for it. The Rochester survey of the Metropolitan Life Insurance Company showed that 39 per cent. of the cases of illness did not have a physician in attendance.

Workmen's health insurance is like elementary education. In order that it shall function properly it needs must be universal, and in order to be universal, it must be obligatory. In regard to obligatory military training it has been said that what America most needs today is a higher appreciation of obligation and that without it we shall ever be a drifting, weak, and inefficient nation. The case for compulsory health insurance is, however, far clearer than that for compulsory military training. In health insurance, as in education, we are dealing not with obligatory burdens, but with obligatory benefits.

Certain interests which would be, or think they would be, adversely affected by health insurance have made the specious plea that it is an un-American interference with liberty. They forget that compulsory education, though at first opposed on these very grounds, is highly American and highly liberative, that prohibitory laws on various subjects such as habit-forming drugs and even alcohol have introduced liberative compulsions in many states in America, and that workmen's compensation acts have introduced liberative compulsion in this very field of workingmen's insurance. The truth is that the opponents of compulsory health insurance are in every case, as far as I can discover, subject to some special bias. They grasp at the slogan of liberty as a subterfuge only.

"Oh liberty! liberty! How many crimes are committed in thy name!"

According to the logic of those now shedding crocodile tears over health insurance we ought, in order to remain truly American and truly free, to retain the precious liberties of our people to be illiterate, to be drunk, and to suffer accidents without indemnification, as well as to be sick without indemnification. In fact, if compulsory health insurance is tyranny, all labor laws, all tenement laws, all health laws, all pure food laws, even *all* laws, are tyranny. In fact, all laws are an interference with some one's liberty, even laws against vice and crime. It is the nature of the Law to restrict. But it is by the compelling hand of the law that society secures liberation from the evils of crime, vice, ignorance, accidents, unemployment, invalidity, and disease.

We have already seen that most of the enlightened and progressive nations of the world have, one after another, adopted compulsory health insurance. This would not have happened if it were a real interference with liberty. England, the most liberty loving of nations, the home of *laissez-faire*, adopted the compulsory system after careful and deliberate study of the German and other systems.

It is also noteworthy that where, as in Switzerland, France, and Belgium, the half-way stage has been reached of a subsi-

dized voluntary system, the tendency has been to convert this into a compulsory system. Such a change was about to be put on the statute books in Belgium when the present war broke out.

In addition to the primary advantage of universality, there are incidental advantages in the compulsory system. There are important economies in administration owing to the elimination of the cost of collection, the cost of advertising, and the other costs of securing business as well as in the elimination of lapses, and of the necessity for accumulating a large actuarial reserve in invested funds. The advantages are similar to those recently realized by insurance companies in some degree and on a small scale in "group insurance."

The superintendent of insurance of the District of Columbia reports that the people who pay health insurance premiums to agents who collect 10, 15, and 25 cents a week at the homes of policy holders "have to give up \$1 for every 40 cents they get back." The National Convention of Insurance Commissioners in their examination of the fourteen principal companies writing industrial health and accident insurance found that the ratio of losses showed that the policy holders spent \$1 to receive back a benefit of between 30 and 46 cents. These figures are in striking contrast to the results of the compulsory system abroad; even in England where the cost of administration is high because of the supposed necessity of utilizing preexisting friendly societies, the administrative cost amounts to only 14 per cent. of the income of the national health insurance fund, or something like one-fourth to one-third the cost under the voluntary system.

Under the voluntary system the policy is apt to lapse just when it is most important that it should not. The Armstrong investigating committee in New York (1906) received testimony from one of the largest of the industrial life insurance companies to the effect that one-third of the policies lapse within three months, one-half within a year, and nearly two-thirds within five years! Under the compulsory system there could be no lapses.

As important as is indemnification, it is far less important than prevention. Almost all insurance sooner or later adds the function of the prevention of loss to that of indemnifying against loss. Fire insurance has led to the use of slow-burning construction and other safeguards against destruction by fire. Marine insurance has led to safety at sea. Some steam boiler insurance companies expend as much as 40 per cent. of their income in inspection and other preventive work. Life insurance companies are now instituting devices for extending human life.

It is well known that the form of social insurance recently adopted in the United States, namely "workmen's compensation," has had the effect of greatly stimulating industrial methods in accident prevention. Out of workmen's compensation came the "Safety First!" slogan and the public movement which it represents. J. D. Beck, of the Wisconsin Industrial Commission, declared that more progress in accident prevention had been made in his state in one year under workmen's compensation than in any previous period of five years.

The importance of prevention depends in any individual case on the degree of preventability, and in the case of human morbidity the degree of preventability is enormous. Even in the last few years there have been opened up hitherto undreamed of possibilities for adding to life's length, vigor, and happiness.

The health movement can be far more potent than the safety movement because sickness is more prevalent and more preventable than accidents. Pasteur convinced us that "It is within the power of man to rid himself of every parasitic disease," and his successor, Metchnikoff, went far to show us that the normal life span, the Utopian ideal for future generations, is much beyond the century mark. Without looking so far ahead we may, I think, accept as conservative the calculations of the National Conservation Commission that at least 42 per cent. of the deaths now occurring in the United States are unnecessary, or that over 630,000 lives could be saved annually by applying existing and known methods of life saving, which would add at least fifteen years to the average duration of human life. These estimates are doubtless over-conservative, as may be judged from the data of the Commission on Industrial Relations, from the recent health surveys of the Metropolitan Life Insurance Company, and from other evidence.

After some fifteen years' study of the preventability of sickness, I am convinced that the great virtue of health insurance, for decades, perhaps for centuries to come, will lie in the prevention of illness. It has already achieved considerable life saving in Germany, although when the system was established there the idea of the preventability of disease was in its infancy. According to Dr. Zacher, reputed to be the best authority on health insurance in the world, twelve years were added to the worker's life span during thirty years of health insurance. We may properly attribute part, if not most of this increase, to health insurance. This prolongation of life is at the rate of forty years a century, the highest rate of increase known in any country or any period of time.

Health insurance will afford a very powerful and pervasive stimulus to employers, employees, and public men to take fuller

and speedier advantage of possible health saving devices. The standard bill of the Association is so drawn as to give any locality and any trade the benefit in lower contributions of any reduction in sickness rates which may be achieved, thus creating an immediate financial motive to reduce illness.

Just as employers have installed safeguards for dangerous machinery in order to reduce the cost of workmen's compensation, so in order to reduce the cost of health insurance they will supply, for instance, better sanitation, ventilation, and lighting, more physiological hours of labor, and fuller consideration for the special needs of employed women and children. In localities where the employer provides tenements for his workmen, he will be led to study and improve housing conditions. So-called welfare work will be made more effective and helpful. Employers will collect facts and statistics as to sickness, analyze them and apply such corrections as the facts discovered indicate. Dr. Rubinow states that a large corporation after introducing health insurance tried, for the first time, to discover its sickness rate and found it to be three times what is usual. Further investigation showed that this excessive rate was due to bad conditions, not in the factory, but in the sanitation of the city. As a consequence an effort was made for the first time toward improving these conditions. It is especially to be expected that as soon as employers realize the nerve strain caused by over-long hours and consequent increase of illness and, therefore, the cost to themselves, they will acquaint themselves with the effects of long hours of labor and reduce them.

The employee, on the other hand, will be likewise stimulated to welcome and to utilize factory hygiene, and improve his own domestic hygiene and individual hygiene. If there could be any doubt as to the reality or strength of this impulse it would vanish after observing the experience in Connecticut of the employees' relief associations organized to combat tuberculosis. Each workman contributes at least 25 cents and, as a consequence of that investment, takes a surprising interest in seeing that his money is wisely expended and that tuberculosis cases are promptly discovered and sent away for treatment. The possibilities of self-improvement through learning how to live are far beyond what any one who has not gone over the evidence realizes. The evils of bad air, bad food, imperfect teeth, wrong posture, improper clothing, constipation, self-drugging, alcoholism, etc., are now overlooked by ninety-nine workmen out of a hundred. Here is a wonderful opportunity for effective and intelligent leadership among committees of wage-earners. The employee will be more ready to apply to his own internal machinery a principle, long since applied by his employer to

inanimate machinery, the principle of inspection and repairs. After health insurance has been adopted slight impairments to health will be remedied before they become serious.

At present we find the United States, in striking contrast to health insured Europe, is suffering from an increase of the death rate after middle life. The increase consists of an increase in degenerative or wear-and-tear diseases, and is due to the growing neglect of personal and other hygiene. The death rate from degenerative diseases in the United States registration area has increased 41 per cent. in twenty years.

One important effect of such attention to the health of the workman will be the prolongation of his life and especially of its earning period. Fewer workingmen will be thrown on the scrap heap in their forties with all the tragic consequences involved to their families as well as to themselves.

Moreover, the cash benefit gives the workman a better chance for recovery as well as a more perfect recovery if attained; for, to the poor, the obstacles to recovery are largely economic — insufficient food or other necessaries, worry over making both ends meet, and the consequent necessity of a premature return to work while still half-sick. It is found that the longer the time given up to sickness, which means the more care given to get well, the lower the death rate. Critics of German insurance have pointed to the fact that the number of days' absence from work per person on account of illness has increased under health insurance, but as Dr. Rubinow points out, this increase is partly, if not wholly, due to improved and longer care of the sick. Only part, and probably a small part, can be charged up to malingering.

Again, under compulsory health insurance both employer and employee will cooperate with the general public in securing public water supply, better sewerage systems, better milk, meat, and food laws, better school hygiene, more playgrounds and parks, and proper regulation of liquor and other health destroying businesses.

Health insurance will also, as it did in Germany, help to meet the crying need for rural sanitation and bring adequate medical and housing care to American farmers and their families.

Health insurance will operate, as it did in Germany, to stimulate the general scientific study of disease prevention, the future possibilities of which though unknown are, we may be sure, enormous. A German observer states that social insurance led to new knowledge in the field of occupational diseases, epidemics, and accidents. Dr. Lee K. Frankel, now of the Metropolitan Life Insurance Company, said at one time that "German insurance legislation has been effective in producing a compre-

hensive industrial hygiene." Dr. Bielefeldt, quoted by Frederick L. Hoffman, says:

The conviction may be expressed, after the experience of several years, that an effective battle against consumption among the working classes would have been all but impossible without the workmen's insurance of the German empire, and, by the support of their powerful pecuniary resources and with the aid of national social regulations, in the end we are quite certain to be victorious.

In Great Britain the health insurance act has led to education on the prevention and treatment of tuberculosis, many of the insurance committees having arranged for lectures, moving picture shows, and other means of educating the public.

I venture to predict that medical and hygienic discoveries and applications will be far more rapid in the future than in the past. What directions these discoveries will take can only be guessed. I expect, however, that a new field will be found in what may be termed industrial psychiatry, the development of which will not only diminish definite diseases but will also diminish industrial discontent and give back to the workman what the economic division of labor has taken away from him — a real interest in his work. The studies of a few of us in economics, particularly Professor Carl Parker of the University of California, and a few in industry, particularly Mr. Robert B. Wolf of the Burgess Sulphite Fiber Company of Berlin, New Hampshire, have led to the conclusion that a fundamental, perhaps the fundamental, cause of industrial unrest is to be found in the fact that most workers at present cannot in their daily tasks satisfy the fundamental human instinct of workmanship. At present many, if not most, workmen are interested only in their pay envelopes. I anticipate that, within a few years, under proper stimulus, psychiatrists will be able to show employers how to make jobs interesting, through a system which enables the workman to understand and keep a record of the results of his efforts and to receive credit for them in the eyes of his fellow workers, his employer, and himself. What little experience is as yet available points to the conclusion that devices for securing a genuine enthusiasm for the job mean much more than any system of scientific management for the health and happiness of the employee, for industry, and for industrial peace.

Besides health insurance many other stimuli of course exist, but they need reenforcement. Moreover, nothing can equal health insurance as a stimulus to prevention among employers and employees.

But prevention of disease and disability is not the only prevention to be effected by health insurance. It will indirectly but powerfully tend to reduce poverty. In the first place the simple operation of the indemnity principle itself tends to reduce

poverty. Poverty today is largely mischance. When a poor man becomes sick, unless he can tide the emergency over by insurance or otherwise, he runs the risk of getting "down and out," for he has little or no margin. Without health insurance a vast number sooner or later exhaust whatever margin they have and sink into poverty—a land from whose bourne few travellers return. Students of gambling condemn games of chance because sooner or later most gamblers must lose enough to throw them out of the game. At present the American workmen without health insurance are gambling with their livelihood and in millions of cases are sure to be thrown out of the game. It is not a question of *average* well-being but of the numbers diverging from the average. One opponent of health insurance says it is not needed in America because the "average" American workman is comfortably situated. Aside from the fact that the most comfortably situated workman needs health insurance, we must not forget that the majority of workmen have less than the average wages and that a large minority have more than the average sickness (of a little over a week) per year. It is true that American wages are, on the average, much higher than German wages, but poverty is, or was before the war, markedly less in Germany than in the United States. This is doubtless largely if not chiefly owing to health insurance. The German laborer has not been allowed to gamble with disease and let it often win away from him his little all. In America, where the workingman is not so protected, we see the results in the casual laborer. Warren and Sydenstricker's *Health Insurance*, already referred to, states:

The casual laborers at the docks in New York City are composed largely of workers who have gradually lost their economic status in industry, and the dock worker continues to slip down in the industrial scale until he reaches the class of "shenagoes," the down-and-out longshoremen who are capable of only light work and who finally become burdens upon public and private charity. According to testimony before the United States Commission on Industrial Relations, most of the 7,000 applicants for work at the San Francisco Coöperative Employment Bureau were of the casual labor class, and one-half of the total number of applicants were found to be incapacitated for work on account of poor nutrition, disease and exposure. The records of many investigators of the unemployed abound with similar instances.

Frederick Almy states:

In Buffalo sickness is more serious in our work for the poor than anything else. It far exceeds unemployment as a cause of poverty. Last winter, 1914-1915, for instance, when the industrial depression was so high, we paid out \$13,646 on account of unemployment, and \$29,275, or more than twice as much, to families in which there had been sickness during the year.

Again, the Charity Organization Society of Buffalo reported in 1916 that "Last year in Buffalo less than 1 per cent. of our poverty was due to lack of work, and more than 76 per cent. to

sickness." According to an officer of the United States Public Health Service, assigned to the Commission on Industrial Relations, sickness produces seven times as much destitution as industrial accidents. Dr. Devine found among 5,000 families known to the Charity Organization Society that in 75 per cent. illness was a part cause of poverty. The report of the Immigration Commission of 1909 states that "The illness of the breadwinner or other members of the family was 'the apparent cause of need' in 38.3 per cent. of the cases, while accidents were a factor in but 3.8 per cent. of the total applications for aid." "At the New York legislative hearing on the health insurance bill in 1916 it was shown that 37 per cent. of the families assisted by the New York Charity Organization Society are dependent because their wage-earners are disabled by sickness, while two-thirds to four-fifths of the expenditure of the New York Association for Improving the Condition of the Poor is for relief necessary because of illness." In the report of the New York Factory Investigating Commission (1915), one working woman gives it as her experience that "practically every week, in her factory, there is either a collection or raffle for the benefit of some worker who is sick, who has no resources, and who therefore is an object of the charity of her fellow employees." This custom, states the report, is really of considerable significance as an indication of how few are able to accumulate for times of emergency. It is also significant in showing how dire is the need of health insurance; for raffles and the like are a sort of stop-gap or make-shift for health insurance.

We see, then, that the claim that in America we do not need health insurance because the workman is so well-to-do is very evidently not in accord with the facts. As the *Brief for Health Insurance* of the American Association for Labor Legislation says, and as the above statistics would indicate, "America evidently presents no exception to the finding of Mr. and Mrs. Sidney Webb, that 'In all countries, at all ages, it is sickness to which the greatest bulk of destitution is immediately due.'"

Aside from the reduction of destitution, health insurance will tend to raise slightly the entire wage level. As Professor Moore of Columbia has shown in his *Laws of Wages* the wage level is fundamentally influenced by industrial productivity. Anything which raises the physical stamina of workmen increases their productivity and earning power. Thus the victims of hookworm disease in the South are poor, and constitute the "poor whites" because they are afflicted with the "germ of laziness," their power and inclination to work are crippled. The Life Extension Institute found that out of 2,000 workingmen and women over 99 per cent. were below their normal working power,

i. e., were suffering from some condition or habit which subtracted from their efficiency. These minor impairments of health and efficiency are mostly preventable, and, in fact in the group referred to, were in part prevented through the suggestions of the institute to the workmen themselves.

Finally, we may expect health insurance to help forward industrial peace, for it will create machinery for continual conference between employers and employees.

We conclude that health insurance is needed in the United States in order to tide the workers over the grave emergencies incident to illness as well as in order to reduce illness itself, lengthen life, abate poverty, improve working power, raise the wage level, and diminish the causes of industrial discontent. It is not a panacea. It will not bring the millennium. But there is no other measure now before the public which equals the power of health insurance toward social regeneration.

THE FUNCTION OF THE KIDNEY*

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Problems in physiology and chemistry are so filled with intricate, abstruse details that by their nature they are outside of the province of the practitioner of medicine, who must accept the ultimate conclusions which these sciences bring to the art of medicine. That the subject of kidney function is a complex matter is evident if viewed from the attitude of the physiologist, and if we choose to consider the subject from a viewpoint, of chemistry and biology, we shall stand a good chance to lose our way in the maze of research and experiment without any very definite comprehension of the matter. But we may select an attitude not so critical and look at this problem from the standpoint of the clinic and bedside and thus apply scientific accuracy to the study of kidney function.

At the outset we should distinguish between the lesion present in the kidney and loss of its function; paradoxical as it may first seem, the two are unrelated in the majority of cases referred to the urologist. There are, moreover, two great classes of kidney cases, including in that term, all sorts of kidney disease. One class embraces conditions more popularly known

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as medical diseases, such as parenchymatous and interstitial nephritis, which may be catalogued as the renal manifestations of cardio-renal disease. The second class embraces diseases frankly surgical, such as calculus and tuberculosis. This group concerns us more particularly. It is in these surgical cases that the question of renal function becomes, in the decision for operation, of greater importance than the lesion itself, and as has been pointed out so well by Albarran, Ambard, Geraghty, Voelcker and a host of others, it is in these cases precisely that renal function is hard to determine with scientific accuracy. The difficulty lies in the fact that we are trying to measure not the extent of damage, but the amount of reserve power and of living tissue which may compensate for tissue impaired or destroyed by the disease in one or both kidneys. Tuffier has shown that animals will enjoy good health after removal of two-thirds of the total renal tissue, with only a third of both kidneys left. Walker says that for nephrectomy the safety margin is from one-half to two-thirds of the total renal tissue.

By functional tests we aim to determine one of two things, or both:

1st — The efficiency of the kidneys in reference to the body as a whole.

2d — The relative efficiency of the two kidneys compared with each other.

The problem is a simple one in advanced disease in which, with diagnosis of a definite unilateral or bilateral disease, we have beside a definitely abnormal urine, the clinical symptoms of renal insufficiency. The symptoms of failure of renal function in the surgical lesions are clear and in many cases, especially in threatened uræmia, are sufficient to settle the question. They are:

1 — Headache with giddiness, mental and physical torpor, drowsiness, restless delirium and finally coma.

2 — Sallow, muddy hue; small, contracted pupils; dryness of mouth and throat causing dysphagia; sordes.

3 — Characteristic red, dry tongue with very great thirst.

4 — Anorexia, dysphagia, constipation or diarrhœa.

5 — Cardiac disturbance with usually a soft, small, slow and irregular pulse.

But in the border-line case where such a group of symptoms is not clearly marked the problem is not a simple one. Our aim here is to determine the reserve power of sound renal tissue, the relative capacity of the remaining kidney, and the quality of function with reference to the life of the patient. Furthermore, by tests of renal function, we may gauge the measure of improvement under treatment as well as the failure

or preservation of kidney function in the obstructive lesions of the lower urinary tract, such as prostatic hypertrophy. Finally, it is an axiom of kidney surgery that in considering operation for unilateral disease the question of greatest importance is always — Is the other kidney healthy? and sufficient in function? not alone, how badly diseased is the affected kidney, but how sound is the other kidney?

The function of the kidney may be described as two-fold (Bayliss).

1st — To remove from the body the non-volatile products of metabolism.

2d — To maintain constancy of the osmotic pressure of the blood by

(a) Regulating the balance in the vital needs of the body for water.

(b) Regulating the balance in the vital need of the body for sodium chlorid.

The first function, to remove waste, is represented for our purposes by the urea function. The second function is just as important to both body economy and renal function as a whole. The osmotic pressure is a difficult part of the problem to estimate. By osmosis we mean the process by which a solvent such as water passes to a solution through a membrane placed between water and a solution containing a definite substance. By osmotic pressure, we mean the pressure due to the passage of water through a membrane from a solution on one side to a solution on the other side in which the solution behaves as if the pressure were exerted by the molecules of the substance directly instead of by the solvent. It is regulated by some kinetic energy of the substance in solution and commonly measured by determining the freezing point of the solvent. Thus at a glance we see that we have in urea and other allied tests an effort to determine the first part of kidney function, the removal of waste. In cryoscopy we have a means of determining the osmotic pressure balance; for the osmotic pressure of the urine is greater than that of the blood and the diseased kidney will accordingly therefore show a lower pressure, more nearly that of the blood. "The molecular content of the urine is reduced and the freezing point of the urine raised."

A third factor enters, however, into our functional tests, namely, the living secretory activity of the kidney epithelia. Putting aside the mass of theories and laboratory data bearing on the subject of renal function, we may summarize our knowledge briefly as follows:

There is in each glomerulus a perfect filtration system, provided by the histological elements and by virtue of the vascular

arrangement which supplies not only the element of blood pressure, but a definite rate of blood flow. This is the source from which urine is derived. The filtrate is simply the blood plasma minus colloids, passed out in fairly large quantities as an unclassified assortment of all the diffusible substances of the blood in the same relative concentration, with the precious sodium chlorid, really often necessary to life, and with useless metabolic waste products in dilute form. This filtrate entering the tubules rushes along like a microscopic torrent. The epithelia of the tubules reabsorb water as may be needed in the regulation of the body needs; but their main purpose is to reabsorb certain amino-acids, glucose and especially sodium chlorid according to the needs of the body; finally the tubules secrete urea and other toxic substances so as to insure the largest measure of excretion, having therefore the power to concentrate in the urine large relative amounts of these toxic substances. Curiously enough, the tubule cells do not reabsorb salts other than sodium chlorid, and of that only enough to maintain a constant blood coefficient.

It is upon this power of concentration that Ambard and others have laid such emphasis in their methods of study of kidney function. For by relatively simple laboratory tests of urea and other substances, especially the chlorid, they aim to determine a definite coefficient.

We have abundant experimental evidence of these hypotheses in the work of Starling, Bancroft and Straub, Sauer, Löewy and Cushny, Albarran and Ambard, and a host of experimenters. There is a biologic analogy for this theory of the absorption of water by the tubules, for Sharpe has found in birds that the urine is a clear fluid in the ureter but in the cloaca, whence it is voided, becomes a semi-solid mass of uric acid, which in birds corresponds to urea in man and gives bird urine its curious semi-solid characteristic; in the bird, urine begins as a liquid but the cloaca reabsorbs water as do the tubules in man. Gurwitsch in 1902 found vacuoles in the epithelia of the tubules that secrete urea. The kidney has the wonderful faculty of rearranging the ratio of NaCl to urea from 10 to 1 in the glomerular filtrate to 1 to 2 in the final urine voided.

From the standpoint of functional tests we must remember that uric acid, phosphates, all dyes, sugar after phloridzin administration, and probably urea, are secreted by the cells of the tubules. On the other hand, albumin comes through the glomeruli. Furthermore, polyuria does not increase the output of dyes, sodium chlorid and excess of phloridzin-sugar. As Kelly so well says, the concentration of a substance in the blood is not the determining factor of the excretion of that substance. With reference to estimating the individual output of each kid-

ney, Albarran and others have shown that there is a variation in the amount and character of urine excreted during short intervals of 10 minutes, less in one hour and practically none in 24 hours, a difference often as great as 1.3. Therefore, collections from each kidney must be over a period of time sufficient to give opportunity for each individual kidney to rise and recede from its main average level of function.

Urea is derived from tissue metabolism, diet, and liver function and is excreted by the kidney. It serves with specific gravity and other factors of the 24 hour analysis, with due regard to other elements, as an indispensable guide to kidney function, but is not always accurate, as has been pointed out by Walker, Folin, Maragliano, and others. It is vastly more valuable in the 24 hour specimen than in the individual catheterized specimen. As a safe standard each kidney secretes in two hours an amount greater than 0.75 gm., the normal being 1.2 to 1.8 gm.

The technic of renal function tests has produced a very great literature; the diversity of opinion in regard to the value of these tests is certain proof that all our tests are imperfect. Any test to be acceptable to the urological surgeon must be simple and yield results immediately available without recourse to tedious laboratory and mathematical procedures during which the sick patient may not survive. But the most important quality of any test is that it shall truly interpret the function of the kidney. In the readjustment of values and from the study of the subject by the urological surgeon, as well as by the laboratory man, a test which will be both practicable and physiologically accurate is bound to be evolved.

Just what test to employ at present is a difficult problem, for each is assailed as imperfect and condemned as being an estimate of only part of the function of the kidney. For instance, the dye tests, such as indigo carmin, methylene blue and phthalein, are essentially tests of the function of the tubules only, the secretory mechanism; while tests of osmotic pressure are without value; and such a method as chlorid and urea estimation singly or by their relative ratio, no matter how complicated the formula, gives us misleading information at the bedside. It is probable that Ambard has at last evolved by his test of the urea coefficient a method that more nearly determines the whole function than any other test; while originally complicated, as at present worked out at the Rockefeller Institute, it bids fair to become accessible to the urologist with the ordinary facilities of a competent laboratory worker.

Meanwhile, we have certain dependable standards by which we may obtain information of renal function accurate enough for practical purposes. The routine has to be varied, but obviously

the first decision to be made in any case is a diagnosis which must, of course, involve a study of the whole patient. Secondly, it is imperative in urological surgery to have repeated urinalyses on two 24 hour specimens; if possible, to eliminate the treachery and fallacy of the absolute urea output, it is wise to make rough calculations of the urea of the blood and of the factors of diet, hepatic function and type of lesion present in the kidney. Depending on phthalein as the easiest, most trustworthy and accurate dye test, a test is then made of the total output of the two kidneys for two hours, collecting the vesical urine. At a subsequent time, or the procedure may be reversed, the ureters are catheterized, sometimes only one, the output of the other being studied by means of vesical catheterization. Specimens are collected always for one hour, usually for two hours. From the first collection and from some other one of the series of separate urine samples collected every 15 to 30 minutes, the urea is estimated and any other necessary data obtained. At this sitting the polyuria test of Albarran is combined with the phthalein test of Rowntree-Geraghty. We have thus for comparison the output of urea from each kidney to compare with the total output of both kidneys, not accurate enough to put into a mathematical equation but nevertheless of very great practical value. We have some idea of the glomerular function and a test of the secretory mechanism, by comparing the absolute output of phthalein through both kidneys with the relative output by each; and by means of the water output for two hours in definite amounts at definite intervals, we have an additional standard of comparison of relative efficiency. In a fairly large series of cases such a procedure, which is simple and relatively accurate, affords a mighty dependable and safe standard by which to judge renal function.

150 West 80th St.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the *GAZETTE* only and preferably to be typewritten — personal and news items should be sent THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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DR. WILCOX RETIRES FROM EDITORSHIP

To our many readers who have enjoyed looking forward to Dr. Wilcox's breezy editorials, his withdrawal will come as a surprise and disappointment. For some months past it has been increasingly difficult for him to find time for editorial work, and so great have been the demands of his profession that he has finally decided to resign from the former. The members of the *Gazette* editorial staff wish publicly to express their thanks and their appreciation of his active interest and able coöperation during the years they have worked with him.

Dr. Wilcox has a terse and pithy way of saying things which commands attention. During his presidency of the American Institute of Homœopathy he kept our readers well informed of the broader activities of that body. He has a wide acquaintance with the homœopathic profession throughout the country and has thus been able to secure many valuable papers for our pages.

Dr. Wilcox succeeded Dr. W. H. Watters as editor in 1912 and throughout his connection with the *Gazette* he has striven to uphold the high standards set by his predecessors. His withdrawal does not mean that we shall not continue to print his writings as occasion offers, but simply that pressure of other work obliged him to resign the responsibilities of editorship.

It is with pleasure that we are able to announce that Dr. Sanford B. Hooker has agreed to undertake the active editorial work of the *Gazette*. Dr. Hooker is a young man of broad and thorough preparation, and he wields a virile and critical pen. For the past four years he has been a member of the staff of the research department of the Evans Memorial for Clinical Research and Preventive Medicine, and he has keen ability for

sifting the wheat from the chaff in matters scientific. He brings to his new responsibility a versatile mind and much enthusiasm for the work. Altogether, the *Gazette's* readers have reason to look forward with renewed interest to each succeeding number. Its scientific and general value will be maintained, while some new features are to be added.

THEORY AND IMAGINATION IN SCIENCE

Bounded and conditioned by reason and observation, theory becomes the mightiest instrument that the scientific investigator possesses. Theory helps him to discover facts; theory gives impetus to progress. The temporary acceptance of theories serves as a scaffolding in his building of knowledge. The fabric not only of medical, but of all, progress is woven from legitimate dreams to a far greater extent than the "practical" individual is willing to admit or wont to realize.

Every investigator must proceed by combining imagination and verification. He formulates a tentative solution and checks it by experiment; he speculates and confirms or explodes his speculation. By no means are such guesses mere leaps in the dark; for knowledge once gained, on which such guesses are founded, sheds some faint light a little beyond its own immediate confines. However, in the basing of provisional formulations upon available scientific data, it is to be remembered that precedent does not always mean progress. Not infrequently is precedent a hindrance; many times has the dogmatism of experience proven to be a most dangerous clog to the advance of science.

There are rare instances in which a kind of momentary clairvoyance has seemed to take the place of continued exercise of penetrative imagination with its incessant correction and partial realization. But there are few wizards, few geniuses in science. Most brilliant results of research are understood by the thoughtful to be the products, not of any superhuman faculties, but rather of sane thinking and prolonged industry. The secret of all who make discoveries is to look upon nothing as impossible. That is one of the reasons why it is always so much fun trying to do things which you know you can't do.

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In its final essence the value of science is two-fold. It is partly resident or intrinsic, partly relative or extrinsic. On the one hand "Science for its own sake" is a false god, an unattainable ideal; on the other hand it is impossible that science

could be pruned of its theoretical developments and continue to bear fruit.

It is asked: "Why study sea weeds when what we want is more wheat?" The danger of imposing such utilitarian criteria cannot be too forcefully emphasized. A theoretical foundation is a necessity if there is to be progressive practical application. Moreover, history tells us of many great practical discoveries that had their origin in some of the most unpromising theoretical investigations. Who thought that the twitching of the legs of Galvani's frogs would eventually lead to telegraphy? Who, in 1825, could foretell the revolutionized technology that has resulted from Faraday's discovery of the then useless benzol? A few years ago, what knowledge seemed more futile than that which sought to distinguish one species of tick or gnat from another? But through such knowledge the construction of the Panama canal and the opening of Africa became possible. "When the multiplication of loaves and fishes becomes the only problem in the world we know the results to be vicious." A true scientist "thinks more of lucidity and formulæ than of loaves and fishes." The question *cui bono* is potentially fatal.

The objection is often raised that science is changeable and uncertain, that the new theories which have superseded the old exploded ones, may be unsound and therefore not worth having. It is true that science is perpetually changing. The work of today is controverted tomorrow. But therein lies the difference between science and prejudice that keeps stubbornly to its position whether disproved or not. The reason science advances is because it is never sure of anything. Liability to error is the price of progress. "Show me the scientist who never made a mistake and I will show you one who never made a discovery." Old theories disintegrate and new ones replace them. But the classification of known facts which a hypothesis suggests and the discoveries to which it leads will remain as positive additions to our knowledge long after the hypothesis itself has been forgotten.

Much discredit, however, has attached to the use of the imagination as one part of the scientific method. There is too easy acceptance of theories especially when consecrated by the typesetter. Immature conjectures have a dangerous tendency to don the garb of full-grown theories or even of established laws. The substitution of analogy for fact is baneful. From the shell of a rotten acorn an oak is postulated. Especially is this a prevalent practice in therapeutic investigations. A few animal experiments, usually without adequate controls, are per-

formed; the clinic is hastily and briefly requisitioned; propaganda is launched, commercial exploitation begins and soon comes the awakening: erroneous premises, evidence inadequate to surpass the limits of experimental error, uncertain and conflicting clinical observations, and the heralded "cures" are dispelled.

Such methods can and do but lead to results that are pitifully shallow and to knowledge that is friable in the extreme. In experimental science it is always a mistake not to doubt when the facts do not compel affirmation. Huxley said: "The assertion that outstrips the evidence is not only a blunder but a crime."

Our theories need more and freer discussion. Who desires to harbor in his intellectual nursery the mummified foetus of an erroneous hypothesis? Far better is it spartanly to place our brain children under the magnifying glass of public or semi-public attention; to present them for the baptism of approval, or for the last sad rites which must be administered to the worthless and fallacious. And far better is it to have our pet theories annihilated, our cherished hobbies throttled, by our friends, than to drift through our allotted time without giving birth or expression to an original thought or enunciating a single word out of conformity with the opinions of others.

We need feel no false modesty about our theories. They are probably all wrong,

"For never yet hath anyone attained
To such perfection, but that time, and place
And use, have brought addition to his knowledge;
Or made correction, or admonished him,
That he was ignorant of much which he
Had thought he knew; or led him to reject
What he had once esteemed of highest price."

S. B. H.

SADISM

The ordinary sex perversions are so usual and common as hardly to warrant notice. The case of Harry Thaw, however, is so unusual and striking and has had so much publicity that it is worth analysis. The following extract from one of his trials justifies his being definitely classed as a sadist.

"Mrs. Merrill then identified a small rattan whip as one which she had found in Thaw's room.

"Once I heard a girl screaming and I ran into the room," her testimony ran. "Thaw stood with the whip in his hand and I noticed the girl had welts on her limbs and arms. She

was crying. Another time I heard screams, and when I went into the room there were two girls crying.

"I told Thaw, or Prof. Reid, as I knew him, if he was going to carry on that way he could not stay.

"He said: 'Those girls deserve a beating. They aren't a bit smart and could not hold a position on the stage.'

"I told him that the girls were very young, that they came to New York to try to make an honest living and he must treat them decently or else he could not stop in my apartment."

"Did you see him strike any girls there?" Dist. Atty. Jerome asked.

"Yes," was the reply. "I saw him in the act of striking three girls on three different occasions. All were unclothed. After I stopped him he was just wild. He dropped the whip, said nothing and hurried away."

The whip, the witness said, was secured by a Miss Wallace during a struggle with Thaw. When discovered in the presence of weeping and lacerated girls, Mrs. Merrill asserted, Thaw sometimes escaped to the street, "insane, just crazy."

At base the pain-love complex is the evolutionary avenue through which civilized races have reached the present conception of the so called normal sex relation. Among most of the lower animals the conquest of the female by the male is most commonly through combat. In primitive man, as Havelock Ellis and others have shown, it was usual for the man to fight for his mate, to win her by chase or to abduct her. The women of certain countries did not feel that they were properly loved unless beaten by their husbands. This did not necessarily mean her submission to him but was rather evidence of his affection. We occasionally hear of the wife beater today, but are apt to look upon it rather as a criminal than as a sensual act. Thus, we see that in the sadist we have a reversion to a primitive type and that whipping is but an erotic symbol.

Ellis says, "Erotic symbolism (which includes everything from the fetich of the ankle or wearing high heeled shoes by men, to the ecstatic joy of a sunset or a saint's martyrdom) is concerned with all that is least generic, least specific, all that is most intimately personal and individual in sex selection. It is the final point in which the decreasing circle of sexual attractiveness is fixed." This symbolism in its finer sense and seen through the lover's eyes obtains sensual satisfaction in innumerable ways. "It (the symbol), is the mighty force behind and beneath the aberrations, a great reservoir from which is drawn the life blood that vivifies even the most fantastic shapes."

"Fetichism and other forms of erotic symbolism are but the development and the isolation and the crystallization which normally arise on the basis of sexual selection. Normal in their basis, in their extreme forms they present the utmost pathological aberration of the sexual instinct."

The reason this pathological form is more rare today (though more common than we realize, as court records will show), is because of the force of social opinion which condemns all pain producing tendencies and attempts to force the highly complex sex impulses into more circumscribed channels.

"A man" says Ellis, "cannot, however, deviate at once so widely and so spontaneously in his impulses from the rest of the world, without possessing an aboriginally abnormal temperament. At the very least he exhibits a neuropathic sensitiveness to abnormal impressions. Not infrequently there is more than this; the distinct stigmata of degeneration, sometimes a certain degree of congenital feeble mindedness or a tendency to insanity."

In this latter connection it will be recalled that those who cared for Thaw at Matteawan felt he should be classed as a case of paranoia. Now this is just the type of congenital mental deviate in whom we should expect a fetich to be carried to its pathological limit. It is also the type over which litigation most commonly occurs. Paranoia is a congenital psychic error of very gradual evolution so that the point at which the person becomes incompatible with his environment and society is most difficult to determine.

Ellis says of the temperament of the sadist, "It is to the extreme individualization evolved by the development of erotic symbolism that the fetichist owes his morbid and perilous isolation; he is nearly always alone. He is predisposed to isolation from the outset, for it is on this basis of excessive shyness and timidity that the manifestations of erotic symbolism are most likely to develop. His most sacred ideals are for all around him a childish absurdity, or a disgusting obscenity, possibly a matter calling for intervention of the police."

Is not this just the type of personality which makes up the paranoid disposition? He finds himself different from the rest of the world. Later as this gulf widens, he decides that he must have been set apart for a purpose and thus grows up the elaborate system of delusions in which he becomes a great personage, and, since the world does not recognize him as such, it is persecuting him. His persecutory idea gradually or through some specific influence (Evelyn Nesbit) narrows down to some one or two persons whom it is his duty to punish — hence the murder of Stanford White.

It is, therefore, plain that though Harry Thaw's offences when gotten piecemeal from the newspaper reports, seemed criminal acts, they were really the consistent and logical outcome of a congenital pathological mental constitution which had built up systematized delusions of persecution and that Thaw's money has only served to persuade some clever minds to befog a simple psychiatric problem.

A. H. R.

CLINICAL DEPARTMENT

Case 2-G. Hysteria or Manic Depression? The patient is an American, age 38 years. Her family history is negative except that her mother is a nervous and notional invalid. She was a nervous child and has had periods of emotional depression which have been called nervous breakdowns, but in none of them has she lost insight and she has kept a fair degree of self-control. Mentally, she has always been above the average, and early became the private secretary of a busy and exacting lawyer for whom she slaved and, at times, developed a sort of infatuation. Temperamentally, she has always felt within herself the stress between her worldly desires and her ethical ideals which are very high. So that she says of this man, "I loved his great thoughtfulness and kindness but hated his lack of principle."

Some ten years ago she left his employ and took a similar position elsewhere. Here she was highly esteemed. She had periods, especially during the past year, however, when she would have to stay away from the office because of fatigue and "because her employer did not fully appreciate her work." Early in December, because of some trivial matter, the employer laughingly called her a "chump." She took it seriously, became hysterical and went home and to bed. She soon lapsed into a sort of dream world with some mental confusion and lack of insight. She wrote voluminously and upon every thing she could get hold of. For the most part this writing was a detailed description of all the events transpiring about her, but, at times, it showed definite flight of ideas. She became imbued with the idea that it was her mission to bring joy to all about her, that she must build a chapel and an art gallery. She decided she was the daughter of God as Christ was the Son, and that henceforth she must be mentioned with him in prayer, *etc.* Her flight of fancy and play on words jumped rapidly from one thing to another and her mood changed frequently. Nothing had any importance after it had been put on paper.

All this variety of moods and ideas was put in writing. On a few occasions she exhibited some motor restlessness, once destroying a potted plant, but for the rest, she was quiet and docile and showed her state of mind only by a slight confusion in conversation. When told that the things she wrote were not so, she would reply, "Are they not—Oh, all right. I was only putting down some ideas, but they are of no importance." Outwardly to the casual observer, she appeared normal. The impression, as one talked with her, was that she was living a dream and had lost grip on reality.

And this seems to be the best explanation of the condition. All her unconscious wish-life seemed to have come to the surface just as it does in dreams. The reality of the work-a-day world where she had known so much friction was simply repressed. She refused to recognize its existence, hence all she had to do was to give expression to her wishes and they were as good as realized.

Parallel with this hysterical mechanism, however, there went a rather typical manic symptom picture—persistent sleeplessness, refusal to eat (which soon ceased), loss of weight, flight of ideas, and some motor restlessness though not as much as is usual in such cases. Again there was no typical retardation unless we consider the occasional confusion and slowness of thought as such, but, with a flight of ideas, one would not expect much retardation.

Though we have never seen a silent case of mania before, we are inclined to place this patient in that category. However, we would not let this fact interfere with the explanatory conversations so helpful in hysteria and to which she was very receptive.

Whichever view we may take, the patient is improving, and we predict recovery of her usual health.

HOMŒOPATHIC PERIODICAL LITERATURE

The British Homœopathic Journal. January, 1917

1. *Some tuberculous manifestations.* 1-9. Woods, H. F.
2. *The sphere of medicine in gynæcology.* 9-28. Purdon, W. P.

The Journal of the American Institute of Homœopathy February, 1917.

1. *What can surgery do for the brain?* 879-887. Fobes, J. H.
2. *Psychological method of review in teaching materia medica, from the homœopathic standpoint.* 888-896. Baker, W. F.

3. *Studies in drug pathology.* 897-900. Hinsdale, A. E. Published in the *Gazette*, 1916, li, 488-491.
4. *Arnica.* 900-905. Wolcott, R. C.
5. *Hydrotherapy in nephritis.* 905-906. Dieffenbach, W. H.
6. *The economic value of health.* 907-911. Waterman, A. H.
7. *Iron rich diet. Practicable ways of increasing the iron-content.* 911-916. Hunt, C. L. Published in the *Gazette*, 1917, lii, 71-75.
8. *Circumcision.* 917-931. Krauss, J.
9. *Extra-uterine pregnancy.* 931-938. Harvey, C. D.
10. *Clinical experience with vertebral adjustment as a remedy.* 939-955. Patchen, G. H.

S. B. H.

The Chironian, January, 1917

11. *The endocrinic glands in obstetrics.* 241-246. Thomas, P. C.

Thyroid extract is recommended for pernicious vomiting and eclampsia, pituitrin for prolonged labor, and adrenalin for deficient kidney-function.

12. *The great war.* 247-257. Ginnever, A.

Impressions from a trip to France. Like other recent medical visitors to the war-zone, the author has less to say about the hospitals than about the military aspects of the war and international politics. The article is remarkable for one reason; the author does *not* tell us how the war could be more successfully conducted.

13. *Medical fakes and fakirs.* 260-272. Eaton, E. R. An interesting account of the methods of an itinerant quack.

14. *Tumors of the spleen.* 273-275. Heinicke, W.

15. *Wandering spleen.* 276-278. Jenkins, P. B.

W. O.

The Hahnemannian Monthly, January, 1917

16. *Therapeutics in relation to diseases of the circulatory system.* 1-9. Price, E. C.

Price calls attention to the mistake of prescribing a "heart tonic" or "heart sedative" for every case of heart disease, without first studying the fundamental cardiac lesion to be treated. He recommends the following drugs for homœopathic application in disorders of the heart: *arnica*, *bryonia*, *convallaria majalis*, *cactus grandiflorus*, *spigelia anthelmia*, and *conium maculatum*.

Digitalis, strophanthus, cratægus oxyacantha, adonis vernalis, and caffein are not believed to act homœopathically, but they have their distinct spheres of usefulness, particularly as temporary aids.

Diseases of the kidneys are very prone to effect cardiac disturbance and should not be overlooked in the consideration of heart diseases.

17. *Factors influencing mortality in prostatic removal.* 11-15. Crichton, M.

The suprapubic route shows a higher mortality than the perineal but is otherwise more efficient, so much so that the higher mortality is more than outweighed. The factors in causing death are anæsthesia, shock, and hæmorrhage.

Crile's method of anoci-association preceded by hyoscin, morphin, and strychnin is the safest method of producing anæsthesia in these cases. For controlling bleeding, Crichton has adopted "the method of suture passed in and around the vesical neck."

18. *Some errors in practice.* 15-18. Crumbaugh, J. W.

A few interesting cases are reported. In the discussion of one of them Crumbaugh calls attention to the possibility that absorption of insufficiently digested proteids resulting from derangement of enteral digestion may cause more or less prolonged fever due to the toxicity of the proteins or their split products formed during parenteral digestion.

19. *Ætiology, pathology and operative treatment of cholecystitis.* 22-29. Elliott, J. D.

20. *Pre-operative immunity with statistics.* 31-33. Replogle, H. B.

Ninety patients received before operation one or more immunizing doses of a mixed vaccin containing staphylococci, streptococci, pneumococci, and colon bacilli. Only one of the ninety cases developed post-operative infection, and this one had received but one vaccination.

21. *Contagious skin diseases — their recognition, relation to public health and prevention of spread.* 34-43. Bernstein, R.

H. U.

Pacific Coast Journal of Homœopathy, January, 1917

22. *Principles of eclecticism.* 5-9. Baird, A. P.

23. *The principles of homœopathy.* 9-16. Cowperthwaite, A. C.

The North American Journal of Homœopathy, January, 1917

24. *Diagnosis of biliary disease.* 9-14. Critchlow, G. R.

25. *Treatment of anterior poliomyelitis.* 14-18. Cardozo, A. L.

Beyond general hygienic measures, especially rest, no non-homœopathic measures seem to have any favorable action upon the course of anterior poliomyelitis, during the acute stage. Among the remedies that deserve study and trial in accordance with homœopathic principles three stand out most prominently, *viz.*, arsenic, causticum, and lead.

26. *An epitome of comparisons in homœopathic materia medica and therapeutics.* 19–22. McMichael, A. R.

27. *Appendicitis.* 22–25. Carleton, S.

28. *Clinical experiences.* 25–29. Case, E. E.

29. *The power of the simillimum.* 29–32. Bogar, C. M.

30. *The cure of diseases with material doses of the homœopathic remedy.* 32–44. McMichael, A. R.

31. *When the doctor was surprised.* 45–47. Guild-Leggett, S. L.

H. U.

Homœopathic Recorder, January, 1917

32. *Scientific symposium on acute poliomyelitis.* 6–12. Bullard, J. A.

An amusing satire of some of the recent rather hysterical literature on infantile paralysis. Contains a plea for pure homœopathy instead of the all too common use of combination tablets and laxatives, and the alternation of remedies.

33. *Tetanus, its homœopathic cure.* 12–18. Johnson, B.

Discussion of certain remedies, such as ledum, hypericum, cicuta, staphisagria, arnica and calendula, and report of a case which recovered on hypericum, followed by cicuta. In this case serum was given on the seventh day. The author, though convinced that the homœopathic remedy alone would have cured, acknowledges that some credit must be given to the serum.

34. *Staphisagrin.* 18–19. Fahnestock, J. C.

Review of some leading symptoms, especially mental and genito-urinary.

35. *A definite system of therapeutics.* 20–24. Jones, E. G.

A plea for more confidence in the homœopathic remedies.

36. *Burns — how to escape skin grafting.* 24–28. Fanning, E. B.

The article reads like an advertisement for the proprietary article which was used in the case reported.

37. *An awful dream.* 28–30. Dienst, G. E.

The Clinique, January, 1917

38. *Chyluria.* 1–4. Ed.

An excellent review of the subject, with report of a case of the nonparasitic type. (Ed.)

39. *Colds and their treatment.* 9-10.

A few remedies with the recommendation (always painful to a conscientious homœopath) to alternate and mix them as needed. Hunyadi and Pluto water are spoken of as laxatives, and Bokert or Poland water is advised for its supposed effect on the kidneys. And to cap the climax of these heresies, "sweats produced by giving acetanilid in five grain doses with hot packs should not be neglected." The mental twist of a man who advises against aspirin because it "acts upon the red blood corpuscles, destroying them," while advocating a more powerful depressant and hæmolytic, such as acetanilid, is indeed interesting.

40. *One hundred thirty-nine cases of skin cancer cured by x-rays.* 11-17. Grubbe, E. H.

One hundred fifty-five cases treated exclusively by x-rays using the intensive method. Of these, 139 have remained free from recurrence for over one year. Practically all these cases were diagnosed by competent pathologists from sections of tissue. Only cases without glandular involvement were treated, as others are virtually hopeless.

41. *Infant feeding—some of the reasons why.* 18-24. Toren, J. A.42. *Poliomyelitis.* 25-29. Cameron, A.

A brief review of the subject.

43. *Ocular lesions in poliomyelitis.* 30-32. Boynton, W. E.

Attention is called to the possibility of blindness in the disease, resulting from encephalitis interfering with the cortical visual areas.

44. *Electrical and mechanical treatment of poliomyelitis.* 32-39. Hanks, M.

For the most part, a review of facts already known. The institution of electrical stimulation and massage immediately after the febrile stages have passed is recommended. The faradic current is considered best, provided it will produce contraction; "if it will not, the galvanic or slow sinusoidal is to be used. Vacuum electrode application over the spine in the febrile stage even preparalytically, is strongly urged. The overvaluation of the reaction of degeneration as a prognostic sign is justly mentioned. The value of orthopedic appliances and muscle training is emphasized.

45. *Ræntgen rays in ophthalmology, otology and laryngology.* 40-42. Boone, J. F.

The author points out the fact that the use of the ray does not relieve one of making the ordinary physical examination as well; a fact which may well be remembered by some of our reflex diagnosticians.

46. *Contagious diseases; a comparative study in a homœopathic institution.* 42-44. Fuller, A. V.

A pale urine with a high concentration (sp. gr. 1.022-1.035) is considered a suspicious sign of pertussis in the presence of dubious clinical symptoms. Mag. phos. 2 x is found serviceable in this disease. An example of the "epidemic remedy" (in this case arnica) is given.

Iowa Homœopathic Journal, January, 1917

47. *Medical inspection of school children.* 21-28. Seeman, F. A. W. O.

BACTERIOLOGY

Bacteriæmias in the Agonal Period. *Fredette, J. W.: Jour. Lab. and Clin. Med., 1916, ii, 180.*

It has long been recognized that a terminal infection frequently accompanies the lowered bodily resistance usually present for a variable period just before death. The author has taken blood cultures in 119 cases within ten minutes following death in an effort to determine the relative frequency and type of the bacterial invasion. The streptococci were the most frequent bacterial invaders. The pneumococcus can be isolated in practically all cases of lobar pneumonia dying before the tenth day of the disease.

In reviewing the data on these cases it was found that only fourteen antemortem blood cultures had been requested. It is rather singular when we consider that three times as many positive cultures were found. It suggests that either bacteriæmias existed when their clinical manifestations were either not of sufficient import to justify the requisition of a blood culture, or that the infection had occurred very late in the progress of the disease when its presence had no clinical bearing.

(More frequent recourse to blood cultures in diagnosed or undiagnosed febrile diseases would result in the accumulation of information especially valuable in prognosis and certainly not useless in therapeutics. — Ed.)

S. B. H.

DIAGNOSIS AND THERAPEUTICS

Acidosis in Acute and Chronic Disease. *Frothingham, C.: Arch. Int. Med., 1916, xviii, 717.*

The term acidosis as it is used in medicine at the present time does not designate a definite clinical entity, but it is applied to a variety of conditions in which there is a general impoverishment of the body in bases or substances which readily give rise to bases. The impoverishment in bases may be due to faulty absorption of bases, to an unusual loss of them from

the body, or to their neutralization by abnormal amounts of acids. Increase in the amounts of acids in the body may be due to the production of abnormal acids, to an overproduction of the usual body acids, or to an accumulation of normal acids due to failure in excretion. The presence of acetone in the urine may be looked on as an indication that abnormal acids are present in the blood but it is no indication of how large a quantity of them are present. A number of methods of study of the relation of body acids and bases have been devised. In this investigation of 99 cases at the Peter Bent Brigham Hospital the following methods were used: Determination of carbon dioxid in the alveolar air; the soda tolerance test; a 24 hour specimen of urine was examined for the presence of acetone, for total nitrogen, and for ammonia nitrogen, and its hydrogen ion concentration was determined. The first two methods were of most value in detecting the degree of acidosis in all the cases in which there was a variation from the normal.

The diseases which showed at times an acidosis by some of these tests are diabetes, chronic nephritis, pneumonia, acute articular rheumatism and several miscellaneous acute febrile conditions.

S. B. H.

IMMUNOLOGY

A Comparison of the Antigenic Properties of Different Strains of *Bacillus Typhosus*. *Hooker, S. B.: Jour. Immunol., 1916, ii, 1.*

In an investigation of 53 strains of *B. typhosus* the author found by means of complement fixation and agglutinin absorption tests that it was possible to demonstrate consistent antigenic differences among some of the strains. These strains have been tentatively allocated in three groups, and it seems advisable for the present to recommend the use of balanced polyvalent vaccins for immunizing and therapeutic purposes compounded in accordance with these groups. The investigation distinctly does not uphold the prevailing practice of employing a single old strain for prophylactic immunization against typhoid fever.

The Application of the Typhoidin Test in a Group of Nurses and Physicians. *Gay, F. P., and Lamb, A. R.: Jour. Lab. and Clin. Med., 1917, ii, 217.*

Using an improved technic the important points of which are as follows: the use of a polyvalent preparation, the employment of the carefully determined minimal effective dose intradermally, and the reading of the reaction in 48 instead of 24 hours, the authors report these findings. Fourteen per cent.

of presumably normal individuals who had not previously had typhoid fever or antityphoid inoculation gave a positive reaction; 75 per cent. of those giving a definite history of typhoid fever reacted positively. Of the vaccinated cases the percentages of positive reactions ranged from 50 to 75.

In the experience of the senior author, in no individual in whom a positive reaction has been obtained has typhoid fever occurred. It is considered that the use of the typhoidin reaction as an indication for revaccination certainly errs on the side of safety in protecting those individuals who in spite of typhoid vaccinations do not show indications of a reaction to the typhoid bacillus, and are therefore those particular individuals who under ordinary conditions of infection will be found to be the least protected.

A Study of 290 Postmortem Wassermann Reactions. *Graves, S.: Jour. Immunol., 1916, ii, 53.*

Graves concludes that the Wassermann reaction on post-mortem blood, according to his methods, is a reliable aid to the diagnosis of syphilis. The postmortem reactions confirmed antemortem reactions in 95 per cent. of the cases. Of those cases that showed postmortem anatomical lesions of syphilis or a positive evidence of syphilis in their history, the post-mortem sera gave positive reactions in 90.4 per cent. of the cases. Only 7 per cent. of 282 cases showed negative reaction in the presence of anatomical lesions (aneurysms) characteristic of syphilis.

The percentage of specific reactions was almost as high postmortem as would be expected antemortem.

S. B. H.

PATHOLOGY

Cardiac Aneurysms. *Wooley, P. G.: Jour. Lab. and Clin. Med. 1917, ii, 221.*

The course of events leading up to a cardiac aneurysm is roughly as follows: The infecting organisms—in syphilis, the spirochætes—arrive by way of the blood stream and enter the smaller vessels of the myocardium, from which they pass into the perivascular spaces. Here they set up a chronic inflammation. The sequel of this is perivascular fibrosis. As time goes on the perivascular connective tissue becomes well-formed and contracts, limiting the flow of blood through the vessels. The result is that the food supply of the myocardium is gradually diminished, and atrophy of the muscle occurs. Strain is placed upon the remaining fibrous tissue, which is apt to undergo hypertrophy, and so fibrosis appears. Each area of

fibrosis represents a point of weakness, — a point at which the wall of the heart is less resistant to continued pressure.

Strain, although a secondary factor in the production of cardiac (and other) aneurysms, seems to be a necessary one. Because of this, aneurysms occur during middle life rather than in old age.

The difference between complete cardiac dilatation and aneurysm is merely quantitative: if the entire myocardium is damaged the whole heart dilates; if there is only focal damage this results in focal dilatation, *e.g.* aneurysm.

Aneurysms may be acute or chronic. The acute form is a rapid dilatation resulting from thrombosis or embolism of branches of the coronary arteries. Rupture of the locally weakened heart wall may result.

Chronic bulgings are due to fibrosis brought on by myocardial overwork or by syphilis and rheumatic fever. The reason fibrous tissue leads to aneurysm is that, although no weaker than muscle, it is not resistant and tends to remain stretched.

The most frequent site of cardiac aneurysm is the anterior wall of the left ventricle near the apex.

Five case reports follow.

A Study of the Occurrence of Immature Polynuclear Leukocytes in the Circulating Blood in Pulmonary Tuberculosis and other Infectious Diseases. *Burgess, A. M. Ibid. 240.*

In 1905 Arneth grouped the neutrophilic polymorphonuclear leukocytes according to the number of nuclear lobes. Those containing the smaller number of lobes are supposed to be the younger cells. (This is disputed by Pappenheim. — Ed.) In infections, notably tuberculosis, when there is increased destruction of leukocytes and a consequent increased demand upon the bone marrow for new cells, a larger proportion of these are immature cells.

Burgess concludes that in pulmonary tuberculosis the finding of excessive numbers of singly lobed neutrophils indicates necrosis and extension of the lesion. In early stages of the disease, when clinical signs are not apt to be definite, the method may be of distant prognostic help. In advanced cases its value is much smaller because the disease is either so slowly progressing that the blood change is not elicited, or it is advancing so rapidly that the unmistakable clinical signs render the study of the blood superfluous.

PHARMACOLOGY

The Action of the Several "Female Remedies" on Strips of the Excised Human Uterus. *Pilcher, J. D.: Arch. Int. Med., 1917, xix, 53.*

This work is supplementary to that recently done on the influence of a long list of drugs upon the excised uterus of the guinea-pig. The drugs examined act on the human uterus in the same direction as on the guinea-pig uterus; more concentrated solutions, however, are required to produce the same effect. This strengthens the arguments of the previous paper that it is highly improbable that these drugs could exhibit the same action on the intact uterus in doses that could be tolerated by the patient. Although only a limited number of the so-called uterine "tonics and sedatives" have been examined, the results agree qualitatively with those of the previous work on the guinea-pig. Pilcher thinks it safe then to conclude that the others would have the same action on the human uterus as on the guinea-pig uterus, but probably to a lesser degree.

Aletris farinosa, *pulsatilla pratensis* and oil of valerian depress the activity of the strips; *caulophyllum thalictroides* throws the strips into tonic contractions; *cnicus benedictus* and *viburnum prunifolium* are inactive.

S. B. H.

BOOK REVIEWS

Mechanisms of Character Formations. An Introduction to Psychoanalysis.

By William A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D.C., Professor of Nervous and Mental Diseases in the Georgetown University, etc. Published by The Macmillan Company, New York.

This little book of 342 pages is a simple and elementary statement of the basic facts upon which psychoanalyses rest. It is at once so logical and lucid that it is hard to see how any unprejudiced reader can peruse its pages without getting glimpses of his own inner life and feeling its truths. In his preface the author says, "It (psychoanalysis) is a psychology which has opened the door to the understanding of man, and as such, I believe, is the psychology which will prove of the greatest pragmatic advantage. It is such a scheme as I have outlined in this work which I think should be taught in the medical schools."

The chapters of the book deal with, (1) Introduction. (2) The Genetic Approach to the Problem of Consciousness. (3) The Fore-Conscious and the Unconscious. (4) The Conflict. (5) Symbolism. (6) Dream Mechanism. (7) The Will to Power. (8) The All-Powerfulness of Thought. (9) The Will to Power (Cook). Partial Libido Strivings. (10) Extroversion and Introversion. (11) Organic Inferiority. (12) The Resolution of the Conflict. (13) Summary and Synthesis, Index.

Those who have read Dr. White's excellent little monograph entitled "Outlines of Psychiatry" will recall its simplicity and the directness with which he gets at fundamentals. The "Mechanism of Character Formation" is similar in style. It is most difficult to encompass so vast a subject in a small book, but Dr. White has created an atmosphere and interest which is sure to urge the reader to go further into the subject.

The type is large, the paper good and the whole get-up attractive.

A. H. R.

Infantile Liver. By D. N. Ray, M. D., L.S.A. (London). Published by Messrs. King and Co., Calcutta, India. 1916, pp. 181.

Infantile cirrhosis of the liver, a disease common in some parts of India, is discussed in considerable detail. There are several more or less irrelevant digressions from the main subject, and some unacceptable views and opinions are expressed. A feature of the small volume is a long list (108 pages) and indicating symptoms of remedies which if used homœopathically are said to be of value in this and other hepatic diseases.

H. U.

Homœopathic Therapeutics in Ophthalmology. By John L. Moffat, B.S., M.D., O. et A. Chir, pp. 166. Boericke & Tafel, Philadelphia.

Chap. 1 gives a short account of Hahnemann's life and work.

Chap. 2 treats of the subject of homœopathy, considering especially the Definition, the Single Remedy, the Psora Miasm, and the Dose.

Chap. 3 is a condensation of Norton's Homœopathic Ophthalmic Therapeutics. Thirty-two minor drugs have been omitted and fifteen added.

Chap. 4 The Repertory also follows Norton very closely and from its convenient form should be an improvement for ready reference.

D. W. W.

SOCIETIES

The Boston District of the Massachusetts Homœopathic Medical Society. February 1, 1917. Evans Memorial.

Dr. W. T. Tompkins of Lynn gave an informal talk on the Workmen's Compensation Act in which he explained wherein the present act is unfair both to the workman and to the physician. The amendment proposed by the Industrial Board (Senate Bill number 135) provides that the injured workman may exercise his choice in selecting a physician and shall not be required to receive the physician which the insurance company provides. Inasmuch as insurers have to provide *adequate* service this amendment also states that *adequate* service must also be provided by the physician called by the injured workman if the insurance company is to pay the bills.

Dr. N. M. Wood of Charlestown discussed the treatment of arthritis according to the method introduced by Dr. Clarence Bartlett of Philadelphia about two years ago. This method consists of using doses of 10 to 25 drops three times a day of a 25 per cent. solution of phenol in water and glycerin. Dr. Wood stated that the method was purely empirical and that no rationale for its use or relation to ætiology had been discovered. He had tried the method thoroughly on only two cases and these were briefly reported. Improvement in these cases of multiple arthritis was slow and only became noticeable after several weeks of practically continuous dosage. There gradually came to be less pain, and considerable improvement in joint motion. In one case, when administration of phenol was omitted, the general health became distinctly worse and this was noted upon the occasion of each omission. Neither case progressed to cure but after two or three months the condition became stationary. No bad effects have been noted.

Dr. Conrad Wesselhoeft of Boston talked informally of some of his experiences on the Mexican border.

Dr. J. P. Rand of Worcester presented a paper on present-day tendencies in medicine and in homœopathy. This paper appears in this number of the *Gazette*.

Dr. J. P. Sutherland discussed those parts of the paper that referred to medical education. He believed that there has come to be too great a demand on the time of the student and that this exercises a deterrent influence on prospective medical students. Those standards that relate to the number of years that must be devoted to the study of medicine and that relate to the "quantity" of preliminary education are excessively elevated. The earnestness and ability of the student,—his *competency*—are the most essential factors to be taken under consideration.

Dr. F. C. Richardson in the discussion of Dr. Rand's paper spoke on the allusions to the work that has been done at the Evans Memorial. He

said that no effort had been made scientifically to investigate the merits or mistakes of homœopathy until it was taken up at the Evans Memorial. In that institution efforts are being and have been made to determine the limits and efficacy of the therapeutic principle of homœopathy. It has been rather disheartening to find that the members of the homœopathic profession have displayed so little active interest in the very suggestive and constructive work which has already been done along these lines. He believed that the members of the staff of the Evans Memorial were just as loyal to homœopathy as any members of this society. They are trying to clear the atmosphere. It is essential that the fallacies shall be cleared out in order that we may rid ourselves of deadwood and delusions.

OBITUARY

Frank Ellsworth Allard, M.D.

Dr. Frank E. Allard, well known in Greater Boston, died on February 4th, in his fifty-sixth year, after an illness of several months.

Dr. Allard was born in Wheelock, Vermont, May 14, 1861, within a few weeks of the outbreak of the Civil War, the son of Horatio P. Allard, and remained on the home farm until he was eighteen years old. His ambition and natural ability enabled him to work his way through high school and Dartmouth College, and he was graduated from the latter in 1885.

The next four years were spent by him as principal of the Boston Farm School, Thompson's Island, Boston Harbor. From 1889 to 1897 he served as principal of the Malden, Massachusetts, evening schools, and in June 1892, after completing the medical course, he was graduated from Boston University School of Medicine.

From 1892 to 1896 he was superintendent of the old West End Homœopathic Medical Dispensary, located in the Charity Building, Chardon St., Boston, a branch of the Homœopathic Medical Dispensary which is now the Out Patient Department of the Massachusetts Homœopathic Hospital and of which Dr. J. Wilkinson Clapp was treasurer.

For many years Dr. Allard has been Medical Director of the Boston Mutual Life Insurance Company, as well as examining physician for several casualty companies. He was a member of the American Association of Medical Examiners and one time president, a member of the Boston Homœopathic Medical Society, the Massachusetts Homœopathic Medical Society, the American Institute of Homœopathy, the Boston City Club and the Boston Art Club; and since 1895 he has been on the teaching staff of Boston University School of Medicine, in recent years as lecturer on Physical Economics.

Dr. Allard gave the impetus for the organizing of the Boston Society of Examining Physicians and Surgeons; he was strongly opposed to vivisection and compulsory vaccination.

Until within the past year Dr. Allard has lived and practised in Boston, but since that time has lived in Wellesley. He leaves a wife and a daughter (A. B. Mount Holyoke College, now Fellow in Semitic Languages in Bryn Mawr College), two brothers and a sister.

The funeral services and cremation took place on February seventh at Mount Auburn Cemetery, Cambridge.

Franklin Weston Mann, M.D.

The *Gazette* records with regret the death on November 14, last, of Dr. Franklin Weston Mann, of Milford, Massachusetts, a graduate of Boston University School of Medicine, class of 1883. Dr. Mann was not in practice, but had for many years been a prosperous and successful business man. He was a generous giver to the Endowment Fund of the Medical School, his

latest gift to his alma mater amounting to one thousand dollars. He was quiet and unassuming, and the School has lost a loyal friend and supporter. He was born in Norfolk, Massachusetts, on July 24, 1856, and was a graduate of Cornell University, class of 1878.

Josiah H. Benton

Boston University has suffered the loss of an honored trustee, in the death of Colonel Josiah H. Benton, a distinguished citizen of Boston who died on February 6th, 1916, in his seventy-fourth year.

Colonel Benton was a Civil War veteran, lawyer and educator, a graduate of New London Literary and Scientific Institute and of Albany Law School, class of 1866.

In his later years he has done conspicuous service as a trustee of the Boston Public Library, of which he was a member for twenty-two years. Since 1908 he has been president of the board of trustees. During these last years of his life he made it a point to visit the library daily, when at home, and while on European trips he frequented book markets and saw to it that the Boston Public Library availed itself of every opportunity to bring its resources to the highest degree. He is said to have had one of the largest and most valuable private libraries in the country.

He was elected a trustee of Boston University in 1910, having from the early nineties to 1906 been a lecturer on corporations and railroads in Boston University Law School.

In recognition of the service of Colonel Benton to the city of Boston, flags were placed at half mast on the day of his funeral, February 9.

In its issue of February 8 the *Boston Post* says of him editorially, "The passing of any public-spirited official serving his city generously and well is a distinct loss to a community. Such an official was Colonel Benton."

Elizabeth J. Tisdale

A personality has just passed from our midst which will be missed particularly by physicians who depended upon her advice for supplying nurses; and by nurses themselves, for to the graduates of the Training School of the Massachusetts Homœopathic Hospital she was friend and sometimes almost mother.

Miss Tisdale was born in West Bridgewater, Massachusetts, October 2, 1858, and died February 8 of the present year. She was of sturdy New England stock and possessed all the sterling qualities characteristic of the type. The place of her birth and early life was the little village of Cochesett, about six miles southerly of Brockton in the valley of the Taunton River. Her father, Edward Tisdale, was a man of local fame of that day as a successful shoe manufacturer.

When thirty-three years of age she entered the Training School of the Massachusetts Homœopathic Hospital, class of 1891, and afterward for several years was one of the head nurses. She was an associate of those well-known pioneer nurses whom all of the older physicians remember,—Mrs. Wragg, Miss Marston, and Miss Edgerton.

It may be known to but few that the office of the Directory of the graduates of the Training School of the Homœopathic Hospital was originally for, and several years in, the Hospital building and was conducted by the Superintendent of the Training School. Circumstances arose which made it seem wise that it should be removed outside of the Hospital, and it was at this time that Miss Tisdale assumed charge of it and it has continued in her hands for sixteen years, until her death. All the nurses who registered with her were sure of justice in so far as she was able to dispense it. Friends she had in abundance, but favorites, none. The nurses who came to her for her sympathy always received it in the most whole-hearted and motherly way. More than once it has happened that a nurse without a home from which to fit herself out for marriage has received from Miss Tisdale in the most whole-hearted and friendly way those offices which only a mother could give.

Miss Tisdale was a charter member of the Massachusetts State Nurses' Association and for several years its treasurer. At the time of her death she was one of its Counselors. She was active in securing and establishing the State registration of nurses.

Her death has come as a shock to nearly all who knew her, for she steadfastly kept hidden within her own heart the knowledge that an insidious disease was undermining her vitality.

H. P.

Nathan A. Mossman, M.D.

Dr. Nathan A. Mossman, (retired), of Norwalk, Connecticut, died on January 15 of the present year, at the age of seventy-nine years. He was a graduate of New York Homœopathic Medical College, Class of 1861, and a member of the American Institute of Homœopathy since 1869.

Edwin Mayo Bangs, M.D.

Dr. Edwin Mayo Bangs, class of 1878 Boston University School of Medicine, died at home, Ithaca, New York, on December 24, 1916.

MEDICAL CARE UNDER HEALTH INSURANCE

Explained in New Pamphlet by New York Physician

How physicians, hospitals, and medical science will be brought more effectively to the service of the sick workers under universal health insurance is explained in a pamphlet just published on "Medical Organization Under Health Insurance" by Dr. Alexander Lambert, New York, Chairman of the Social Insurance Committee of the American Medical Association.

The full coöperation of physicians and public health officials all along the line, Dr. Lambert points out, is provided in the standard bill for health insurance prepared by the American Association for Labor Legislation and now before the legislatures of several states.

"In any large health insurance scheme," says Dr. Lambert, "a huge and intricate machinery is necessary, and physicians are an essential part of this machinery. The service rendered by the medical profession must be on a business and not a charity basis. Sickness is an economic calamity for which the members of the community are responsible in varying degrees, and for which the whole community pays. The greatest economic asset that a workman possesses, is the health that enables him to go to work each day. If he loses that, he loses his power of earning his living."

The pamphlet covers thoroughly every aspect of the proposed system involving the medical provisions, with charts to illustrate the organization of medical care. The writer invites comment and criticism that will be helpful in working out the plan in each state in justice to employers, employees, and physicians.

American Association for Labor Legislation,
131 East 23d Street, New York City.

JUDGE HARVEY H. BAKER FOUNDATION, BOSTON'S NEW PHILANTHROPY

It is not always true that "the good which men do dies with them," as shown by the establishment in Boston of the Judge Harvey H. Baker Foundation, organized to carry on the work of the late Judge Baker of the Boston Juvenile Court. The *Boston Medical and Surgical Journal* reports the announcement that Dr. William Healy of Chicago has been appointed director, to begin his duties on April first. Dr. Healy has been at the head of the Chicago Juvenile Psychopathic Institute since 1910. He is to

work in conjunction with Judge Frederick P. Cabot, now in charge of the Boston Juvenile Court, and to make psychologic examination of children referred to him by the court.

Attention is called to the following notice. It has been ascertained that there will be no discrimination against graduates from homœopathic schools and hospitals.

SURGEONS AND PHYSICIANS WANTED FOR BRITISH HOSPITALS

The strain of the Great War is making itself felt in a shortage of younger medical men for service in the civil and military hospitals in England. Younger men, free from ties, are most suitable, and it is clearly a great opportunity for them to see a large amount of war surgery, as well as of being of great assistance to the cause of humanity.

Transportation both ways (from and return to Boston or New York), equipment, subsistence, and pay while in hospital (according to age, experience and qualifications of the applicant) will be allowed. The service should be for not less than six months in the hospital. This service is likely to be used as a method of obtaining satisfactory men for service with the Harvard Surgical Unit at its hospital in France with the British Expeditionary Force.

Applications should be made in person, if possible, by appointment, or by mail at the office of the manager, Herbert H. White, the University Press (near Harvard Square), Cambridge, Mass., where application and registration cards may be had or further information obtained. The manager is usually available any day between 10 A.M. and 12 M., except Sundays and holidays.

Surgeons and physicians immediately available will sail at the earliest possible date.

HERBERT H. WHITE, *Manager.*

ABSTRACTS FROM "INTERNATIONAL CLINICS"

December, 1916

Chronic Duodenal Indigestion in Children

By JOHN FOOTE, M.D., Washington, D. C.

This condition is said to occur most frequently in children after the first year, and especially in those who have suffered from dietetic errors, usually with antecedent contagious diseases, or from prolonged intestinal infections. This form of indigestion seems to be accompanied by deficiency or pancreatic ferments, especially lipase. A mild duodenitis, which either passes up the pancreatic duct, or diminished hormone formation, seems responsible for the condition. Diminished bile production may also be a factor. Anæmia, loss of weight and mental underdevelopment occur. Large pendulous abdomens are common. Fever may be encountered, vomiting almost never. The number of daily stools varies from 3 to 12. They are thin, contain some mucus and flakes of whitish material and have a very foul odor. They give an acid reaction and microscopically contain not only large quantities of fat soaps, but also a considerable amount of neutral fat but rarely starch granules. It is to be differentiated from mesenteric tuberculosis and acute duodenal indigestion. The treatment consists in reducing the food elements which have proven indigestible, namely, the fat, and stimulating enzyme production by the administration of hydrochloric acid and pancreatic ferments.

A Clinical Consideration of Migrain

By JOHN A. LITCHY, M.Ph., M.D., Pittsburgh, Pa.

Migrain is considered by the author as the most frequent headache, occurring in 700 of his 15,000 patients sick from all causes. He believes that the so-called acidosis in children may often be a forerunner of a well established sick headache habit. The interesting relation between migrain and epilepsy deserves further study. Among the author's 15,000 patients epilepsy

occurred in 7, and both migrain and epilepsy in 70. Auerbach's theory which attributes migrain to an actual disproportion between skull-capacity and volume of brain, needs further proof. The diagnosis is easy when there are headaches which are unilateral, periodical and hereditary, but when only one or two of these symptoms are present, or when there is only a periodicity of some of the minor symptoms or possibly of the auræ, the diagnosis may be difficult. Migrain is frequently mistaken for pelvic disease, for acidosis or cyclical vomiting in children, and organic disease, when some of the auræ are present. The psychasthenic and the gastric symptoms frequently lead to confusion in diagnosis. While the underlying causes of migrain are vague and furnish little light as to treatment, much can be done to ameliorate the symptoms by proper handling of the exciting causes that aggravate the patient's general condition and precipitate the attacks. Most thorough investigation and careful individualization are indicated. Systematic administration of the bromid salts and avoidance of undue fatigue are especially recommended.

Acute Syphilitic Meningitis

By BORIS BRONSTEIN, M.D., Odessa, Russia.

Bronstein considers that the term acute syphilitic meningitis should be more particularly applied to acute meningeal phenomena of the secondary period, sometimes preceding, but more frequently accompanying the cutaneous manifestations of this period. The pathology is essentially a meningovascularitis with hypersecretion of the cerebrospinal fluid. Prodromal symptoms, such as headache and insomnia, may or may not occur. Acute syphilitic meningitis at its height, presents the clinical picture of the tuberculous form, differing from the latter by the indistinctness of the symptoms, such as contractures and stiffness of the neck, and by the absence of any marked disturbance of the pulse and respiration. In the luetic form fever is apt to be absent and there may be remissions and relapses. Lumbar puncture reveals a considerable hypertension of the cerebrospinal fluid, albumin in quantity, and a marked lymphocytosis with plasmazellen. The cerebrospinal fluid may yield a positive Wassermann even when the blood serum is negative. Other manifestations of syphilis are to be looked for. The immediate prognosis is rarely fatal but the ultimate prognosis should be reserved. Prophylactic treatment is recommended whenever the cerebrospinal fluid shows a lymphocytosis, even when all meningeal symptoms are wanting. The treatment consists in frequently repeated removal of the cerebrospinal fluid in considerable amount; combined with intravenous injection of cyanid of mercury and intraspinal injections of colloidal mercury. Neosalvarsan and salvarsan have a much more rapid action, but must be prudently handled in neurologic lesions of syphilis.

PERSONAL AND GENERAL ITEMS

Dr. Edward Kirkland of Bellows Falls has just been appointed by the Governor as member of the Vermont Board of Medical Registration, to take the place of Dr. Whitaker, deceased. Dr. A. E. Parlin of Island Pond has been appointed to succeed Dr. F. H. Godfrey of Chelsea as the eclectic member of the Board. The regular annual meeting of the Board for the examination of applicants for license will be held in Montpelier, February 13, 14 and 15.

TO RENT. Office hours in a physician's office. Inquire at Suite B., 483 Beacon St., Boston, 3 to 5 P.M. Telephone: Back Bay 8000.

Dr. William F. Wesselhoeft of Boston, Professor of Clinical Surgery in Boston University School of Medicine, is taking with Mrs. Wesselhoeft a winter vacation in a trip to Honolulu. He expects to return to his practice about April first.

Dr. Bessie B. Tharps (Class of 1916 B. U. School of Medicine) has opened an office at 623 North Third St., Richmond, Virginia.

Dr. Clayton E. Hoover, class of 1916 B. U. School of Medicine, is serving an internship in the Hospital of the Women's Homœopathic Association, Philadelphia.

Dr. Henry L. Mann, B. U. School of Medicine 1903, (not in the practice) is living at 104 Chestnut St., Boston.

Dr. S. Perry Wilde of Hingham, Massachusetts, (class of 1910 B.U. School of Medicine) is spending the winter in Montreal, taking a hospital course in McGill University.

Dr. Harriet H. Cobb, a graduate of the Medical School, Boston University, is living in Medway, Massachusetts.

Dr. Herbert F. Gammons (B.U. S.M. 1909) who for a time after his graduation was assistant physician at Massachusetts State Sanatorium, Rutland, later in private practice in Neponset, succeeding the late Dr. Carlton R. Thomas, and in recent months at Connecticut State Sanatorium, Meriden, is Assistant Superintendent at Texas State Tuberculosis Sanatorium, Carlsbad.

Dr. Robert H. Burke has removed from West Burke, Vermont, to 10 Cross St., St. Johnsbury, Vermont.

Dr. Harold L. Burr has removed from Westbrook, Connecticut, to 64 Main St., Middletown, Connecticut.

Dr. Edward S. Smith has removed from 951 Park Avenue to 784 Fairfield Avenue, Bridgeport, Connecticut.

Dr. Harry W. McElman (B.U.S.M. 1910) who for a time after his graduation was in practice in Waltham, Massachusetts, and later house physician in Styles' Sanitarium, New Britain, Connecticut, is now in private practice in Meriden, Connecticut.

Dr. M. A. Wilson of Westfield, New York, is spending the months of February, March and April in Southern Pines, North Carolina.

Dr. David W. Wells, Professor of Ophthalmology in Boston University School of Medicine, gave a stereopticon lecture at the Bridgewater (Massachusetts) Normal School on February 8th before the Parents-Teachers Association on "The Care of Children's Eyes."

FOR SALE: A long established homœopathic doctor's office, centrally located in a rapidly growing New England city. Address "Retiring," Care *New England Medical Gazette*, 80 East Concord St., Boston.

The fourth annual meeting of the Alethean Club was held on the evening of February ninth at Hotel Victoria, Boston.

HOSPITAL NOTES

Boston has another hospital. This newest one, Beth Israel, is an addition to the Jewish institutions of the city and is located on Townsend Street, Roxbury, formerly one of the most beautiful and aristocratic sections of "Boston Highlands," (a name now obsolete).

Beth Israel was opened for the reception of patients on February 4th, and is said to be the first institution of its kind in New England where food will be prepared in accordance with kosher rules, as required by Hebrew dietary laws, but although provision is made in the by-laws for the obser-

vance of these laws and of religious services in conformity with Jewish doctrines and religious forms, the hospital is to be non-sectarian in character. The region in which it is located has a very large Jewish population.

The first unit of the University Hospital, Columbus, Ohio, has been completed. This is to be a part of the equipment of the College of Homœopathic Medicine, Ohio State University.

The New York Hospital and College for Women has a new building nearly ready for occupancy, shortly to be opened for use.

A movement is on foot and well under way to raise one million dollars for Hahnemann Hospital of Chicago, and the fund already collected amounts to \$380,000, besides land valued at \$100,000.

The Massachusetts Homœopathic Hospital has adopted an increase in the number of hours allowed visitors to ward patients. Up to the present year visiting hours have been limited to every other day and Sundays, but are now allowed daily from 2 to 3 and 6 to 6.30 o'clock.

By the will of the late David G. Pratt of Plymouth, Massachusetts, admitted to probate in January, the Hospital is to receive a bequest of \$15,000, the income of which is to be used for the maintenance of free beds. The Massachusetts General Hospital and the Massachusetts Tuberculosis Sanatorium at Lakeville were similarly remembered.

Dr. Henry L. Houghton, 176 Commonwealth Avenue, Boston, has been appointed by Governor McCall Trustee for the Massachusetts Homœopathic Hospital.

NEWS FROM AUSTRALIA

Dr. Laurence R. Clapp (B.U.S.M. 1908), writes under date of January 15th, that he and Dr. Ray C. Hart (B.U.S.M. 1907) are about to start in private practice in the suburbs of Melbourne. During the former's convalescence from appendicectomy, Dr. Hart,—who had been away from Australia on a five-months trip to the United States,—was acting Resident in Melbourne Homœopathic Hospital.

Dr. Clapp's letter states that Dr. Arthur A. Struthers (B.U.S.M. 1915) had just arrived to take the position of Resident Medical Officer in the Hospital,—“a very welcome addition” to the staff. On the voyage to Australia, Dr. Struthers visited Dr. Benjamin C. Woodbury (familiarily and affectionately known in his medical school days,—B.U.S.M. 1906,—as “Bennie”) at Honolulu. Dr. Woodbury went out to Hawaii in the summer of 1916, and Dr. Martha I. Boger (B.U.S.M. 1915) succeeded him in Portsmouth, New Hampshire.

WOMAN RESIDENT PHYSICIAN WANTED. Salary \$900 and delightful suburban home to the right woman. A mature homœopathic physician wanted as resident physician in a small maternity hospital, which is department of social service institution in the neighborhood of Boston. Address General Secretary, P. O. Box 2, Jamaica Plain, Mass.

WANTED. A doctor immediately for Pilley's Island Hospital, Labrador. There are three thousand people in the district without a physician. All supplies and everything ready. Salary of at least \$1500 a year will be paid. Write or apply to Dr. W. Russell MacAusland, 240 Newbury Street, Boston, Mass.

THE NEW ENGLAND MEDICAL GAZETTE

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APRIL, 1917

No. 4

ORIGINAL COMMUNICATIONS

THE VACCIN TREATMENT OF PNEUMONIA NOT SUCCESSFUL*

BY HERBERT C. CLAPP, M.D., BOSTON.

Formerly Visiting Physician to the Massachusetts State Sanatorium for Incipient Consumptives at Rutland and Professor of Diseases of the Chest in the Boston University School of Medicine.

Nothing whatever in this paper must be construed as an argument either for or against vaccin treatment in general. Consideration is here given only to its results in acute pneumonia. This disease has now been treated either by serum or by vaccins, by some who have been more or less enthusiastic in their use, for quite a number of years. Up to this time I have refrained from expressing an opinion on the subject in public for several reasons. One of these reasons for not being too hasty is the desire to be perfectly fair by not combatting prematurely the claims of a new and honest aspirant for the favor of the medical profession, an aspirant whose claims on the surface seem rather plausible. Too much and too early opposition to a new method or system is often unwise, reminding us of Gamaliel's advice to let the apostles alone. "For if this counsel or this work be of men, it will come to naught, but if it be of God, ye cannot overthrow it."

Another reason is that it is not easy, as will soon appear, to form a satisfactory judgment as to the efficacy of any new treatment in pneumonia; and still another is the acknowledged difficulty of proving that any given new treatment is *not* efficacious, even if the writer so believes. Positive evidence, even in a few cases, seems to appeal to some people far more than negative. Of course, if enough of such positive evidence is obtained, the question is affirmatively settled. But the more one studies into this matter, the more he is impressed and

* Read before the Hughes Medical Club.

amazed, owing to the great intricacy of the subject, at the really very large number of positive results he finds necessary to establish a verdict. How perfectly ridiculous then it is for one to announce his decision after the observation of a few cases only! Indeed, to my knowledge, in one instance a physician was thoroughly and enthusiastically converted to the vaccin treatment of pneumonia by the recovery after it of one single patient, who had been very sick. The prescriber was a man of large experience too; and it seems strange that he should have forgotten what is so well established, that there is perhaps no other disease where it is possible for a patient to be so desperately sick and yet recover. And this holds not only under what many of us would call good treatment, but also under indifferent or bad or even villainous treatment, or under absolute neglect.

All physicians of extensive practice must have had more or less of such experience. Many years ago I learned the folly of giving up a desperate case of pneumonia too easily, after seeing such a one recover now and then, either in my own hands or, after my unfavorable prognosis, under the care of another physician. I have often thought of the remarkable recovery of a pneumonia case reported by the elder Dr. Austin Flint in his fascinating way a long time ago, where an entire lung was involved and the patient situated under as unfavorable hygienic conditions as could well be imagined.

“The patient was attacked when working alone in a shanty, there being at the time two inches of water on the ground. The case occurred during the winter season in the swamp near New Orleans. After the attack he was unable to leave the bed for any purpose for a week, and during this time he was entirely alone. He had a quart of brandy which he drank during the week. His habits, as he stated, were temperate. At the end of a week he was visited by some one, (not a physician), who gave him thirty grains of calomel. After this he remained alone for ten days. A friend at length came to him, gave him some doses of quinia, and removed him first to his own house, and afterward to the Charity Hospital of New Orleans. The physical signs, on his admission into the hospital, showed pneumonia affecting the whole of the right lung, and resolution progressing. He remained in the hospital six days, convalescence going on rapidly, and at the end of that time he was well enough to be discharged.”

Of course, this was a very exceptional case. However, if, instead of calomel and quinia, his good Samaritan had given (pardon the anachronism) a hypodermic of fifty millions of plain stock pneumococcus vaccin, not to mention the poly-

valent or autogenous kinds, or had administered any other remedy, how much proof in such an isolated case would this have been of cause and effect?

I believe that the vaccin treatment of pneumonia after the fair trial that it has now had, cannot be called successful; and that it had therefore better be abandoned by the great majority of us, as it has been already by many, as sometimes dangerous, and generally as worse than useless, worse because encouraging a false dependence on it, and thus tending to paralyze our further efforts.

Those who favor this treatment have not sufficient statistical evidence to prove their point. The burden of proof always rests on the advocates of a new method. Although I have diligently searched in a good medical library the literature on the subject which has been accumulating for several years past in books and medical journals, yet I have failed to find any adequate statistical evidence at all worthy of the name, which has been brought forward by those who believe in vaccin, mostly because such small numbers are dealt with.

By all odds the most powerful argument, in my opinion, in favor of this treatment, which has appeared in the medical press (*Boston Med. & Surg. Journal*, Nov. 11, 1909) is in the paper of our able fellow-citizen, Dr. Timothy Leary, who reports eighty-three cases with a mortality of 9.7 per cent. (thirty-four of these patients being alcoholics with a mortality of 17.7 per cent.), and yet Dr. Leary himself modestly and honestly adds:

“We are not attempting to draw definite conclusions from this series, because we recognize the futility of deductions from so small a number of cases of a self-limited disease, in which sudden critical changes in the clinical picture are frequent.” To increase his statistical evidence, therefore, and to place it on a firmer basis, Dr. Leary devised a very ingenious scheme which he described at the end of the paper referred to, in which he offered to furnish on application, entirely free of cost, to every registered physician in Massachusetts, (of whom there are about 6,000), subject only to the reasonable condition of answering a few questions on blanks furnished, sufficient vaccin, both stock and autogenous, with full instructions for their use, for the treatment of as many patients as each physician wished. He also proposed to submit the statistics thus gathered to a committee of the Massachusetts Medical Society for consideration and report. Just how much vaccin was thus furnished or to how many physicians, I know not, but from what I have heard I have no doubt the numbers were large. Although some of us have been waiting patiently for it for seven years, yet no

report, so far as I can learn, has ever been made. Is it unreasonable to suppose that no report was made because the results were not favorable to Dr. Leary's contention? If they had been as good as the eighty-three cases reported in the original paper, would they not also naturally be reported?

I have also found scattered through the literature of this country and of Europe other articles espousing this cause with more or less enthusiasm according to the temperament of the writer, but dealing with numbers of cases so small, even if those of different writers should be added together, as to be entirely inconclusive. Some of these articles bear internal evidence possibly of a desire to make a favorable showing at any rate; and some, like those of Dr. Nathan Raw of Liverpool, who is a believer in the treatment, show a very fair spirit. In the London Lancet of March 23, 1912, we find that Dr. Raw, in reply to a criticism of his arguments by Sir Douglass Powell, rejoins:— "The criticism of my mortality table is quite warranted and I quite admit that a death rate of 16 per cent. based on 207 cases of pneumonia treated with vaccin is not any great advance on the results obtained by other methods of treatment. I would, however, like to express my belief that in the future with further experiments and knowledge of vaccin this death rate will be still further reduced."— We need not add that a hope or wish or even a belief falls somewhat short of a demonstration.

In a previous article in the Lancet of March 9, 1912, Dr. Raw saw no effect in hastening the appearance of the crisis or in shortening the duration of the disease, although there was frequently a temporary sudden drop of about two degrees after an injection. He acknowledged that a vaccin to be potent ought on strictly scientific grounds to be *autogenous*, that is, to be prepared from the sputum or blood of the patient himself; but claimed that this is a matter of great difficulty, as the disease, being of such an acute and short duration, has either subsided or terminated fatally before the vaccin can be got ready. Another difficulty (March 23) lies in the fact that, as there is often no sputum during the first two or three days, the material for the culture could only be obtained at an early date by puncturing the lung, which in the opinion of Sir Douglass Powell, would be done only at some hazard. Later (London Lancet April 3, 1915), Dr. Raw reported a mortality of 13 per cent.

Nor are all of the published reports of experimentation favorable. The New York Medical Journal of February 10, 1912, p. 301, abstracts from an article in the Glasgow Medical Journal of Jan. 1912 as follows:— "Charteris reports nineteen

cases from which he draws the following conclusions: 1st, The administration of a multivalent stock pneumococcus vaccin had no marked effect upon the subsequent course of the disease. 2d, The mortality in the vaccin series (21 per cent.) was slightly higher than in the control series (20 per cent.). 3d, The early administration of vaccin did not abort the disease nor prevent complications. 4th, Complications were relatively frequent in the vaccin series; one case of meningitis, two of empyema and one of hyperpyrexia."

Human nature is such that we are far more likely for several reasons to report our successes or our curiosities than our failures. No one will contradict this statement, and it is therefore unnecessary to dwell upon it. Even if we disregard the idea that a failure is not flattering to our ability or intelligence and that, therefore, we shrink from publishing it; if we are meeting with success, or think we are, we are encouraged and impelled to go forward and pile up the proof; whereas if failures confront us, our courage wanes and we give up the task.

I know of a number of cases where physicians have tried the vaccin treatment in pneumonia and have given it up without making a report, because their results were not favorable. I am in this category myself. I have also talked with physicians connected with many of our large hospitals, and only very rarely find one who has now any faith in this treatment. I cannot learn that it is now used at all in our Massachusetts General, Boston City, Peter Bent Brigham and many other hospitals.

I have myself seen many cases of pneumonia in private practice in consultation with physicians where the vaccin had already been tried, early or late, in small or in large doses, either as the result of Dr. Leary's offer or otherwise, and it does really seem to me as if in such cases there had been an extra large mortality; surely no diminution. Objection might be made that cases in which consultation was held would naturally be of a more severe type. There is undoubtedly something in this idea, but not to the extent imagined; because as most consultants are aware, some physicians, conscious of their own resources, never have a consultation if they can possibly avoid it, no matter how dangerous the case. When one is held, they are forced to it by the family or its friends. With all grades between, some physicians go to the other extreme, and, recognizing that even the mildest case of pneumonia may sooner or later assume threatening proportions, they are only too anxious, soon after the diagnosis is made, to call some one with whom they may divide the responsibility, if things go wrong. Many of these cases might do well anyway; but the consci-

entious attendant feels relieved, and the family is often better satisfied, even if implicit confidence is felt in their regular physician. So that after all it does not necessarily follow that consultation cases must be more serious than others.

If the results of vaccin or serum in pneumonia could have come anywhere near the really marvellous effects of the anti-toxin treatment in diphtheria, the whole world would have been persuaded long ago; but the serum has been tried and found wanting, in spite of seeming encouragement at first, and the vaccin acts on an entirely different principle, as Leary happily and concisely puts it.

“Diphtheria antitoxin (serum from immunized horses) acts immediately to neutralize toxins with which it comes in contact in the bodies of patients into whom it is injected. It calls upon the patient for no assistance in overcoming the poisons of the bacteria. He is a *passive* agent. Vaccins, on the other hand are in themselves incapable of directly influencing the bacteria or their poisons. Their function is to stimulate the immunizing machinery of the individual to react and to produce substances (opsonins) which will influence the bacteria. The patient then plays an *active* part in the process, and if a success is to be obtained, he must have sufficient resisting ability to react; and therefore vaccin is useless in moribund patients, or in those too sick to react.”

He might have added that in a bad case, where this reactive ability is very slight, an attempt to stimulate it to react against its enemy by the nagging opposition of a vaccin, might utterly exhaust and overwhelm the organism and so aid in accomplishing defeat instead of the intended victory; whereas possibly the slight reactive ability unopposed might have conquered. The pneumococcic vaccin would thus join the forces of the pneumococcic infection against the welfare of the patient, and become really a dangerous agent. See Dr. Parks' opinion later and also Dr. Yeo's.

Although this is a paper on vaccins, yet occasional reference will be made to the results of serum treatment, as the subjects are so closely related.

Probably one reason for the failure of the serum treatment in pneumonia is, as stated in the Lancet for March 9, 1912, that it has been found extremely difficult to prepare a good serum from the pneumococcus on account of the insusceptibility of animals to true pneumonia.

I have said that the number of cases so far brought forward to prove the efficacy of vaccin treatment in pneumonia is too small, (even if we add the groups all together), to have much weight. It reminds one of the statistical tables sometimes com-

piled by boards of State medical examiners, or other medical bodies in announcing the results of examinations for registration as physicians. In stating the numbers of applicants who passed, under the headings of the medical schools from which they graduated, if fairly large numbers are dealt with, the results are comprehensible; *viz.*, forty passed out of fifty, or 80 per cent. But if only one graduate of a school is examined, and he passes, then 100 per cent. of all applicants from that school pass, and the inference is that that school is perfect. But if the applicant from the same school is rejected, either from poor scholarship, or from length of time since he graduated, or from sickness or from stage-fright, or other cause, then 100 per cent. of all applicants from that school fail, and the inference is that that school is "no good," and should be at once closed up. How grotesquely absurd is such statistical evidence!

This statement as to small numbers might apply to any disease; but when we come to *pneumonia*, of all diseases, we have some especially good reasons for demanding large numbers, if we are to place any dependence whatever on statistics. Why? Because pneumonia, perhaps more than any other disease varies so much in its severity and mortality according to different circumstances, the influence of which is apparent when we make a careful study of the natural history of the disease, irrespective of treatment.

If our figures were gathered in some years or in some seasons or in some epidemics, under any treatment or under no treatment, they would be better than in other years, in other seasons or other epidemics. Likewise, if they were made up in a Home for Aged Couples, they would be very different from those in a Children's Hospital. In fact, pneumonia in the very old or in the very young differs so much from pneumonia in common adults as to be almost a different disease. The results in a Charity Hospital or in one for paupers would be far different, even under the same treatment, from those in private practice among the well-to-do, and so on. Among alcoholics the death rate is always very much higher, and among regular army soldiers it is always very much lower than the general average. It is higher for women than for men and for negroes than for white people. Complications also influence the death rate. Perhaps 10 per cent. of the cases of pneumonia by common consent are caused by other organisms than the typical pneumococcus and with a differing mortality. Among these organisms are the streptococcus pyogenes, staphylococcus pyogenes, and the following bacilli: influenza, Friedlander's, pestis, diphtheria, typhosus, coli communis, tuberculosis, and the micrococcus catarrhalis. Even when the pneumococcus is the

sole cause of pneumonia, there is acknowledged to be a difference in mortality according to the particular strain or degree of virulence of the microorganism.

All these and many other influences so affect the death rate, that in order to determine the agency of any *therapeutic* means, these influences must be blended and neutralized and averaged by incorporating very large numbers.

Now for a few figures to substantiate what has just been said. First, as to age. According to the U. S. Census Report for 1900, (quoted by Lord), the death rate of patients between 15 and 45 years of age is 100 in 100,000 of the population. Between 45 and 65 years it is 263 in 100,000, and over 65 years it is 733; showing a perfectly tremendous increase as age advances. According to Frankel, from the 6th to the 20th year the mortality was (omitting fractions) 6 per cent., in the twenties it was 14 per cent., thirties 26 per cent., forties 39 per cent., fifties 43 per cent., and over 60 years it was possibly 65 per cent.

Then as to variation in years or seasons. Of 2025 cases at the Massachusetts General Hospital from 1897 to 1913, of which 25 per cent. died, the lowest mortality in any one year was 15.3 per cent. in 1906, and the highest was 31.6 in 1899, there being no important change in treatment. Many other figures can be obtained with a similar bearing.

In a paper by Townsend and Coolidge read before the Climatological Association in June, 1889, in which 1,000 cases at the Massachusetts General Hospital between 1822 and 1889 were studied, there was a mortality of 25 per cent.

Sears and Larrabee, among 949 cases (St. Paul Med. Jour. 1902) at the Boston City Hospital, from 1895 to 1900 inclusive, found a mortality of 35.9 per cent. Ashton & Landis (Amer. Jour. Med. Sci. 1905) among 991 cases in the Philadelphia General Hospital from 1897 to 1904 found a mortality of 53 per cent., but they claim that there were many aged paupers treated there.

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Wells (Jour. A. M. A. 1904) has collected from the literature the enormous number of 465,400 cases of pneumonia, with a mortality of 20.4 per cent.

Lord shows the influence of complications as follows:— Of 500 cases at the Massachusetts General Hospital the mortality was 24.4 per cent., but some of these were alcoholics, some had disease of the kidneys, heart or arteries, *etc.* If we leave these out, and also persons over fifty years of age, the mortality drops to 9.2 per cent. This might be called doctoring statistics, if done on purpose. And as to soldiers, Lord says,

“The statistics given by Frankel for the Imperial Prussian Army indicate how low the mortality may be in healthy picked men. Among 85,000 cases occurring from 1878 to 1898 the mortality was only between 3.1 and 4.3 per cent. In the Austrian army from 1891 to 1896, 5.8 per cent., and in the French army 8 per cent.”

Of course, this extra low mortality was due partly to the youth of the soldiers, and partly to the careful examinations which had previously sifted out, as far as possible, all organic diseases.

When we are dealing with such enormous numbers as those gathered by Wells, almost half a million patients, who were treated in all sorts of ways, naturally the resulting 20 per cent. of deaths is only the broadest generalization expressive of the average death rate under all conditions. To make up this average there must have been many cases, the great majority of which died, as well as many other cases the great majority of which recovered, in addition to all grades between. It cannot mean that all the varieties and conglomerations of treatment were equally efficacious or non-efficacious, or that some methods were not very much superior to others. It would be an insult to human intelligence to suppose such a thing. It rather indicates that, as there was no Noble Grand Physician in Chief with his staff to compel all practitioners to adopt the same method of treatment, each acted for himself and the result was Babel which averaged up to 20 per cent. Even had there been this noble chief, all clothed with due powers to enforce his commands, who could say that the measures he ordered were really the most efficacious, unless he got his inspiration from on high.

In this twentieth century it would of course be impossible to make such an analysis of this half million of cases, as to determine the relative efficacy of the different methods of treatment employed. But it is easy to see that, if it were possible, the proper way to go to work would be first to classify the cases into groups according to the influences already referred to in this paper and other influences, and then to apply our therapeutic yardstick to these different groups in succession. This would be the only fair way. In endeavoring to ascertain the value of any *new* treatment in pneumonia, a similar method of procedure should be followed; at first classifying into groups in a small way, and then enlarging the numbers, if the experiment offered sufficient encouragement.

This might be equivalent to dividing up the disease, acute pneumonia, for statistical purposes into quite a number of subdivisions, each of which for our purpose would constitute a different disease. One might be pneumonia in very young

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children, one in older children, one in adults in the prime of life, one in middle age and one in old age. One might be in the epidemic of five years ago, one of 10 years ago. One might be in soldiers, one in alcoholics, *etc.*, *etc.* Large enough numbers in each of these groups ought to be obtained to make the statistics worth while for comparison.

Naturally, it is absolutely impossible for us all to try every method or every remedy that is suggested, for their name is legion. The only way is for the preliminary testing to be done by committees, either voluntary or appointed. We are now hearing the preliminary report of the committee on vaccin in pneumonia. There has apparently as yet been no effort to classify into groups, and even the total number of cases unclassified is confessedly small, and the majority of us are as yet unconvinced.

Until we can have further and more satisfactory statistical evidence, there is only one other court in which we can try the case, and in that court the verdict is often far from satisfactory. That is the court of experience and common sense, or whatever else you may call it. The term *tactus eruditus* illustrates the idea. In these days of laboratories and diagnostic instruments of precision many claim that the tendency is for the physician to become too much like a machine or the tender of a machine in a factory, and to lose some of his thinking powers, and his powers of critical analysis, for which the physicians of a former generation were famous. Not to go into this matter, it is undoubtedly true that some physicians more than others can in a sense apply the statistical method without having actual statistics at hand, when by the exercise of a cultivated judgment mixed with a little common sense they can resurrect from their cells of memory symptoms and conditions and results of treatment, (making allowance for the influences surrounding numbers of cases in their past experiences), to apply shrewdly to the present case, in an almost automatic fashion and one which they may be unable to explain in words. This much at least we ought to be willing to allow to the credit of the old medical worthies, and not merely picture them as arrogantly strutting about with wigs and wise looks, and sucking gold-headed canes. Even if we of the present day can read the figures on a sphygmomanometer and take the opsonic index, we may not always be able to size up a case of pneumonia much better than they, and sometimes possibly not as well.

So then by the gift and exercise of a shrewd judgment of this kind, some of us may possibly be able to collaborate in our minds, almost unconsciously, enough facts from our past experience in many cases to enable us to form an opinion, more

or less satisfactory to ourselves at any rate, without written records, as to the relative value of different methods of treatment. Some have a great deal of this power and some very little, and those who have the little may think they have the much, and vice versa, and we cannot always agree, and there must always be differences of opinion.

In the present absence therefore of sufficient statistical proof on a large scale of the efficacy of vaccin in pneumonia, I am inclined to trust to the mature judgment of a number of such able physicians of large experience, who have come to the same conclusions as myself; reserving the right to shift, if the future should offer as much proof as in the case of diphtheria antitoxin, which now seems very unlikely.

If the vaccin method had been the only aspirant for recognition, we might have afforded to devote more time to its investigation; but until one spends hours and hours industriously delving into the secrets of this department of the history of medicine and going way back for years and years, not including the vagaries of prehistoric times, it is impossible to realize how many remedies have been lauded to the skies as wonderfully efficacious in pneumonia, and yet where are they now? Their advocates were often far more enthusiastic and certain of success than the modern pushers of vaccin; and yet one after another they have dropped out of sight. In most cases the modern medical student does not even know their names. A new aspirant should present better evidence of worth than they.

Now, going back to statistics, we ask: *How low should the mortality percentage be* in any new method, to persuade us that it is better than any method we already have?

That is a very hard question to answer. It should certainly be very far below 20 per cent. of a large total figure, because, as we have seen, in about half a million cases 20 per cent. is the average of good, bad and indifferent treatment, and the percentage of good must be considerably below this to balance some of the treatment which has been terrible. More than that at the present time nobody can exactly say. Often at discussions at medical meetings much wild talk has been allowed, there being no set standard. After a mortality at one hospital of 65 per cent. has been admitted, another in great triumph claims superiority on account of a record of 35 per cent. At a medical meeting in Liverpool on Dec. 7, 1911, (*Lancet* Dec. 23) Dr. N. Raw in a paper advocating the vaccin treatment in pneumonia reported a mortality of 16 per cent. Afterwards, the President, Dr. T. R. Bradshaw, quietly snubbed him by stating that he did not consider that the use of vaccin was attended by

better results, because in 131 cases treated by himself by the ordinary methods there was a mortality of only 6.87 per cent.

Up to 1891, Petrescu of Bucharest, often quoted, had treated 825 cases by enormous doses of crude digitalis, with a mortality of only 2.06 per cent.

In the N. Y. Medical Record of Oct. 26, 1912, p. 767, Dr. Thomas J. Mays of Philadelphia says that ice reduced the mortality to 2 to 4 per cent.

In various other places I have found a startlingly low recorded mortality for many other methods, the total number of patients not always being given. And yet neither ice nor these other methods have produced a corresponding reduction of mortality in other hands, nor has their superiority been generally acknowledged in consequence. Some even go so far as to report 100 per cent. cured in spite of age, complications and other handicaps. For instance, among many other wonderful remedies which for a time seemed to promise remarkable results in pneumonia, Babcock (*Diseases of the Lungs*, p. 284) tells us of Liegel's report of 72 cases, from 16 to 74 years of age, treated by salicylate of sodium, and *all cured*, although eight had a complication of emphysema, six of heart disease, and a large number were chronic alcoholics.

Indeed, I myself well remember a physician, a nice old gentleman, who had had an enormous practice for many years, who died at a ripe old age, who was regarded in the community in which he lived as well as by his brother physicians as the soul of honor and integrity, and yet who solemnly assured me that he had never lost a case of pneumonia in his life. That statement has always been to me incomprehensible. With a practice as small as some have, it might have been said that he never had a case, or only a few. Even if his diagnosis had often been faulty, it must have been also often correct, for pneumonia in its typical form is an exceedingly easy disease to diagnosticate; and although he was educated at a time when physical diagnosis was not very thoroughly taught, yet in this disease the symptomatology alone is generally sufficient for an accurate diagnosis. By what name could he have called the disease from which most of us lose our pneumonia patients? Of what acute diseases did many of his elderly patients die?

A devoted disciple of Isaak Walton, who loved dearly to fish and even more dearly to narrate with embellishments to gaping audiences his piscatorial exploits, meaning no evil, however, after hearing some famous predecessor of Billy Sunday, was converted and decided to turn over a new leaf. Henceforth he would not trust to his memory for the size and weight of the fish he caught, but would safeguard his statements with

a brand-new and accurate pair of scales. But before he had a chance to use his purchase, the stork visited his next-door neighbor and the family, wishing to learn the weight of the new arrival, borrowed the scales, and to their surprise found that the baby weighed 49 pounds.

I have taken some pains to look through the literature on the subject of vaccins in pneumonia in recent books and medical journals, to ascertain the opinions of prominent physicians. Some writers make no mention whatsoever of vaccin treatment. A few references as samples, of those who do mention it, follow.

The latest book on Diseases of the Bronchi, Lungs and Pleura, written by Dr. F. T. Lord, 1915, on page 224 says: "There is thus far no specific treatment for pneumonia. Drugs, immune sera, vaccins and leukocytic extracts have not yet been shown to be of definite value. . . . The *prevention* of infection by the use of dead or living organisms, as vaccins, is already established for certain diseases; but vaccins have never been shown to be definitely effective against an existing infection."

In Osler & McCrae's System of Medicine, 2d edition, 1913, in eleven large pages devoted to the treatment of pneumonia there is only one single line about its vaccin treatment, as follows on page 276: "Vaccins and leukocytic extracts have not proved definitely beneficial." On page 214 we find: "The attempts to establish an efficient serum therapy for lobar pneumonia have so far failed of satisfactory results." But when this volume was published, Osler was over sixty years of age.

In their smaller book, Osler & McCrae's Practice of Medicine, 8th ed., 1912, p. 79 is found:

"Many trials have been made of the curative value of anti-pneumococcic serum in the treatment of pneumonia, but thus far it has not been shown to influence in any marked degree the course of the disease in man. . . . Vaccin therapy is on its trial in this disease, and the results so far have not been very satisfactory."

Also in Osler, on page 100; "Anders' analysis of the reported cases do not give a very favorable impression of the value of the serums at present in use. None of these has proved its value. Nor has the vaccin treatment been shown to be of positive worth."

In a large book, the fifth edition of which was published in 1914 by Lea & Febiger, *Pathogenic Microorganisms*, by Dr. W. H. Park, Prof. of Bacteriology and Hygiene in the New York University and Bellevue Hospital Medical School, and his assistant Dr. A. W. Williams, on page 219 we find:

"The giving of bacterial vaccins during infection is adding more or less poisonous proteins, and unless the body tissues

respond to produce antibodies, *harm rather than good is obtained*. Experience has taught us that those who become infected are less able to produce antibodies. In such diseases as pneumonia . . . and other general infections due to different microorganisms, the treatment by bacterial vaccins has not met with sufficient success to be recognized by most careful observers. *Here, an overdose of the foreign more or less toxic protein should be carefully avoided. . . .* The exaggerated claims of certain manufacturers (of vaccins) must be considered as wholly unwarranted."

"Although, during the past few years many thousands of cases of infection have been treated by vaccins, there is at present considerable difference of opinion as to their value. The majority of observers agree that it is in subacute and chronic infections that vaccins give the best results."

On page 272: "The use of injections of dead pneumococci in pneumonia and other acute pneumococcic inflammations has not been followed by appreciably beneficial results in those cases which have come under our observation."

There has recently appeared (1915) an exceedingly interesting new book edited by Dr. A. R. Short, assisted by various English collaborators, entitled *An Index of Prognosis*, being a companion to the valuable *Index of Treatment and Index of Differential Diagnosis* already published in this country by Wm. Wood & Co. In this book the article on pneumonia was written by Dr. Arthur Latham of London, an able and voluminous writer, who has for a number of years been a great enthusiast and believer in the vaccin treatment of a number of diseases; and yet after studying the end-results of treatment in pneumonia, on page 406 he says: "Different forms of treatment, such as the use of vaccins, the systematic employment of digitalis, or the use of various other methods, have *not* been shown to have any markedly different results in a sufficiently large number of cases."

In the companion volume, *Index of Treatment*, by various writers (English), 1908, p. 657, in the article on pneumonia by Dr. W. J. Hadley, Pathologist to London Hospital, it says:

"Its use (serum) in patients suffering from the disease is rendered difficult by the fact that each individual breeds his own particular strain of pneumococcus. Bearing in mind this fact, *viz.*, that A's pneumococcus does not protect B. and that it therefore becomes necessary to cultivate an individual's own organism for his own cure (a process which takes about 14 days), it is obvious that this form of treatment will become more useful in lingering cases, or for some of the more chronic complications . . . and that there would be no time to call on its aid

in the ordinary case, swiftly culminating in death or in resolution."

In a book of 900 pages by Prof. John A. Kolmer, M.D., on Infection, Immunity and Specific Therapy, Philadelphia, Saunders, 1915, all that can be found on our subject is in one sentence on page 661: "Autogenous vaccins may be of value in the treatment of *delayed resolution* in lobar pneumonia, cultures being secured by puncturing the lungs; usually several organisms are found and a mixed vaccin may be given." On page 754 he says "Acute lobar pneumonia, with its clear cut clinical course, unsatisfactory and difficult treatment, uncertain prognosis and high mortality, was one of the diseases in which the earliest efforts were directed towards discovering a specific serum therapy. Since the pioneer work of the Klemperers, in 1891, numerous investigators have prepared serums, that have yielded either indifferent results or proved beneficial in but a limited number of cases, so that there has been no well established form of serum therapy."

In Applied Immunology, by B. A. Thomas and R. H. Ivy of Philadelphia, published by J. B. Lippincott Co., Philadelphia and London, 1915, on page 254, we find:—

"By virtue of the theory of biological therapeusis, little should be expected from bacterial inoculation in the acute stages of infectious disease. Indeed, they may exert an evil influence." (They also denounce "phylacogens" as unscientific and dangerous.)

Floyd and Lucas of the Dept. of Bacteriology in the Harvard Medical School, in the Journal of Medical Research, Sept. 1909, said: "In spite of the great amount of work done in the study of the processes involved in meeting infection and the establishing of immunity, actual advances in serum therapy have been disappointing. The successful production of antitoxin for diphtheria and tetanus in which strong diffusible toxins play the major part in the disease, are in great contrast to the numerous failures when the same methods have been adopted in the treatment of other diseases."

In the very valuable and much-read book on Diseases of the Lungs written by Dr. Robert H. Babcock of Chicago (D. Appleton & Co. 1907), on page 282, he says: "There can be no greater confession of our inability to cope successfully with desperate cases of acute croupous pneumonia than is furnished by the long list of remedies proposed for its treatment. When we consider also that pneumonia is a self-limited disease, we cannot fail to be impressed with the belief that the results claimed for certain modes of management may with propriety be attributed to the vagaries of the disease. It is to be feared

that only too often the advocates of special remedies are misled by their enthusiasm and their desires."

He then speaks of several methods of treatment, endorsed by physicians of great prominence in different parts of the country, "all of whom thought they saw very unpromising cases of pneumonia recover under the use of these agents in a way scarcely possible without them. Not only did the high fever fall within a day or two after instituting the treatment, but signs of resolution appeared and the course of the disease seemed to be shortened. . . . They were extensively used at first, but in the last two or three years have attracted but little attention. As before remarked, it is easy to attribute to medicine what may be merely the result of nature's efforts at resistance, yet it should always be remembered that pneumonia is a disease full of surprises." As to the serum, he says: "Such a serum is now prepared by certain well-known manufacturing chemists, and by at least one house is widely advertised as efficient against this dreaded malady. Hopes thus aroused are, however, not sustained by actual results and by published figures."

In Yeo's widely circulated Manual of Medical Treatment, vol. 1, p. 643, London, 1909 we find:—

"We need not here enter into detail as to the attempts that have been made to obtain a specific serum for the cure of pneumonia. Most authorities are agreed that they have not been successful. Musser & Norris observe on this subject that 'various serums have been tried, but their use, so far as curative effect is concerned, has been valueless. . . . Reports of individual observers have in some cases been very interesting, but when a large number of cases is reviewed, the results are unsatisfactory.' They also point out that it is doubtful if a protective antitoxin can be produced, 'owing to the low vitality of the pneumococcus in artificial inoculations,' and that there is *absolutely nothing which can be termed specific* in pneumonia, as it may be caused by a *variety of different organisms*, or by mixed infections.

"Notwithstanding the good results reported by some enthusiasts, still less can be expected from *vaccin* therapy. In a disease which is induced not only by different organisms, but also by different strains of the same organism, it is clear that the *vaccin* must be prepared from the patient's own organism. Such a lengthy procedure will, necessarily in the large majority of cases, be forestalled either by the spontaneous recovery or by the death of the patient. For our own part *we should not consider it justifiable to submit to the increased danger of the 'negative phase' a patient whose life is already in extreme jeopardy*, for it is only in grave cases that there is any call for such a pro-

cedure as vaccin. If there is any field for its use, it must be in the occasional sequels of the acute attack, such as *delayed resolution*, for which as yet our therapeutic resources are inadequate."

Here I feel obliged to stop my quotations for the present, not because there is nothing more to quote, but because the lack of further space forbids.

One argument frequently advanced by some advocates of vaccin treatment contains considerable sophistry. They point to the reduction of temperature which sometimes follows an injection. This, however, does not always happen, and when it does, the fall is generally temporary and soon rises again. Even if the crisis is oftenest to be expected on the seventh or fifth day, yet it sometimes occurs sooner, without regard to treatment, and is seen on the fourth or third day, and some even think, rarely on the second. Physicians who forget this might call an early crisis the result of the vaccin. Some without claiming to influence the crisis, think that the temperature runs lower from day to day as a result of the vaccin. I well remember the case of a lady over fifty years of age to whom I was called about two years ago in consultation on the evening of the first day, and who then had a temperature of a little over 105 degrees. The attending physician wanted her to have vaccin, but arrangements could not be made for it on that night, and so it went over until the next afternoon. Meanwhile, however, the temperature had dropped several degrees and remained throughout much lower than it was at the beginning. If the vaccin could have been procured earlier, the drop might have been attributed to that.

Besides, even if vaccins do sometimes produce a lower range of temperature, this does not prove that the patient is any the better for it. Years and years ago some physicians tried by the coal tar derivatives and other antipyretics to force down the temperature, as now in another kind of cases some are trying by drugs to force down the figures indicating high blood pressure. The only satisfaction comes from reading the charts. The patients themselves are only the worse for it.

The fact is that a good physician likes in pneumonia a temperature pretty well up, provided that it is not too high, and he considers it a good sign. We expect a healthy young robust adult to do well if his temperature goes up to 104 or 105 degrees. It shows that he has vitality enough to react well against the invasion of the pneumococcus. But when a feeble old man or old woman cannot get up enough spunk to raise the temperature to 100 degrees, we think they are putting up a

pretty poor fight and making a pretty bad showing. It is an unfavorable sign.

One effective reason for the continuance of vaccin therapy lies in the self-interest of certain large manufacturing chemists, drug houses and others who profit financially by the sale of vaccins, serums and other products of a similar nature, sometimes, however, sold under other and different names. These people flood the mails of physicians with circulars highly eulogistic, and their accredited representatives haunt doctors' offices with silver-tongued oratory and persuasive arguments as to the wonderful success of their products, which they try practically to force physicians to use. Each one is a Gamaliel, at whose feet the humble and trusting doctor should dutifully sit, taking his word for gospel, and trying to forget that therapeutic suggestion and the hope and confidence born of enthusiasm for a cause may perhaps account for a part of the wonderful successes the agent so glibly describes.

Some firms, however, form a worthy exception, and simply stand ready to sell whatever products they are requested to prepare by clinicians, who assume the whole responsibility of deciding whether the products have any practical value or not.

Specialists in pulmonary tuberculosis, cancer and diphtheria strongly urge the adoption of therapeutic measures in their respective diseases at the earliest possible moment. So do the advocates of the vaccin treatment in pneumonia. They cannot say too much about the necessity for gaining *time*. Also considerable evidence has already been presented in different parts of this paper and in different connections that a stock vaccin, although it answers the time demand and could be *promptly* used, is nevertheless not satisfactory and dependable in pneumonia.

And so we are driven to believe that the autogenous vaccin is what we want and what we must have, if we use this method of treatment. But, unhappily for our hopes and aspirations, when we consult a skilled and careful bacteriologist, he tells us that to make a thoroughly reliable autogenous vaccin, one that he is willing to stand behind, causes a delay of several days, sometimes up to ten or more, by which time the patient might be either convalescent or dead; and that if we in our haste try to use a more rapid method, it may possibly succeed, but very likely may fail. Even then, if we use the rapid method, counting also the time necessary to go back and forth between the patient and the bacteriologist, if, like most patients he is not in a large hospital, and especially if the patient lives at a distance, and if the physician has anything else to do, the so called more rapid method with its imperfections also takes too much time.

As the question of the amount of *time* necessary to prepare a reliable autogenous vaccin seems to me very important in this connection, and as I am not a professional bacteriologist, I am anxious to quote freely from several who are bacteriologists and whose opinions are certainly authoritative. In other divisions of the subject also I have quoted verbatim much more freely than is my custom, in order that the reader may see exactly what the prevailing opinion is.

Dr. Charles E. Simon of Baltimore, Prof. of Clinical Pathology and Experimental Medicine, author of *Infection and Immunity*, 3d ed. Lea, 1915, *etc.*, in a personal letter to me writes:

“In reply to your question I would say that under the most favorable conditions it would take four days to prepare an autogenous vaccin. If the cultures had to be prepared from the sputum, it would be necessary to plate, which would require twenty-four hours more. I am morally certain that vaccin treatment in an acute malady is altogether illogical.”

Dr. John A. Kolmer of Philadelphia of the Pathological Laboratory of the University of Pennsylvania, and author of the new book on Specific Therapy already referred to, in a personal letter, says: “In reply to your letter I would state that under the most favorable circumstances an autogenous vaccin for a case of pneumonia cannot usually be prepared under seven to ten days. . . . I have not noted good results in pneumonia with vaccins, and on general principles am opposed to them in such an acute infection.”

In a personal letter from Dr. A. P. Hitchens, Director of the Biological Laboratories of the H. K. Mulford Co., he says:

“Our routine method for the preparation of autogenous vaccins requires about ten days. . . . As soon as the vaccin is completed, cultural tests are made and a small quantity is injected subcutaneously into a guinea pig. We prefer to hold the check tests and the guinea pig under observation for seven days before permitting the vaccin to leave the laboratory.” Then follows his shorter method, but he adds: “This should be done only in extremely urgent cases, because there are several loopholes in such technic. . . .” “In collecting a specimen for the rapid preparation of a vaccin, sputum is of doubtful value. I would much prefer the material obtained by a careful lung puncture.”

If the bacteriologist objects to the sputum, and the patient to the lung puncture, perhaps the attending physician will object to the blood, on the ground that the pneumococci are not always there, which is true.

In the Sept., 1915, number of Parke, Davis & Co's. “Therapeutic Notes,” on page 106, their bacteriologist says:

“Furthermore the element of time frequently plays an important part in determining the value of actively immunizing measures. For the preparation of a suitable autogenous vaccin anywhere from three days to a week or more will be required, so that in an acute infection the necessitated delay before autogenous therapy can be instituted may jeopardize the chances of successful active immunization.”

Some bacteriologists think that an autogenous vaccin can be prepared in from one to three days.

CONCLUSION

To sum up the whole subject, unless we first ascertain by examination the exact infecting microorganism, we find that we cannot depend on a stock vaccin, because in at least 10 per cent. of the cases of pneumonia, the pneumococcus is not the cause, but some one or more of quite a number of other organisms. Even in those cases where the pneumococcus is proved to be the cause, there are so many strains of it and degrees of virulence, that these varieties practically amount to so many different kinds of bacteria, each needing its own special vaccin, not being willing to respond to our stock vaccin. Therefore we are thrown back by necessity to the choice of autogenous vaccins which exactly correspond to the causative pathogenetic bacterium or bacteria in each case, and which are theoretically just the thing. Here we encounter a practical difficulty, however, in that acute pneumonia is a disease of very short duration, and it is generally impossible for the bacteriologist to prepare a really reliable autogenous vaccin soon enough to have much effect before the disease terminates in one way or another, especially if the physician is not called to the case (as often happens) until the second or third day of the disease, and also counting in the time lost in going or sending back and forth between the patient (especially if he is at a great distance) and the laboratory. Again, often the sputum is absent for the first one, or two or three days, and some physicians might shrink from substituting for examination the blood from a vein, or lung puncture products, and might lament the extra time and cost consumed by the whole experiment. This last objection of course could be made negligible if the experiment really promised more success than anything else, but it does not. So far not enough cases have been reported to form a proper basis for statistical evidence, as a very large number of cases, for reasons already mentioned in detail, is necessary. Nor is the statistical evidence, so far as it has come in, indicative of better results, or as good, as that derived from many other methods of treatment in the past which now by common consent have been abandoned as

ineffective. Evidence of success in treating pneumonia by any method is peculiarly hard to analyze, owing to the rapid changes in the natural history of the disease, and its vagaries, and also to the wonderful influence on its prognosis of age, alcohol, epidemics, race, season, and other factors. On this account much of the evidence adduced in favor of vaccin treatment is inconclusive.

In the absence of sufficient statistical evidence, we have the positive opinions against it of many clear-headed physicians, both practical clinicians and professional bacteriologists, who have tried it and found it wanting. Some even consider it at times decidedly dangerous.

DIAGNOSTIC VALUE OF LUMBAR PUNCTURE IN ANTERIOR POLIOMYELITIS *

By WINFRED OVERHOLSER, A.B., M.B., M.D., Resident Physician, Evans Memorial, Boston.

Although much has been written of late on the diagnosis of anterior poliomyelitis, the general practitioner, or indeed, any physician, is likely to feel that the numerous articles but make "confusion worse confounded." The object of this paper is to discuss briefly the subject of lumbar puncture in the diagnosis of this disease, its indications, and the information likely to be given by it. To this purpose I shall for the most part summarize the recent literature, and also briefly refer to the work done at the West Department of the Massachusetts Homœopathic Hospital under the auspices of the Evans Memorial during the epidemic last fall.

In spite of the large amount of research which has been done, it is yet too early to feel that we know the whole story concerning the ætiology or pathology of the disease. The evidence seems to point to anterior poliomyelitis' being a general infection which sets up among other lesions a meningomyelitis with cellular aggregations, hæmorrhages, and œdema, this process usually causing more or less severe damage to the motor cells of the gray matter of the cerebrospinal axis.¹ The inflammation causes an exudation into the cerebrospinal fluid of cells and albuminous bodies. It is upon this exudate that the value of fluid: examinations depends.

Many of the prodromal symptoms, such as fever, headache, restlessness, vomiting and diarrhœa are so indefinite and common as to be of very little diagnostic value. Even the stiff neck

* Read before Boston District Homœopathic Medical Society, March 1, 1917.

sometimes spoken of as an important sign may be due to a meningism resulting from some other infection. Hyperæsthesia, when present, points to a nervous involvement, and insofar is a valuable symptom. After paralysis has set in, the diagnosis is much facilitated. It is, then, in the prodromal stage that the physician should be most interested; here, if at any period in the course of the disease, can treatment be of greatest avail in ameliorating or preventing subsequent paralysis; here, also, is the chance to isolate the patient before other persons are possibly infected. If now, lumbar puncture may be the procedure which will corroborate or disprove our diagnosis, shall we undertake it on all patients showing fever, headache, and so forth? The answer is a long one. First of all, we may say that except in the presence of an epidemic, the possibility of the case's being one of anterior poliomyelitis may not occur to the general practitioner. Under ordinary circumstances, there is very little likelihood of mistaking a birth palsy or a hemiplegia for poliomyelitis (errors actually made during our recent attack of poliomyelitophobia!). But, if we stop to consider, we shall readily see that unless there is a definite involvement of the central nervous system, we can scarcely look for a markedly pathological spinal fluid. To be sure, in several infectious non-neurological diseases (pneumonia and influenza especially) a condition of meningism may occur, but this causes usually only an increase in the amount of fluid.² If we are to find lumbar puncture of diagnostic value, then, we shall expect it to be most useful in those cases which show evidence of affection of the central nervous system. To quote from a recent article by Drs. Dubois and Neal of the New York City Board of Health:² "It does not seem possible that a disease accompanied by an inflammatory reaction in the central nervous system and meninges of sufficient severity to produce changes in the spinal fluid could fail at the same time to afford definite clinical evidences of nervous involvement. Therefore, in the past, we have made it a rule to consider the possibility of poliomyelitis, and to perform lumbar puncture only in those cases presenting symptoms referable to the nervous system, such as hyperæsthesia, Koenig's [?] or the spinal sign, altered reflexes, stiffness of the neck, MacEwen's sign, etc. . . . When any of these signs are not present we have usually considered a lumbar puncture unjustifiable. In the few cases where we have performed it the fluids have been normal." This is indeed a refreshingly sensible attitude amidst the welter of strenuous recommendations of indiscriminate lumbar puncture. A similar, though somewhat more extreme, attitude was taken by Dr. John Lovett Morse of this city six years ago.³

Having, then, decided to perform lumbar puncture on a patient who presents suspicious nervous symptoms, what results may be expected from an examination of the fluid obtained?

In the preparalytic stage (the one in which at present we are most interested) the spinal fluid is usually clear, rather rarely showing a tendency to fibrin web formation, and is sterile. The cells are increased in number, there being anywhere from 16^4 to 990^5 per cu. mm., most of them (80-90 per cent.) polymorphs. In about 50 per cent. of the cases⁴ there is a globulin excess. Fehling's solution is reduced in varying degree. It was formerly thought that this point was valuable in differentiating poliomyelitis from tuberculous meningitis, but Dubois and Neal⁶ found from a considerable experience that 73 per cent. of fluids from patients suffering from the latter disease reduced Fehling's solution. However, it is safe to say that if the fluid fails of this reduction, the patient most probably has not poliomyelitis.⁴

As the disease progresses the cell-count falls, and lymphocytes predominate. At the same time, the globulin increase becomes more marked. The Fehling reduction is preserved throughout. By the end of the second week, the cells are practically normal in number, whereas the globulin excess may persist for seven weeks or more.⁵ Very little has so far been done with Lange's colloidal gold test in this disease. A report on the experience with this test at the Evans Memorial during the epidemic is now in preparation, and, it is hoped, may prove instructive.

The picture presented by the spinal fluid in this disease resembles in certain respects that which we see in several other conditions, notably purulent and tuberculous meningitis, meningism, and syphilis of the central nervous system. In the meningitides, especially the purulent form, bacteriology comes to our assistance, with the demonstration of the causative organism. The cell-count is usually much higher, and the fluid often cloudy. An absence of the Fehling reduction almost always signifies meningitis. The tuberculous form may yield cytological and chemical results identical with those in poliomyelitis, so that finding of the tubercle bacillus, animal inoculation, history, and clinical course often must determine the diagnosis. An absent copper reduction, as before stated, is of great value. Neurosyphilis will usually give a positive Wassermann reaction; the history and clinical signs are the most important bases of differentiation. In meningism the fluid is normal, as said above, except for increased pressure.

Now that we have considered briefly the laboratory findings

in poliomyelitis, what shall we conclude as to the value of lumbar puncture in this condition?

It should be borne in mind that lumbar puncture is a proceeding not without its discomfort and (very rarely, to be sure) danger, so that its indiscriminate employment is not to be recommended. In a case presenting suspicious neurological symptoms and signs such as those mentioned above, however, puncture should be performed, provided an experienced pathologist is near at hand to examine the fluid promptly. But we must remember that the results of a fluid-examination are not sufficiently distinctive to be considered the sole basis for a diagnosis. One of the evils of present-day medicine is that many practitioners (and not alone those engaged in general practice) seek too much after pathognomonic symptoms and laboratory reports, degenerating into mere reflex diagnosticians. Is the culture negative? Then surely the patient has not diphtheria. Is the knee-jerk absent? Then certainly a case of tabes dorsalis confronts us. And so it goes. That this is not only a lamentable, but a pernicious, state of mind should go without saying.

But to return to our theme: the report of an examination of the spinal fluid in anterior poliomyelitis should be interpreted only in the light of what should never be lacking in any case — the results of a careful and complete physical examination of the patient. With the limitations mentioned above, lumbar puncture is a valuable factor in the diagnosis of this rapacious and almost irresistible scourge.

BIBLIOGRAPHY

1. Jelliffe, S. E., and White, W. A.: *Diseases of the Nervous System*, 1915, 306-8.
2. Neal, J. B., and Dubois, P. L.: *The Diagnosis of Poliomyelitis*. *Am. Jour. Med. Sc.*, 1916, clii, 313-20.
3. Morse, J. L.: *Value of Lumbar Puncture and of the Leucocyte Count in the Diagnosis of Acute Poliomyelo-Encephalitis*. *Arch. Pediat.*, 1911, xxviii, 164.
4. Ruhrah, J.: *Poliomyelitis: Preparalytic Stage and Diagnosis*. *Am. Jour. Med. Sc.*, 1917 cliii, 178-88.
5. Peabody, F. W., Draper, G., and Dochez, A. R.: *A Clinical Study of Acute Poliomyelitis*. *Monographs of the Rockefeller Institute, New York, No. 4, 1912, 98-107.*
6. Dubois, P. L., and Neal, J. B.: *Four Years' Experience with Meningitis in New York City*. *Am. Jour. Dis. Child.*, 1913, ix, 1.

EDUCATION OF THE FATHERS AND MOTHERS OF TOMORROW *

BY AGNES FULLER, M.D., Chicago.

DISCIPLINE FROM BIRTH

A child three days old is as much the ruler of the house as the child of three years, and in the lack of discipline from birth the trouble of the future begins.

I have great respect for the parent who, when the child was less than one week old, asked, "Is *he dry?*" "Is *he hungry?*" "Is there any reason *why* he should cry?" Upon being assured there was no cause, the father said "Then he may as well learn he is not the ruler in this house, and that there are others to be considered as well as he."

The idea many parents have that their child is too young to be made to obey is the beginning of bad training.

SENSITIVENESS IN CHILDHOOD

Very few mothers understand their children, and very rarely do the mothers understand one of the most common characteristics of childhood — sensitiveness. The sensitive child usually has a keener imagination and finer emotion than the less sensitive one.

In dealing with all children, frankness, sincerity and honesty are the underlying principles, and much more are they needed in dealing with the sensitive child.

The one with a lively imagination must have his questions answered with all sincerity or there is danger of becoming suspicious and withholding his confidence in the future. Every question must be answered carefully lest his ideas become distorted. Children of highly sensitive temperaments usually have some of the finer qualities and instincts of human nature, but because they are not well understood they rarely receive the considerate and sympathetic treatment that such natures require.

QUESTIONS REGARDING THE ORIGIN OF LIFE

Questions regarding the origin of life, often come early to these sensitive, imaginative children. These questions from the child the parent must answer truthfully, in order to gain and keep his confidence. They must be answered before the age of seven or it is too late.

After seven these questions are being answered under the trees on the play grounds, and upon the streets. Wrong im-

* Read June 30, 1916, before the American Institute of Homœopathy, at Baltimore.

pressions are received under such conditions which can never be effaced, and will last through life. Parents must understand the respective characteristics of their children before they are able to answer wisely the questions that are coming every day. They must exercise discretion as to how much knowledge to impart, and in what way to give it. The mother should be frank with them from the beginning and she must have them under constant supervision, guiding them with wise and gentle counsel.

Parents should be the only teachers of their children on this subject, and if a book is given them, the parents should read it with them. There will be words and sentences not understood and needing explanation. Unless the parent can do this intelligently, wrong ideas are gained and damage done that can never be repaired.

It is necessary to answer questions honestly, else children very soon lose their respect for, as well as confidence in, their parents.

HEREDITY AND ENVIRONMENT

Children have a right to a good heredity, therefore, the education of the Fathers and Mothers of Tomorrow should begin with their great grand-parents, the children of today.

The daily family life is the best education the child can have. In a family where there is culture, refinement, morality and clean living, the children unconsciously acquire the same, and there is little need of caution being given regarding the selection of friends. When school life is begun, the child will choose his friends to suit the taste that has been unconsciously formed by the home life of the preceding years.

Besides training boys and girls in the laws of health and clean living, parents must have faith in their children and believe and expect that they wish to do right. They must have the greatest faith in their nobility of character and in their possibilities for a useful future.

TROUBLE AFTER MARRIAGE

A great deal of trouble comes after marriage, because too much is left to instinct, but it cannot be expected that mothers can know by instinct how to manage their children. There are no rules of training which will apply to all cases. Mothers must study the children, and come to an understanding of their natures. A great deal of care and anxiety can be spared if the mothers will study the best thoughts and experiences of others.

Who is to blame for the preventable diseases, which cause such a mortality among children under five years of age? Often

the municipality, but oftener untrained mothers. The trained mother is able to prepare the baby's food; the trained mother will understand the prevention of contagion; the trained mother will act with more caution, thus preventing accidents.

Although the means of the mother may be limited, if she is ingenious she can plan many things which will make her home more sanitary. She can make her own ice-box which will serve her purpose as well as any she could purchase. In many ways her wit will forestall poverty.

Boys should be taught the cost of living and should be made to feel a certain responsibility in connection with duties that pertain to the household.

They should be taught that when occasion demands it is no disgrace to take part in the housework.

Girls should be taught domestic science and *scientific motherhood*, also the keeping of accounts, no matter what their circumstances are. When their school life is finished, they should take up some definite employment which provides them with interests and duties.

These and many other things should be taught in the school room, which, next to the home, offers the best chance to build character and preserve health.

THE OBJECT OF AN EDUCATION

The object of an education is to teach one how to *live* in his environment. He may have great knowledge of books and large intelligence, but if he lacks the ability to live in harmony with his fellow-men, his education is deficient.

Good citizenship involves consideration for others, and control of the emotions.

CHILD POVERTY

There is a large amount of poverty among the school children of the poorer classes. A large number are underfed, and suffer from want of warm clothing. Their minds are dulled by hunger and the discomfort from not being warmly clad.

Millions of dollars are spent on fine school buildings which house the children of the poor as well as the rich. Millions are spent on splendid school systems, and yet ten per cent. of the children go to school hungry, and are unable to assimilate education.

Judge Henry Neil said: "Save the present generation of children from the ruining effects of poverty and we will have largely solved the problem of bad parents for the next generation.

"While we are conserving natural resources, do not forget

the child, the great resource of the nation and the world. Conserve the children; maintain the home and family, for the home and the family form the corner stone of Society."

With the fathers and mothers of the present day lie the high duty, the great privilege and the wide responsibility of educating their children to be the worthy parents of the future.

Napoleon said: "The fate of the child is always the work of his mother." She influences more than any one else his emotional and moral nature; she becomes his ideal. In the hands of the Mothers rests the great trust of the future of American men and women — "The Fathers and Mothers of Tomorrow."

THE INDIVIDUAL REMEDY*

BY FRANK W. PATCH, M.D., Framingham, Mass.

Prominent among the foundation elements of homœopathic study is the art of individualization. On the ability to examine our patients as individuals and to prescribe our remedies in the same manner, rests much of our success in daily practice.

It is comparatively easy to understand what is meant by the study of an individual human being. In fact we unconsciously recognize our acquaintances as individuals, each with a varying complex of mental and physical characteristics and differing more or less radically from others.

The study of drugs from the homœopathic point of view is likewise a study of individuals not less strongly marked than are the friends and acquaintances whom we meet from day to day.

Unfortunately, however, in our attempts to apply the tests of understanding to our homœopathic remedies we are not always as successful as in recognizing our friends on the street. There are several reasons for this failure, one of which is the difference in our methods of getting at our friends and those of becoming acquainted with our remedies.

The two studies should be analogous, but our study of human nature begins very early. We meet individuals singly in childhood, grow unconsciously into a knowledge of their characteristics, and unconsciously pack them away in our minds as distinct entities, rarely thought of, yet recognizable as long as we live.

The study of *materia medica* is undertaken in maturity. We are thrust suddenly into what seems to be a chaotic field of disconnected traits wholly lacking in any coherence.

* Written especially for *The New England Medical Gazette*.

The student in his second or third year in medical college is confronted by this mass of incoherent and isolated symptoms, relating to a great variety of drugs, which he feels he must memorize in order to arrive at anything recognizable. Such a feat is well nigh impossible. The average student is discouraged at the outset unless his mind is carefully guided in correct methods of study and analysis.

The more observing among us accept this mass of material as we accept our friends and make the most of it that we can, patiently plodding along, gathering a bit here and a bit there, until we are able to piece these various symptoms together into the individual forms which they later occupy in our minds.

It is probable that could we become acquainted with our *materia medica* as we grow into the friendships of childhood and adolescence there would be far less heard of the unsatisfactory and chaotic features of drug study.

Many physicians never get out of the student stage but throughout their lives waste time in searching for specific remedies for specific diseases or in clutching at a few prominent keynotes which they apply wholly from the standpoint of mere symptom covering without any real comprehension of the true art of individualization.

Probably the reason for Hahnemann's preëminence as a *materia medica* expert, aside from his highly scientific mind, came largely from his great experience as a prover.

Every student who carefully proves a drug becomes more thoroughly acquainted with the characteristics of that drug than is possible in any other manner. It becomes a matter of personal experience which is indelibly fixed in mind as are all the vital experiences of life.

Hahnemann made this kind of personal acquaintance with more drugs and made it more carefully than any other physician has done, consequently he was not only able to elaborate his wonderful system of therapeutics but also to become the master physician in handling the means of cure which he had established.

We need today more men of his type, who are willing to investigate patiently and persistently the individual features of drug substances that are constantly coming to the front. Too many of our graduates are mere symptom-coverers in prescribing rather than masters of individualization.

This is, perhaps, not wholly their own fault, as they have missed the inspiration of some of the earlier teachers who often at great personal sacrifice brought their talents to bear on the study of pure *materia medica* and accomplished what can be done only through personal enthusiasm and devotion to a cause.

So much ground must be covered in the modern medical

course that it is impossible to do any one thing with entire thoroughness. It is perhaps questionable if our results are all that we might desire. Surely the time that is necessary to realize a true understanding of the homœopathic materia medica is far greater than can be devoted to such study in any ordinary four years course, especially as a certain amount of careful reading and reflection is important before one can actually grasp all the collateral features of such work. The use of the repertory must be mastered, a help that is indispensable yet one of which we must not expect too much. Intricate case analysis can be accomplished best through its help, but the repertory can never supplant the materia medica; study of symptomatology and provings must always be the final court of resort.

Now as to how we may actually become acquainted with our drugs—the practical side: First we must try to understand what each drug can be expected to accomplish. This knowledge must come through observation of its physiological effects on the healthy human being. We must know the regions of the body which it affects most prominently, its mental characteristics and its modalities. After we have mastered these prominent features we may study more carefully the symptomatology, bearing in mind constantly that something more than a mere knowledge of the symptoms of the given drug is necessary if we are to comprehend fully its individuality.

Much of this individual knowledge may be obtained through comparison. After we have become familiar with a given drug so that we can recognize its real identity, indicating correspondingly something of the type of the individual whose sickness it may be expected to overcome, then by comparison with other individual drugs we shall bring out the finer shades of its nature and gradually come to recognize the full picture of our drug. For instance, note the peculiarities of *kali carb.* in comparison with those of *nux vomica*; both drugs are adapted to the wiry individuals who suffer from cold, who have difficulties of digestion, who are irritable and impatient. These characteristics are common to both drugs, yet on further study we shall find the *kali carb.* individual a far more intense and complicated nature than the *nux vomica* subject. We shall find *nux vomica* adapted largely to the treatment of passing and acute complaints resulting from indiscretions in living, while *kali carb.* is adapted to more deep-seated troubles extending over a much longer period of time. The irritability of the two remedies arises from different causes, the *nux vomica* patient being excitable, nervous, unable to bear pain, very disagreeable at times; while the irritability of *kali carb.* arises more especially on account of a highly sensitive nature; it is due less to

passing disabilities than to a state of dissatisfaction with himself and his surroundings that is inseparable from his peculiar makeup. *Kali, carb.* furthermore, is especially adapted to the treatment of catarrhal conditions of the chest and troubles resulting from previous disease often accompanied by intense stitching pains and rising temperature.

This is but one example of a method of getting at the finer shades of difference in individual drugs.

It can be repeated almost without limit and tried out in practice to the satisfaction of every individual physician.

THE BARANY TESTS AND THEIR BEARING ON NEUROLOGY *

BY NATHAN H. GARRICK, B.S., M.D., Cambridge, Mass.

To the otologists we are all greatly indebted for our increased knowledge of the vestibular apparatus and its function. Barany and his followers have given us many clues and have indicated new paths for further study that should be invaluable not only to the otologist but to the physiologist, neurologist, and general practitioner as well.

Several prominent neurologists have dismissed the Barany tests as of little value and have come to the conclusion that results are not dependable. We have seen some of these tests applied in such a manner that the results were not only useless but even misleading. It is essential that a rather complicated technic be mastered thoroughly and applied painstakingly if the data obtained are to be of value. The one using the tests is called upon to make quick decisions based on his observation of previous cases. The records must be kept with great care, and this necessitates a specially trained assistant for this purpose. Of the greatest importance is the type of patient, for in order to obtain the best results the subject examined should be intelligent and able to co-operate well.

If the conclusions reached by Randall and Jones of Philadelphia are true: (1) that they can usually differentiate lesions of the labyrinth from those of the cerebellum; (2) that they can detect a lesion of the cerebellum but cannot always locate it; (3) that they can always tell when the eighth nerve is diseased; and (4) they can say positively whether or not the posterior longitudinal bundle is affected: if these conclusions are true, no neurologist can afford to ignore them or decline to make use of these tests.

* Read before the Alethean Club, February 9, 1917.

It is not, however, possible for us to accept all of these conclusions at the present time, since some other workers in this field have not been able to corroborate these findings in all respects.

Grey, of Boston, in conclusions drawn from the examination of thirty-one cases of certified cerebellar or extra-cerebellar tumors in the surgical clinic of the Peter Bent Brigham Hospital, states that the Barany tests constitute an important means of differentiating labyrinthine from intra-cranial disease, and are of assistance in localizing circumscribed lesions of the cerebellum. In tumors of one or the other cerebellar hemisphere the findings were sufficiently characteristic to be of supplementary value in localizing the disease. In his article Grey does not differentiate the findings from stimulation of the vertical and horizontal canals so that his conclusions are not of as much importance as those of Randall and Jones. The latter have established to their own satisfaction that the pathways from the vertical and horizontal canals are decidedly different. In support of this contention they cite cases which tend to prove it. If further investigation shows that separate pathways do exist our ability to localize in intra-cranial lesions will be decidedly augmented.

Another conclusion reached is that spontaneous vertical nystagmus is pathognomonic of disease of the central nervous system and is not produced by end-organ or labyrinthine disease. We have seen no attempted explanations of this phenomenon.

REFERENCES

Randall, B.A., and Jones, I.H.: The Ear Test of Barany in locating cerebellar and other encephalic lesions. *Am. Jour. Med. Sci.*, 1916, cli, 515.

Gray, E. B.: Studies on the localization of cerebellar tumors. II. The pointing reaction and the caloric test. *Am. Jour. Med. Sci.*, 1916, cli, 693.

Mills, C. K., and Jones, I. H.: Barany test demonstrating neuraxial differentiation of fibres from horizontal and fibres from vertical semicircular canals. *Jour. A. M. A.*, 1916, lxxvii, 1298.

CLINICAL DEPARTMENT

Postural Neurosis Simulating Epilepsy Treated by Physical Culture

[This case is kindly reported by Miss Alice Whitten, Instructor in Physical Culture at The Arlington Health Resort. This sort of therapeutics is deserving of more widespread attention by the medical profession. Ed.]

The patient is a slight, delicate-looking girl of eighteen. For some months she had complained of headaches, had a slight puffiness of the thyroid gland and had had seizures of an epileptiform character which came on in the early morning with various nervous sensations. She would wake to find herself staring straight ahead or would feel her eyes rolling to one side or the other without her volition. She would fear that she was going to lose consciousness, and sometimes actually thought she did, and would call out to her parents, who are also neurotic. She also suffered a good deal from fatigue.

Examination showed that she had a decidedly poor posture, hollow chest, stooping shoulders, a long back rather rigid in the dorsal region and a low lumbar curve. The patient stood back on her heels and there was the characteristic backward tilt of the pelvis. There was also a relaxed abdomen and a lack of fat in the upper part of the abdominal cavity which usually marks this type of mal-development. While no doubt there were other factors which contributed to her condition, correction through physical culture was clearly indicated. She was fitted with a belt, with an anterior and posterior leather pad, to wear during her time out of bed, was advised to rest a good deal, and was given the following passive and active work.

(1) Hyper-extension (15 minutes after meals). This consists in lying supine on a mattress with a medium-sized pillow under the small of the back below the scapulæ, the shoulders resting on the mattress. A small pillow can be placed under the head if desired.

(2) Prone-lying. — The patient lies for the same length of time face down with the pillow under the lower abdomen. She should breathe deeply in both this and the above mentioned position so as to get full expansion of the lower chest.

(3) Prone-hanging (twice a day for three to five minutes). The patient lies prone across the bed with hips resting on the edge and the head and shoulders and abdomen hanging off the bed on a stool or box about twelve inches lower upon which a pillow has been placed, thus throwing the viscera upward and outward. The use of this position has to be begun carefully and the time gradually increased.

Besides these passive positions the following set of active exercises were gone through daily:

Fundamental position — head up, chin in, shoulders back — abdomen in, back flat at waist, feet parallel, weight on the balls of feet.

- (1) Hands on hips — stretch up from waist and breath in. (8 times.)
- (2) Hands on hips — trunk bent to left, right and forward. (8 times each.)
- (3) Tiptoe march — arms stretched straight above head grasping rod, walk in straight line on tiptoe, toeing in, very short steps, letting body sway slightly forward. (6 times across room.)
- (4) Lie on the back on the floor — hands on hips, lift each leg separately — knee straight and instep stretched, slowly lower it to floor (do not hold breath). (6 times each.)
- (5) Arms stretched straight above head — bend trunk forward, downward, stretching arms to touch floor, keeping knees straight. (8 times.)
- (6) Lie on back — feet fixed, hands on hips, rise to sitting position, keeping shoulders and head back. (8 times.)
- (7) Hands at sides — left shoulder high and draw up whole left side from the waist, breathe deeply while holding the position a few seconds, alternate sides. (8 times each.)

At the end of two months, without other treatment, the patient reported that she had gained eighteen pounds in weight and was much better generally. The epileptiform spells had become much less troublesome and the headaches had disappeared.

Note, eight months later. The patient has taken up work, and though the spells still annoy her, they seem to come more from her mental attitude of fear and anticipation of them. She has kept her weight.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the *GAZETTE* only and preferably to be typewritten — personal and news items should be sent to *THE NEW ENGLAND MEDICAL GAZETTE*, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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INTEREST IN HOMŒOPATHY

Since the beginning of homœopathic organizations there has been an unbroken succession of pleas for wider public recognition of the value of homœopathy and for more extended dissemination of knowledge of its methods and principles. There exists the belief, doubtless well-founded, that were the homœopathic clientèle larger and more accurately informed, there would be a generous contribution to relieve the financial handicaps under which our institutions, hospitals and schools, are laboring.

Concerning the existence of these handicaps there can be no doubt. With one questionable exception, in none of the homœopathic medical schools or strictly homœopathic departments of universities is there offered facilities for advanced research in the medical sciences under the stimulating and scholarly direction of men who have a solid background of recognized achievement in these sciences. Yet few will deny that penetrative research in homœopathy is needed now as probably never before. Research and the training of research workers cost money.

As an example of the pecuniary embarrassments with which our hospitals are burdened, the following figures¹ are illuminating.

	Property and investments	Patients annually ²	Assets per patient
Massachusetts Homœopathic	\$2,161,555	7,391	\$ 292
Massachusetts General	7,883,570	7,745	1,018
Peter Bent Brigham	8,347,933	3,156	2,645

¹ These figures were supplied by Dr. C. T. Howard.

² Exclusive of out patients.

Expressed in another way, for every \$1.00 that the M. H. H. has for a patient, the M. G. H. has \$3.49 and the P. B. B. H. has \$9.06.

Compared, respectively, with the number of patients who consult physicians of dominant school affiliations and the number of patients who consult physicians of homœopathic affiliations, the income controlled by dominant school institutions is disproportionately in excess of the income controlled by homœopathic institutions.

The number of substantial bequests that has been received in recent years by our schools and hospitals is not large. And when we understand the origin of these few, a significant fact is disclosed. Most, if not all, of the donors have absorbed the interest and impetus which led to their donations from contact with physicians who have, themselves, an intelligent interest in homœopathy, who use homœopathy, who attend meetings of homœopathic societies, who read homœopathic journals; in short, physicians who study homœopathy critically and understandingly, and who appreciate its needs. This illustrates the fact that enduring and productive interest is *contagious*; and rarely can it be spread by indifferent "carriers."

Are we to continue to ascribe the cause of our financial anæmia wholly to lack of knowledge and helpful interest on the part of the present patients and friends of homœopathic physicians? Are we to continue to think that with numerical increase in patronage will come ease and affluence and adequate endowments? . . . Numbers alone will not help. There is no strength in immensity if its core is rotted. And there are a few disquieting, but none the less insistent, indications of incipient decay in the corps of homœopathic organizations. The question "*Quo vadimus*" is appositely propounded.

The per cent. of the total membership of homœopathic societies that is in attendance at stated meetings is notoriously low. Comparison with the attendance at meetings of dominant school societies, even if it be favorable to us, affords no reason for self-gratulation. They are not organized specifically to defend a principle. We are. We have not a vestige of other excuse for separate existence. . . . This is an instance of a lack of interest, but *not* on the part of homœopathic patronage.

Consideration of the physicians who have been graduated from Boston University School of Medicine within the past six years has led to a personal estimate that about one in ten has more than a veneer of serious interest in the principles of homœopathy. One in fifty has had sufficient interest to carry on investigations tending scientifically to substantiate those principles. These figures might not be paralleled in similar estimates in all

other foci of titular homœopathic activity, but in at least three of the largest homœopathic medical schools, concerning which the writer has first-hand or reliable second-hand information, the same tendency is strikingly exemplified. In matters of serious thought and performance, homœopathy is receiving deplorably little help from our recent graduates. . . . This is an instance of a lack of interest, but *not* on the part of homœopathic patronage.

THE NEW ENGLAND MEDICAL GAZETTE is the only homœopathic periodical published in New England. There are six State homœopathic medical societies in New England. Of the total active memberships of these societies the following percentages subscribe to the GAZETTE:

Massachusetts	48.7
Maine	35.6
Rhode Island	25.
New Hampshire	22.
Vermont	16.7
Connecticut	11.

We will not press this point; we realize that much could be said on both sides, but it is, fundamentally, another instance of a lack of interest, and *not* on the part of homœopathic patronage.

The Massachusetts Homœopathic Hospital is the largest non-municipal homœopathic hospital in the world. The following averages computed from the summaries of its annual medical and surgical reports from 1871 to 1915 are offered for consideration.

PROPORTION OF medical TO surgical CASES IN THE M.H.H.
Exclusive of out-patients

1871-1880	1. : 0.3
1881-1890	1. : 1.6
1891-1900	1. : 2.9
1901-1910	1. : 4.6
1911-1915	1. : 6.2

The presentation of these figures in this connection is coupled with the expression of our heartiest commendation for the splendid work and growth of the Hospital in all its departments, and is in no way deprecative of the "non-medical" specialists; indeed, for them, their initiative, their activities and their excellent work, we have the most sincere admiration and warm encouragement. We hope our attitude will not be misunderstood.

The figures need little comment. They tell plainly of the *growing* preponderance of interest in the Massachusetts *Homœopathic* Hospital in specialties that are but remotely and incidentally connected with homœopathy. This is an instance of a

lack of interest, but *not* attributable to homœopathic patronage.¹

Would it not be prudent, before extending our spread of propagandistic sail, to add a few ounces of ballast?

S. B. H.

A ROUTINE TREATMENT FOR PNEUMONIA IN CHILDREN. As advocated in the *Pharmaceutical Advance*, Menley and James, Ltd.

(1) Plenty of fresh air. (2) Regular and frequent feeding with small amounts of liquid or semi-solid food. (3) Saline enemata given hot, twice a day, slowly. Castor Oil in repeated doses for distention or constipation. (4) Cold applications to the chest, by wringing cloths out of cold water, applying them to the surface, and covering them with newspaper. Renew when they become warm. (5) A tepid sponge bath, followed by an alcohol rub, twice a day, if the temperature rises to 102° F. (6) When the temperature is high or is continued, 20 to 50 drops of brandy every 2 hours for a child from 1 to 3 years old. The brandy should not be given with food. (7) Anti-streptococcus serum twice a day in case streptococcal septicæmia is suspected. (8) Drug treatment, ammonium chlorid and syrup of ipecacuanha, the fluid extract of licorice used as the vehicle. One-quarter to half a drop of the syrup of ipecacuanha every 2 hours to children under 1 year. Above 1 year, 1 drop of the syrup for each year of the child's age every 2 hours, and 1 grain of ammonium chlorid for all ages from 1 to 12 years. In the case of vomiting, one-quarter to half a drop of tincture of belladonna every 2 hours to children under 18 months old, one to one and a half being given to those over that age. When the heart's action is weak, one and one-half minim doses of tincture of digitalis for each year of age every 4 hours. Reserve stimulant, strychnin in doses of .0025 to .01 grain every 4 hours.

It is often remarked that parents employ homœopathic physicians to treat their children, though they prefer allœopathic treatment for themselves. Of course the *Pharmaceutical Advance* is merely the advertising organ of the proprietary medicine firm of Menley and James, Ltd. Nevertheless the editors of such papers usually reflect the thought of a wing of the old school. This wing is the dominant wing, and its treatment is just as far remote from homœopathic treatment as ever. Homœopathic treatment as used here does not include the use of combination tablets, hypodermic injections of so called stimulants and the administration of saline or other laxatives *ad lib*. Such of the homœopathic school who feel that the above are necessary adjuncts to homœopathy are likewise members of a distinct wing in the homœopathic school. Is this wing becoming dominant? We doubt it. Usually these practitioners are honest enough to realize that they belong elsewhere than in the homœopathic ranks.

¹One distinctly encouraging instance of *presence* of interest where interest should be present is afforded by the work at the West Department (contagious), of the Massachusetts Homœopathic Hospital.

Dr. Rand has asked "Where are we drifting?" Some homœopaths are *drifting*, in the same downward and backward direction as some alloœopaths. Some don't drift,—in fact they rarely ever get becalmed,—but sail gaily ahead under the courage of their convictions; interested, enthusiastic, and ambitious to be a credit to the school of their choice. Only by practicing homœopathy in a logical manner can we ever discover its efficacy and its failings.

C. W.

CORRESPONDENCE

To the Editor:—

In a recent number of the *Gazette*, editorial comment is made on the fact that no reply to the "Gazette's Questionnaire" had asked for reports of homœopathic failures, it being suggested that perhaps more might be learned from our failures than our successes.

Generally speaking this is probably true, but one can but wonder just what the writer means by "homœopathic failures."

Does he mean to suggest that we report the instances where a prescriber has failed to discriminate between curable and incurable disease, has foolishly prescribed for the latter with a hopeful prognosis? In other words, where the obviously impossible has been attempted, naturally without success. Does he mean the cases where someone has attempted to cure a complicated chronic disease by use of one or several short-acting remedies? Does he mean the instances of surgical or mechanical conditions that some tyro has endeavored to cure through the action of remedies, regardless of correction of such states by adequate surgical or mechanical means? Does he mean the seeming failure of remedies given in combination or alternation under the name of Homœopathy where one drug is possibly antidoting the others? Does he mean the multitude of failures, where remedies are selected by guess rather than by careful repertorial analysis or study of the totality of the symptoms?

All these conditions would surely be failures, but I trust they would not be considered homœopathic failures.

If anyone has cases of homœopathic failures to report where the case has been a curable one, the remedy selected according to the Law of Similars and administered in such form as the experience of many years has proven to be wise, by all means let us have them reported; but we doubt if many such cases can be found in the annals of homœopathic medicine.

FRANK W. PATCH, M.D.

The success of a method depends upon the knowledge and observance of certain conditions that are necessary for the proper use of that method. Failure of the method results from ignorance or non-observance of those conditions.

Dr. Patch lists several categories in which remedies are frequently used unsuccessfully; these are examples of failures in the application of the homœopathic method. They have no weight as evidence tending to invalidate the homœopathic principle. Some of them, however, exemplify the need of a series of amendments to what is frequently termed a "universal law of nature."

And the conditions under which the principle of symptom-similarity *is* applicable are none too well defined. Not infrequently do we read reports of "cure" of malignant tumor, of advanced tuberculosis, of "certain cases of rheumatism" etc., in which Dr. Paul¹ claims we should not expect successful results from homœopathic treatment. What, then, is curable? Perhaps, if we had a series of reports of failures to cure these conditions (which we have not), to parallel the reports of successes (which we have), we might be able more intelligently to define limits of applicability of our principle.

Dr. Paul requires certain data and imposes certain criteria that must be satisfied before a just verdict regarding *failure* in any given case can be handed down. Yet in how many reports of *successful* cases, the number of which reports is legion, are these data furnished and these criteria satisfied? Isn't there too little attention paid to the natural history of disease in our judgment of "cure?"

S. B. N.

To the Editor:

In your editorial "*The Gazette's* Questionnaire" you ask for reports of "homœopathic failures—an omission that causes us to stop and ponder." I am glad you have brought up this question, and I would like to ask the homœopathic profession of New England, through you, for a report of a failure of "cure" under homœopathic treatment. I mean a "curable" case. I do not mean cancer of the stomach or other organ, arthritis deformans, advanced tuberculosis, or certain other incurable cases, acute or chronic, such as pneumonia in some people with a weak heart, some special case of rheumatism, some cases of septic endo-carditis, if the tonsils are *in statu quo*, but a really reasonably curable case. I would like to hear of a single one. Of course, for us to judge of it as a failure we must not only know definitely of the case itself, but of the homœopathic treatment, the symptoms, remedies, how given, what potency, frequency and the general care of the case; was or was not aspirin or other patent drug given? This may not be worth while, but it seems to me that it is. If some one will report one such failure it will help me much, and no doubt will help many others in the profession.

May I say in closing that I have just been through the February number of the *Gazette* which you say on the cover page is "A journal of homœopathy, its allied sciences and institutions," and I fail to find anything especially homœopathic in it. You review some homœopathic literature, which is good.

¹. See following letter.

Your journal is a good, interesting journal and there is much of value in it. You *can* make it absolutely indispensable to every homœopathic physician in the United States by making it a real homœopathic "*vade-mecum*." Try it; it will be unique and we need it.

Yours truly,
WILLARD A. PAUL.

It has been estimated that 95 per cent. of the patients seen by physicians will recover from their immediate ailments without treatment but the percentage doesn't matter. What we want to know is whether drugs are demonstrably beneficial in these spontaneously recoverable cases. Do they shorten the normal course of the disease or diminish its mortality? Do they mitigate its severity? Do they lessen the frequency of repeated attacks? Do they reduce the incidence of complications and sequelæ? If not, they are useless.

How many can match Dr. Paul's admirable record of 100 per cent. successes in his curable cases? If others have failures, how many? in what kind of case? why? These are tremendously important questions. We did not ask for reports of failures; we stated that none of our subscribers asked for reports of failures. We will, however, make amends now and invite such reports, preferably, of course, over signature.

S. B. H.

HOMŒOPATHIC PERIODICAL LITERATURE

The Chironian, February, 1917

1. *Address of the retiring president.* 281. Rabe, R. F.

Remarks on the growing indifference to homœopathy displayed in our medical societies. A plea for a more active interest in homœopathy and a strong spirit of coöperation. The author also urges the desirability of doing away with our sectarian attitude. The article might well be read by many of our men, as it is largely applicable to conditions here.

2. *Post-operative adhesions. Relationship between teeth and other ailments. A new bone clamp for operative fractures.* 286. Kellog, E. W.

3. *The eye and focal disease.* 302. Williams, C. E.

Emphasizes importance of such conditions as alveolar abscess, tonsillitis, infection of accessory nasal sinuses, and gonorrhœa in the causation of various ocular affections, e.g., episclerities, iritis, chorio-retinitis, and glaucoma. Case reports are given. The old idea of the "rheumatic diathesis" as the cause of many of our ills is justly attacked. Especially in the case of the old school is the conception to be condemned, when we see aspirin and other salicylates prescribed for nearly everything from tonsillitis to myalgia, because, forsooth, these are all manifestations of the "rheumatic diathesis." Over-confidence in the virtues of boracic acid solution as a panacea in eye-conditions is cautioned against.

W. O.

The Homœopathic World, February, 1917

4. *The three drifts in the evolution of internal secretory therapy.* 56. Burford, G.

The Clinique, February, 1917

5. *Toxæmia of pregnancy.* 53. Mitchell, C. (Ed).

Importance of urea-ammonia ratio in urine emphasized. If below 15:1, patient is toxic. Condition may be temporary, relieved by rest, diet, and remedies. Is serious if persistent.

6. *Sparteïn sulphate in heart disease.* Halbert, H. V. 58.

Often of value with digitalis; is vaso-dilator. Action is quick, drug is almost non-toxic. Doses of 2 or 3 grains should be given.

7. *Surgical treatment of gastric and duodenal ulcers.* 62.

Kahlke, C. E.

Review of various operations with indications for each.

8. *Carcinoma of the colon.* 66. Chislett, H. E.

The author finds that almost all his cases come to him only after there is such involvement of surrounding structures as to dash all hopes of permanent recovery. He then speaks of the inestimable value of early diagnosis, and gives a few reasons why so many times the general practitioner fails in this regard. Occasional attacks of intestinal colic, frequently accompanied with increase in peristalsis and gas formation, are valuable symptoms. If symptoms are suggestive, exploratory incision is recommended.

9. *New methods in the treatment of intra-nasal infection.*

71. Sowers, A.

Nose is cleaned with alkaline spray, then cotton tampon dipped in 10 per cent. argyrol solution is applied. The author's statement that argyrol in this strength is "highly germicidal" is possibly open to some doubt.

10. *Gonorrhœa in women.* 75. McBurney, B. A.

Review. Importance of taking smears from every suspicious discharge is emphasized.

11. *Symptoms and diagnosis of gonorrhœa in the female.*

78. Plank, H. A review.

12. *Treatment of gonorrhœa in women.* 82. Maltman, J. F.

Permanganate douches, bland diet, and indicated remedy in acute stage. Then silver nitrate 10 per cent. application and glycerin and ichthyol tampon, repeated once or twice weekly.

13. *Homœopathy as an economical factor in the family.*

86. Cornell, M. C.

Emphasizes the value of homœopathic remedies when given to weakly children in restoring the normal equilibrium of the

vital forces. As is so frequent in such articles (alas!), we find compound tablets recommended by the author.

14. *Cross-eyes as a handicap*. 92. Boynton, W. E.

An interesting review of the numerous respects in which strabismus is a drawback. Concludes with a plea for early correction of the defect.

W. O.

University Homœopathic Recorder, January, 1917

15. *Remarks on focal infection*. 5. Myers, D. W.

The author speaks especially of conditions resulting from colon bacillus infection.

16. *Bacteriology of focal infections*. 10. Voigt, W. C. R.

Most common bacteria in focal infections as seen by the author are: Staphylococcus aureus, streptococcus pyogenes, staphylococcus albus, micrococcus gonorrhœæ, diphtheroids, bacillus coli. Discussion of the cultural characteristics and pathological significance of each group.

17. *Floating kidney*. 23. Naylor, G. I.

A caution against indiscriminate nephropexy, as results are not to be expected in cases presenting a general splanchnoptosis. Report of fatal case, patient dying from acute dilatation of the stomach, probably caused by the duodeno-renal ligament's producing a kink.

18. *Results to be expected from partial thyroidectomy*. 27. Beebe, H. M.

Partial thyroidectomy performed early in the course of Grave's disease offers good prognosis, as then few or no organic changes have taken place. If done later, myocardial degeneration is stopped, but the damage done is not repaired. Operation should be made during a quiet period, as otherwise marked toxemia may result. During periods of exacerbation, *lycopus virg.* in 5 drop doses every 2-4 hours with ice-bag over heart and absolute rest is of service.

W. O.

Pacific Coast Journal of Homœopathy, February, 1917

19. *The year inventory of homœopathy*. 58. Buffum, J. H.

20. *Cratægus. A heart tonic*. 62. Bishop, H. F.

The author gives tincture of cratægus, three to ten drops three or four times a day, in chronic cases with muscular weakness of the heart when the stronger heart remedies are not required. He finds it useful for "relieving cold extremities, dyspnœa on exertion, general bodily weakness, indigestion, bronchitis, etc., resulting from a weak heart."

21. *Birthright*. 65. Hutchins, M. L.
 22. *Municipal sanitation*. 67. Stiles, W. H.
 23. *The big small remedy*. 70. Shepherd, H. L.
 24. *Gastrojejunostomy*. 72. Evans, T. J.

Homœopathic Recorder, February, 1917

25. *Heritage versus homœopathy*. 52. Guild-Leggett, S. M.
 Report of case in which *graphites* was useful in case of both mother and child.

26. *Warts. Enlarged prostates*. 54. Lutze, F. H.
 Report of homœopathic cure of warts and of relief of urinary symptoms caused by prostatic hypertrophy.

27. *Palm Beach*. 57. Fahnestock, J. C.
 A rhapsody on Florida in winter, followed by a few remarks on *apis*, with case reports.

28. *My southern trip*. 60. Jones, E. G.
 Rambling remarks. It is rather interesting to note that the author, who endeavors to give one the impression that he is an orthodox homœopath, recommends this combination for lumbago:

Tr. Bryonia.
 Tr. Cimicifuga.
 Tr. Gelsemium. āā.

Spirit of Hahnemann!

29. *Grindelia robusta in measles*. 68. Ramseyer, A. A.
 Calls attention to the value of this drug in measles when itching and a profuse, tenacious expectoration are prominent features.

30. *Personal experiences*. 76. Emery, R. L.
 Report of several cases in which gratifying results were obtained from careful prescribing.

31. *Renal vascular diseases*. 82. Mitchell, C.
 Report of few cases, and discussion of the differentiation between arterio-sclerotic nephritis and primary chronic interstitial nephritis. The value of hygiene and of the salt-free diet, or at least of a limited salt-intake, is urged.

W. O.

The Journal of the American Institute of Homœopathy, March, 1917

32. *Homœopathic therapeutics needed: the old school look for it*. Garrison, J. B. 1011.

Homœopathy is losing vogue. People value what we have as we place the estimate ourselves. There is too little writing and talking on the homœopathic subjects. Garrison reports four cases with the purpose of showing what he thinks might be interesting to those seeking homœopathic information. At

least three of the cases are wholly unconvincing examples of cure. The first a case of naso-pharynx catarrh with a thick, stringy, profuse, yellowish discharge in a patient who drank lots of beer. The administration of kali bichromicum 200 was followed in four days by cessation of the discharge and cough.

33. *Verification of homœopathic remedies above the collar.* 1015. McBean, G. M.

34. *Place of homœopathy in general science.* 1018. Hastings, W. S.

The real contribution of homœopathy is its deliberate attempt to cure disease by stimulating the resistive functions of the patient by using drugs having an action similar to that of the injurious agent causing the disease. It is believed that if we can definitely show that drugs may consistently increase the resistive functions of the body, we shall have demonstrated the essential feature of homœopathy.

Homœopaths must regard their science in the same light as that in which the biologist and the chemist do theirs, not as a system of belief demanding loyal adherence, but rather as a part of the accumulated knowledge of the world, knowledge of great value, but to be critically studied and explained, if possible.

35. *Tonsils.* 1026. Copeland, R. S.

Able prescribers testify that adenoid tissue rarely yields to remedies, or at least that it takes a long time to accomplish results. In the case of hypertrophied tonsils and adenoids, we cannot afford to wait; permanent impairment of aural function, or other serious effects are too imminent. Hence the earlier the adenoids are removed, the better.

36. *The end results of fulguration in cases of papillomata and other tumors of the urinary bladder.* 1036. Ashcraft, L. T.

37. *Vaccin therapy in puerperal infection.* 1048. Sappington, S. W.

A series of cases of puerperal septicæmia treated with and without vaccin. The results were practically the same. This does not necessarily mean that vaccin therapy is futile in puerperal infection; only that it is of no value in the last stages of septicæmias. Eleventh hour therapeutics of any description is notoriously useless. Sudden drops in temperature and remarkable recoveries of untreated cases should make us cautious in our deductions. Vaccin therapy in puerperal infections has hardly been given a fair trial for the reason that it is usually employed in the last stages of this serious infection. It should be tested on a large series of cases, in the earliest possible stage, the selection of the vaccin being based on an exact bacteriologic diagnosis. It should further be tried out for its prophylactic possibilities.

38. *Obstetric factors in the prevention of infant mortality.* 1053. Ruggles, E. P.

In the prevention of infant mortality the pregnant woman should be under the care of a physician from the beginning of the pregnancy. There should be frequent physical examinations, laboratory tests, proper dietetic and hygienic conditions; one should guard against premature delivery, measure the pelvis carefully, diagnose the position, correct faulty position, estimate the size of the child.

39. *Venesection in puerperal toxæmia.* 1060. May, G. E.

May concludes that venesection should always be considered when blood pressure is high or rapidly increasing. It should always be done on the advent of either ante- or post-partum convulsions, that the amount of blood drawn should be sufficient to bring the blood pressure down to approximately 130.

40. *Comparative therapeutics; homoœpathic and traditional.* 1063. Strawn, J. C.

41. *Three uncommon remedies.* 1068. Grimmer, A. H.

Oxytropis-Lamberti, *Calcarea silicata*, and *Lathyrus sativa* are briefly discussed and three cases reported.

42. *Carcinoma of the breast.* 1073. Burrett, C. A.

43. *Cancer.* 1079. Crump, W. G.

44. *The function of the kidney.* 1087. Kaufmann, L. R.

Published in the *Gazette*, lii, 146.

45. *Research Work.* The Polycrest of January announced that the fund for research, raised through the efforts of Dr. T. A. McCann of Dayton, will be used to equip a surgical experimental laboratory, primarily for the faculty and their assistants, but its facilities will be extended to students who seek to amplify their student days by productive scholarship. There is an urgent demand for advanced scholarship in the work of homœopathic pharmacodynamics. One of the most valuable of our books in this field, Hughes' *Pharmacodynamics*, should be worthily revised and supplemented by all that present-day scientific scholarship can add. Up to the present day, the colleges have been kept busy meeting legal requirements of state boards. With the preliminary two-year collegiate training established, there should be individuals of adequate ability for this work. The other requisite is some one imbued with the conviction necessary to **ask with the intention of getting** the money necessary to carry on the enterprise.

S. B. H.

The Hahnemannian Monthly, February, 1917

46. *The principal causes of death from typhoid fever; their recognition and treatment.* 65. Bartlett, C.

The three principal causes of death in typhoid fever are:

(1) general toxæmia, (2) intestinal hæmorrhage, and (3) intestinal perforation. Cardiac failure is due to toxæmia and therefore cannot be classed separately.

Toxæmia is the greatest danger. Rest in bed is the most important measure for preventing it. No death from typhoid fever has been observed by Bartlett, "when the patient has been sent to bed within the first five days of illness." Copious water drinking, also, may relieve toxæmia. The amount of water taken should be gauged by the amount of urine elimination, which should not be less than 1500 cc. The author has not observed a single death from toxæmia among cases passing daily over 1200 cc. of urine. If water cannot be given by mouth, then recourse should be had to saline hypodermoclysis or enteroclysis or to the Murphy drip.

Exclusive milk diet seems undesirable. In addition to milk, raw eggs and sugar may be given. Soups, strained gruels, ice cream, and even finely minced meat in moderation may be added. Discretion is necessary, however, and only as much food should be given as the condition of the patient warrants.

"Cardiac stimulants" such as strychnin, digitalis, and camphor are rarely required. Rather should the cause of the failing heart, *i.e.* the toxæmia, be lessened. In addition to general measures, the following drugs are of use to combat toxæmia: *baptisia*, *rhus tox.*, *phosphoric acid*, *hyoscyamus*, and *arnica*.

Regulation of the temperature by the cold mitten rub is advocated.

Intestinal perforation happens especially during the third week of the disease in 2-3 per cent. of all cases and in about 12 per cent. of all typhoid deaths. Diagnostic symptoms of this complication are: sudden abdominal pain, local tenderness and rigidity, movable dulness, obliteration of liver dulness, muscle spasm, diminished peristalsis, leukocytosis, pulse changes. The acute pain is the most important. Sudden drop in temperature occurs later, when it is too late for operation, and should not be waited for. The pain usually soon subsides.

For hæmorrhage, opium may be given to immobilize the intestine. Ice applied to the abdomen contracts the blood vessels by reflex action. Cardiac stimulation should be scrupulously avoided.

47. *Acute sinusitis*. 75. Weaver, H. S.

48. *Pathology of the accessory sinuses*. 81. Gerhardt, P. H.

49. *Immunity in hay fever*. 90. Hillegas, W. M.

50. *Homœopathy*. 98. Champlin, H. W.

Champlin's article is a rather weak attempt to boost

homœopathy by the recitation of five cases treated and "restored to life," by *carbo vegetabilis* 30.

51. *Selection and importance of the homœopathic remedy.* 101. Bohn, D.

52. *Datura stramonium.* 106. Fleagle, M. M.

Stramonium is of much value in the treatment of infantile paralysis, and is probably indicated more frequently than the usually prescribed *belladonna* or *gelsemium*. It is also useful in delirium tremens.

53. *Keynote to a hundred and one homœopathic remedies.* 111. Loveridge, A.

54. *The single symptom.* 116. Maddux, D. P.

H. U.

The North American Journal of Homœopathy, February, 1917

55. *The pathogenic effects of food.* 73. Woodbury, B. C.

The author seems to ascribe all symptoms produced, when but one article of food is ingested for a more or less extended period of time, to its pathogenic action; and he apparently overlooks the probability that an excess of this food, and perhaps even more, the lack of other necessary nourishment, may be the cause of the symptoms.

56. *Recollections of Dr. Hering and his teachings.* 84. Woodbury, Sr., B. C.

57. *An epitome of comparisons in homœopathic materia medica and therapeutics.* 87. McMichael, A. R.

Typhoid fever, otitis media, and acute inflammatory rheumatism are taken up in this portion of McMichael's serial epitome.

58. *Pathological conditions produced by homœopathic remedies.* 91. Hinsdale, A. E.

A brief report of experiments; the action of *iris versicolor* on the stomach, of *spongia* on the bronchus, of *apis* and *veratrum viride* upon the spleen, of *croton tiglium* upon the colon, of *antimonium tartaricum* upon the lung and of methyl alcohol upon the optic nerve. Rabbits were used for the experiments.

59. *Clinical observations and verifications of the effects of some of the metals.* 94. Taylor, E. A.

A few case reports featuring gold, zinc, platinum, and iron.

60. *Clinical cases.* 97. Burgess, Webster M.

Four cases said to have been relieved by *psorinum* 200, *tarentula* 200, *mygale* 200, and *natrum muriaticum*, 1500.

61. *Surgical shock.* 100. Houghton, H. L.

62. *Prompt action of the remedy.* 101. Beals, H.

63. *A sarsaparilla case.* 102. Berridge, E. W.

64. *The International Hahnemannian Association, its history, its scope and its present opportunity.* 103. Becker, H.

H. U.

INFECTION AND IMMUNITY

Diphtheria in the first year of life. Rolleston, J. D., Am. Jour. Dis. Child. 1916, xii, 47.

Diphtheria in the first year of life is comparatively rare. Less than one per cent., at this age, occurred among a total of 2600 diphtheria patients of all ages. Congenital syphilis seems to be an important predisposing cause. The mortality was very high, being 45 per cent. as compared with 7.3 per cent. in the total number of cases.

Scarlet fever morbidity and fatality. Donnally, H. H., *ibid.* 205.

Donnally collected somewhat over seven million cases. About two million of these were believed to be well reported and studies are based upon them. The mortality rate was 5.25 per cent. The morbidity rate was 3.9 per thousand. The mortality and morbidity rates of scarlet fever seem to be independent. The season itself does not influence morbidity. The sexes are equally susceptible, and 90 per cent. of the cases occur in those under fifteen years of age; 90 per cent. of the deaths occur in children under ten years of age. About two children out of three, between three and eight years of age, contract scarlet fever if exposed to it in their homes, if they have not previously had it.

Scarlet fever appears to be a milder disease than formerly but no decline in morbidity has yet been made out. However, where registration has been of longest duration and most thorough (Norway) a reduction in the incidence of scarlet fever has been observed. At all ages males succumb more readily than females. Fatality is lowest in those about ten or fifteen years of age. The younger the child the less his chance of recovery.

DIAGNOSIS AND THERAPEUTICS

Infantile scurvy: its influence on growth (length and weight). Hess, A. F., *ibid.*, 152.

In the course of the development of infantile scurvy, growth is markedly affected. Weight ceases to increase and a stationary plane is maintained for weeks or even months. There is a quick response, however, to the administration of orange juice or its equivalent. Growth in length is also retarded, which is not the case in simple malnutrition.

Although pasteurized milk is to be recommended on account of its comparative freedom from infection, we should realize that it is an incomplete food unless an antiscorbutic such as orange juice, the juice of orange peel, or potato water, is added. Infants frequently develop a subacute form of scurvy on a diet of pasteurized milk alone.

Infantile scurvy: the therapeutic value of yeast. Hess, A. F., *ibid.*, 1398.

It has been shown that a clinical similarity exists between beri-beri and infantile scurvy. Yeast, which is a specific in the former disease, was found to be of no value either as a prophylactic or as a curative antiscorbutic. The embryo of the wheat seed is another effective therapeutic agent in the cure of beri-beri. Although it has some value as an antiscorbutic it is not sufficient to make itself useful in this connection from a practical or clinical standpoint.

It was found that there is an idiosyncrasy as to the reaction to well-known antiscorbutics. In some instances orange juice may meet with only partial success while potato produces a rapid cure.

The specific diagnosis of tuberculous meningitis. Kasahara, M., *ibid.*, xiii, 141.

The finding of tubercle bacilli in the cerebro-spinal fluid is often very difficult and animal injection to confirm the diagnosis of tuberculous meningitis takes a comparatively long time. It is well known that the tuberculous organism reacts to tuberculin in three ways:

1. General reaction.
2. Focal reaction.
3. Local reaction.

In applying this focal reaction to the diagnosis of tuberculous meningitis, Kasahara proceeds by removing some of the cerebro-spinal fluid by lumbar puncture and injecting into the spinal canal from .01 to .002 mg. of tuberculin diluted up to 1 cc. with physiological salt solution. After 6, 12, and 24 hours more fluid is withdrawn and its cytology compared with that of the sample which was withdrawn at the time of the first puncture. The most conspicuous thing in the specific reaction is the presence of a large number, from 50 to 3000, erythrocytes per cubic millimeter. Lymphocytes and leukocytes also show a moderate increase, and the fluid, macroscopically, is usually quite turbid.

Intraspinal injections of tuberculin in three children with suppurative meningitis, epidemic cerebro-spinal meningitis, and with chronic hydrocephalus produced no change in the cells in the cerebro-spinal fluid.

BOOK REVIEWS

Clinical and Laboratory Technic. By H. L. McNeil, A.B., M.D., Adjunct Professor of Medicine and Instructor in Physical Diagnosis, University of Texas Medical School, Galveston, Texas. 1916. Illustrated. Pp. 88. Price \$1.00. C. V. Mosby Company, St. Louis.

This manual aims to present the practical details of history taking, physical diagnosis, and laboratory diagnosis. Theoretical discussion of these details is omitted.

The laboratory methods presented are concerned with the examination of the urine, blood, sputum, gastric and duodenal contents, feces, spinal fluid, serous exudates and transudates, the complement fixation tests for syphilis and gonorrhœa. Most of the methods given are standard.

For blood counts a counting chamber with the "Thoma" ruling is illustrated and is the only one mentioned. This ruling is not satisfactory for the enumeration of leukocytes. The Neubauer or Türk rulings cost but little more and are suitable for counting both red and white cells. The fact that more than one half of the orders for counting chambers, received by a well known dealer, specified Thoma ruling, is probably due to lack of information on this point.

The technic recommended for the Wassermann reaction is that of Noguchi's well known modification, using human erythrocytes. The use of "capillary drops" as a method of titration can hardly be endorsed either in point of accuracy, of convenience, or of comparableness of results.

The very prevalent error of saying "normal" saline (which is 5.8 per cent.) when 0.85 per cent. saline is meant, appears also in this book.

The manual is well printed and of a convenient size. It would not have been rendered over bulky had a few blank pages been put in appropriate places through the text. Laboratory workers, especially, have favorite individual tests and it adds much to the value and convenience of a pocket manual if space is provided for the transcribing of accustomed technics.

S. B. H.

Practical Uranalysis. By B. G. R. Williams, M.D., Director Wabash Valley Research Laboratory. Illustrated. Cloth. Pp. 139. St. Louis, C. V. Mosby Company, 1916. Price \$1.25

In the preface the author states that this outline manual was prepared with the hope of emphasizing "many of the little points which are often lost in the complexity of the large book."

Normal urine and the normal variations it undergoes under certain conditions are first considered; then the chemical examination is taken up, and finally the elements of the sediment, both normal and abnormal, are described. The book is well written, of handy size, and should prove valuable to the general practitioner who has not the time to cull the information he seeks from more voluminous works.

H. U.

 SOCIETIES

College Alliance of the American Institute of Homœopathy

The fifth annual meeting of the College Alliance of the American Institute of Homœopathy was held on March 3d at Powers Hotel, Rochester, New York, — the meeting place of the next session of the Institute in June.

There were present at this meeting Deans R. A. Copeland and Emily Brant of New York, W.-A. Pearson of Philadelphia, C. A. Burrett of Columbus, Ohio, Jos. P. Cobb of Chicago, J. P. Sutherland of Boston University; Drs. Hugh M. Beebe of Ann Arbor, and Sarah M. Hobson, of Chicago. Dr. F. M. Dearborn of New York and a good many of the Rochester physicians dropped in during the meeting.

The program of papers presented was as follows:

"The minimum entrance requirement for Colleges associated with the College Alliance."

Dean William A. Pearson, Ph.D.

Hahnemann Medical College & Hospital of Philadelphia.

Discussion. Dean George Royal, M.D., College of Homœopathic Medicine, State University of Iowa; Dean Claude A. Burrett, M.D., College of Homœopathic Medicine, Ohio State University.

"The minimum and maximum number of hours to be devoted to each division of study in the four years' medical course including didactic and clinical work."

Dean John P. Sutherland, M.D.

Boston University School of Medicine.

Discussion. Dean Joseph P. Cobb, M.D., Hahnemann Medical College of Chicago; Prof. Ralph H. Stewart, M.D., New York Homœopathic Medical College and Flower Hospital.

"Publicity for the purpose of educating the intelligent public including the homœopathic profession."

Dean Royal S. Copeland, M.D.

New York Homœopathic Medical College and Flower Hospital.

Discussion. Dean W. B. Hinsdale, M.D., Homœopathic Medical School, University of Michigan; Dean Cornelia C. Brant, M.D., New York Homœopathic Medical College and Hospital for Women; Sarah M. Hobson, M.D., Secretary the American Institute of Homœopathy.

An interesting feature was the special report on the meeting of the Association of American Medical Colleges and the Federation of American Medical Examining Boards, by Prof. Hugh M. Beebe, M.D., of the Homœopathic Medical School, University of Michigan.

At 7.30 o'clock the homœopathic profession entertained the Alliance at a banquet which ended the program.

Boston District of the Massachusetts Homœopathic Medical Society

The Boston District Homœopathic Medical Society held its regular monthly meeting on Thursday evening, March 1, at the Evans Memorial Building, and the following program was presented:—

1. "Exhibition of Cases of Unusual Interest." Ernest M. Jordan, M.D.
2. "The Psychopathic Hospital—Its Sphere and Usefulness." Esther B. Woodward, M.D., of the Psychopathic Hospital.
3. "The Cerebro-Spinal Fluid in Anterior Poliomyelitis." Winfred Overholser, M.D.
4. "Some Social Problems in the Neurological Clinic." Alberta S. B. Guibord, M.D.
5. "A Case of Multiple Intracranial Sarcomata." Frank C. Richardson, M.D.
Discussion by Drs. Arthur H. Ring, Nelson M. Wood and W. H. Watters.
The name of Hugh Heaton, M.D., was proposed for membership, the application to be acted upon at the April meeting.

Homœopathic Medical Society of the County of New York

The regular monthly meeting of the Homœopathic Medical Society of the County of New York was held on the evening of March 8 at the New York Academy of Medicine, 17 West 43rd St., New York City.

After disposing of reports of committees and the election of new members, the following program was presented:—

"Uterine Hæmorrhage," DeWitt G. Wilcox, M.D., Boston.

Discussion opened by Drs. Walter G. Crump and George W. Roberts.

"Body Balance and Static Joint Conditions," Norman D. Mattison, M.D.

Discussion opened by Drs. Olcott, Kaufman, Laidlaw and Wilson.

Twentieth Century Medical Club

The Twentieth Century Medical Club held its regular monthly meeting on February 21st at the home of Dr. Clara E. Gary, 416 Marlboro St., Boston. Dr. W. H. Watters was the speaker of the evening. The membership of this Club is composed of women physicians of Boston and vicinity, with Dr. Elizabeth Ross as secretary.

MILITARY-MEDICAL INSTRUCTION TO BE GIVEN IN BOSTON

A students' course in military medicine is being given the Senior and Junior classes of the medical departments of Boston University, Harvard University and Tufts College jointly, on Mondays, Wednesdays and Fridays at 4.30 o'clock at Harvard Medical School. The work is done under Government direction and instruction is given by Lieut. Colonel W. P. Chamberlain of the Medical Corps of the United States Army, and Surgeon G. F. Freeman of the Navy. The course is expected to continue until about June 1.

A similar course of lectures is being given by Colonel Chamberlain on Tuesdays and Thursdays to graduates in medicine, and the course is open to the profession without charge. Physicians wishing to take this course should apply to the secretary of Harvard Graduate School of Medicine, Longwood Avenue, Boston, for enrollment.

These lectures are designed primarily for members of the Medical Reserve Corps but are open to any members of the medical profession who are interested in preparing themselves for service in the event of war or who wish to enter the Medical Reserve Corps.

The importance of this movement, "it is stated, lies in the fact that in case of war with a first-class Power, the regular army and the National Guard could not furnish more than one-tenth of the medical officers needed. The other nine-tenths must be drawn from physicians in civil life. However skilful these physicians may be in ordinary practice, experience has shown that they do not make effective medical officers unless acquainted with the special duties demanded in actual service. In the past, preventable diseases have cost the lives of more soldiers than have the bullets of the enemy. It is the duty of the profession, therefore, to prepare themselves for possible war service."

Schedule of Lectures by Lieut. Colonel W. P. Chamberlain

Lecture 1 (given on March 21). History of Military Medicine, and its Contributions to Science. Notable work of Certain Military Surgeons.

2. The Medical Department of the United States Army: Duties Devolving on the Medical Department in Peace and in War.

3. Records of the Medical Department. Supplies for Medical Department. Methods of Obtaining and Accounting for Same. (Samples of Equipment to be Shown.)

4. Examination of Recruits for the Army. Fundamental Importance of the Subject. Bearing on Pension Claims.

5. Military Sanitation in General. Housing, Feeding, Clothing and Equipping the Soldier.

6. Personal Hygiene. Hygiene of Hot and Cold Countries. Sanitation of Troop Ships and Troop Trains.

7. Principles of Marching. Hygiene of Marching Commands. Camp Sanitation.

8. Diseases Prevailing among Soldiers, and Their Prophylaxis. Important Bearing of These on Outcome of Campaigns.

9. Medico-Military Statistics. Bearing on Them of Age, Length of Service, Arm of Service, Station and Race. Acclimatization in Tropics.

10. Military Weapons and the Character of the Wounds They Produce. Gas Poisoning.

11. Nature and General Treatment of Wounds in War. Difference between Civil and Military Practice, and Reasons therefor.

12. Organization of the Army. Line. Staff. Sanitary Units in the Field. Ambulance Companies, Field Hospitals, Hospital Trains, Hospital Ships, etc.

13. Lines of Medical Aid on the Battle Field. Hospital Corps Drill. Evacuation of the Wounded, Importance of Prompt Evacuation.

14. Tactical Knowledge Needed by Medical Officers. Map Problems.

15. The Geneva and the Hague Conventions. The Red Cross Society.

16. Medico-Military Preparedness.

There will probably be two or three extra lectures at which lantern slides and moving pictures will be used to show sanitary service in the field.

Naval Hygiene

Schedule of Lectures to be given by Surgeon G. F. Freeman.
Naval Hygiene; Submarines and Battleships. Illustrated. Friday, March 30.

Preparations for Battle on Board Ship. Demonstrations of Stretchers and Dressings. Monday, April 2.

(a) Hospital Ships: Construction: Functions Hague Convention: Articles Governing the same.

(b) Health of Navy, and Records. Monday, April 9.

Special Accidents and Diseases on Board Ship. Monday, April 16.

Special Features of Naval Life and Hygiene. Illustrated pamphlet and lantern slides. Monday, April 23.

Naval Medical Corps; Organization, Duties Afloat and Ashore. Monday, April 30.

THE AMERICAN REVIEW OF TUBERCULOSIS

A New Monthly Journal

As a result of numerous conferences and more or less continuous demand from all parts of the United States, The National Association for the Study and Prevention of Tuberculosis has decided to launch, in March, 1917, a new monthly scientific publication for physicians and research workers in tuberculosis, to be known as the *American Review of Tuberculosis*.

The purpose of the new *Review* will be to serve as a medium for the dissemination through its articles, notes and abstracts of reliable information from every source with regard to medical and other phases of the nature, treatment and prevention of tuberculosis.

Plan of Publication

It is proposed to publish a monthly *Review* of approximately 64 pages per issue, or about 800 pages to the volume. The publication will be of standard magazine size, and will be printed in attractive and readable form.

Editorial Arrangements

The editorial policy of the *Review* will be determined by an editorial staff of seven members to be appointed by the Board of Directors of the National Association. All articles, notes, abstracts and advertisements to be published in the *Review* must be approved by the editorial staff. In conjunction with the editorial staff there will be a large board of contributing editors. Announcement as to the membership of the staff and the board will be made later.

The Managing Editor

The Association has secured the services of Dr. Allen K. Krause of Baltimore, as managing editor of the *Review*. Dr. Krause is widely known as a worker in the research field of tuberculosis, formerly from Saranac Lake and recently appointed by the Johns Hopkins University to take charge of a new Division of Tuberculosis in that institution. Combining as he does unusual ability as an investigator with experience in teaching, Dr. Krause should inspire confidence of workers in tuberculosis throughout the country in the new publication.

Nature of Articles

The editorial contents of the *Review* will consist chiefly of three types of reading matter: first, original articles, secondly, papers read at annual meetings of the National Association; and thirdly, notes and abstracts such as have been published for several months in the Bulletin of the National Association. By means of these three groups of articles the *Review* will aim to keep physicians and others interested in the scientific aspects of tuberculosis abreast of the best thought in this field.

Price

The price of the *American Review of Tuberculosis* to members of the National Association will be \$2.00 per year, over and above their regular membership dues of \$5.00. To non-members of the Association the price of the *Review* will be \$3.00 per year.

The price of the *Review* has been fixed as low as possible to insure a satisfactory publication. As contrasted with other publications of a similar nature, the price will appeal to members of the National Association and others as very moderate.

Date of Publication

It is planned to begin publication of the *Review* in March, 1917, which issue will be Number 1 of Volume I. Subscribers who wish to be sure of the first issue should send in their subscriptions before March 1st. Medical members of the National Association and other readers of the *Bulletin* are urged to subscribe at once. Checks accompanying subscriptions should be made payable to William H. Baldwin, and should be sent to the executive office of the National Association, which will serve as the business office of the *Review*. Further information may be secured upon request to the National Association, 105 E. 22d St., New York City.

A NATIONAL MOVEMENT OF HOMŒOPATHIC PROPAGANDA

An Open Letter to Each President and Secretary of the State Societies

By William W. Van Baun, President of the A. I. H.

From lack of proper organization and "Federation" of our State Societies, a vast storehouse of Homœopathic energy and co-operation has lain dormant for years. At the Baltimore session of our Institute in June, 1916, steps were taken to initiate a reform in our own Administrative and Scientific Organization and to mobilize all our resources, men, women and institutions, into one vast, harmonious unit of dynamic energy, which will vitalize *all* the members of our profession into aggressive, intelligent usefulness.

Our new Executive Committee has mapped a plan personally to reach each State Society and present a graphic message of great importance to Organized Homœopathy. Under date of December 20, 1916, they sent you a copy of this scheme in full. I respectfully ask you to push aside all obstacles and have your State Society join this progressive movement and adopt the plan as your own. Complete success demands the support and sympathetic co-operation of all our State Societies. With all the forces of our School combined in this common effort, we will surely succeed, and at the same time, we will give an impressive illustration of the School's unity of action.

What our Executive Committee now asks us to do is the supreme task before the Homœopathic profession today, and the least we can do is to respond to their call and put behind them the compelling force of a united determined profession.

THE THREE "C'S" OF CARING FOR MILK IN THE HOME

The three "C's" for the proper care of milk in the home, according to the dairy specialists of the U. S. Department of Agriculture, are:

Keep milk	}	Clean
		Cold
		Covered

Milk is a highly perishable food and the length of time it will remain sweet and safe, especially for children, depends almost entirely upon the constant care it receives from cow to consumer. Milk passes through three agencies — the producer, the dealer, and the consumer. If the first two have

done their part, clean, safe milk will be delivered, thoroughly chilled, to the consumer. The consumer's responsibility begins the moment the milk is delivered at his doorstep.

Because milk poured from vessel to vessel on the street is very liable to contamination from dust, manure particles and germs, milk is best delivered in capped bottles. If bottled milk can not be obtained, the housewife should try to have someone in the family receive the milk in a clean, scalded utensil, cover it instantly, and put it without delay into the refrigerator, or the coldest available place. Under no circumstance should an uncovered pitcher, bowl or pan be left out on the porch to receive bulk milk. The vessel, both before and after the milk is poured into it, is accessible to flies and collects particles of dust and dirt.

Even in the case of bottled milk, however, the consumer must see that the bottle is not left out in the heat for a moment longer than is necessary. Milk should be delivered and kept at a temperature of 50° F. or lower—the colder the better. At such temperatures bacteria develop very slowly and milk undergoes little change until consumed. A slight rise in temperature above this point, however, permits bacteria to multiply rapidly and brings about rapid deterioration of the milk, which may render it unfit for ordinary use and make it highly dangerous for babies and little children. For this reason bottled or other milk should not be allowed to remain in a warm place, as on a sunny porch or in a hot kitchen, for a moment longer than is necessary.

DELIVERY OF MILK IN HOT WEATHER

In hot weather the best plan is to have the milkman put the milk directly into the refrigerator, because at that time of year milk can not be kept properly without ice. If a refrigerator is not available, provide a small box containing ice, and if ice is unobtainable, provide some tight container with insulated walls that keep the heat from getting rapidly to the cold milk. A home-made fireless cooker is admirable for this purpose, especially if partially filled with ice. In the absence of any of these devices, arrange with the milkman not to leave the milk in the sunlight, but to put it in the coolest, shadiest place around the house.

HANDLING MILK IN THE HOME

In handling milk around the home, do not pour it from one vessel to another until it is to be consumed. Do not let the bottle of milk remain out of the refrigerator a moment longer than is necessary. Keep the milk covered, using paper caps or an inverted tumbler on bottles, or storing it in covered utensils. Any household utensil that is to be used as a vessel for keeping milk should first be cleaned thoroughly and scalded.

Before opening a bottle of milk, wash and wipe the neck and outside of the cap with water and a clean cloth. The little depression on the top of the cap may collect dust or water and any milk that leaks out may attract flies. Lift out the cap with a pointed instrument, so that the outside of the cap, which may be contaminated, will not be pushed down into the milk. Each time the milk is to be poured from the bottle it is a wise precaution to wash the neck as described.

MILK IN A REFRIGERATOR

The refrigerator where milk is stored should be cleaned regularly, especial care being given to keeping the drip pipe free and clean. The ice rack also should be cleaned and any place where food is kept or milk stored should be scalded occasionally with sal-soda solution. The refrigerator, even though cold, may quickly be contaminated by a few drops of spilled milk, or by small particles of food. No matter how clean the refrigerator, milk should never be kept in an open vessel. As milk absorbs odors easily, such food as fish, cabbage, or onions should not be kept in proximity to it.

CLEAN EMPTY BOTTLES

As soon as a milk bottle is emptied, rinse it thoroughly with cold water. Do not return dirty bottles and do not use milk bottles except to hold milk. Returning dirty bottles to the milkman may mean that a few days later

either you or your neighbors will get contaminated milk. Milk bottles should never be taken into a sick room. In case of infectious or contagious disease, all bottles should be boiled thoroughly and should not be returned to the dealer without the express permission of the attending physician. Such diseases easily can be made epidemic through disregard of this precaution.

WHERE THERE ARE CHILDREN

Care of milk, important for all, is a vital necessity in a home where there are children. It is absolutely essential to the safety of babies. No intelligent mother will leave to an ordinary servant the task of caring for or preparing the milk for her baby. Mothers of small children should get, from their own physicians, explicit directions for the proper handling of milk and for cleaning and sterilizing nursing bottles. Pamphlets on infant feeding may be obtained from the municipal milk stations or health officers. Milk for babies can not be kept too cold, and too much care can not be given to keeping it clean and covered.

Further information on this subject may be had by writing to the U. S. Department of Agriculture, Washington, D. C., for Farmers's Bulletin 413, "Care of Milk and Its Use in the Home."

ASSISTANT BACTERIOLOGISTS WANTED

The Civil Service Commission of the State of New York is to hold examinations on May 5 for a number of State appointments, among which are the following two:—

ASSISTANT BACTERIOLOGIST, State Department of Health. Men only. \$1,800. Minimum age 25 years; preferred ages 30 to 40 years. Applicants must be graduates of a registered medical college, and have a thorough knowledge of the principles of bacteriology and considerable practical experience in the bacteriologic diagnosis of infectious diseases, bacteriologic examination of water and milk, testing efficiency of disinfectants, and in preparation and testing of antitoxins, including the preparation of purified antitoxins by chemical methods. Training and experience in sanitary chemistry is desirable. Candidates will not be required to appear at any place for examination, but will be rated on their general and special training, and particularly their practical experience and personal qualifications as shown by their sworn statements and by answers to inquiries made by the Commission of their former employers and others acquainted with their experience and qualifications; in connection with the rating for personal qualifications they may be summoned for an oral interview. Candidates may also submit testimonials, publications and any other matter which will bring out clearly their qualifications. Non-residents and non-citizens will be admitted.

ASSISTANT BACTERIOLOGIST, State Department of Health. Open to men and women. \$900 to \$1,200. Minimum age 21 years; preferred ages 21 to 35 years. A degree from a college maintaining a standard satisfactory to the Commission, or an equivalent education, is required. Candidates must have a thorough knowledge of the principles of bacteriology and considerable practical experience in the bacteriologic diagnosis of infectious diseases, bacteriologic examination of water and milk, testing efficiency of disinfectants, and in preparation and testing of antitoxins, including the preparation of purified antitoxins by chemical methods. Training and experience in sanitary chemistry is desirable. Candidates will not be required to appear at any place for examination, but will be rated on their general and special training, and particularly their practical experience and personal qualifications as shown by their sworn statements and by answers to inquiries made by the Commission of their former employers and others acquainted with their experience and qualifications; in connection with the rating for personal qualifications they may be summoned for an oral interview. Candidates may also submit testimonials, publications, and any other matter which will bring out clearly their qualifications. Non-residents and non-citizens will be admitted.

Application for these must be made not later than April 25, and no application forms will be sent out by mail after April 23. For information write to the State Civil Service Commission, Albany, N. Y.

RECENT DEATHS**Asa Stone Couch, M.D.**

Dr. Asa S. Couch, for many years in practice in Fredonia, N. Y., died in New York City on February first, aged eighty-four years.

Dr. Couch was at one time president of the New York Homœopathic Medical Society and a member of the American Institute of Homœopathy since 1877. He was one of the organizers of the New York State Hospital for the Insane at Middletown and at Tonawanda.

Charles V. Webb, M.D.

Dr. Charles V. Webb of Wallingford, Connecticut, died on December 26 last at Middletown (Connecticut) State Hospital. Dr. Webb was a graduate of Hahnemann Medical College of Philadelphia, class of 1898.

NOTES FROM DR. POWELL IN CHINA

A letter from Dr. Charles A. Powell (B.U.S.M.) appears in a recent number of "Prophetic and Mission Record," published by the American Advent Mission Society, under whose auspices Dr. Powell went out to China as a medical missionary. He is stationed at Chao Hsien, and writes interestingly of his work and the conditions under which it is carried on. A hospital is to be built, and probably by now—four months later—is well under way although progress must be very slow. Even the bricks for it had to be made.

As an example of some of the inconveniences with which he has to contend, he mentions the following:

"My pony just now is bare and no one in the place is able to make or fit shoes, so I have had to draw a pattern of his feet and send to Shanghai to buy some new shoes. They will come by parcel post and then I shall have the job of fitting and nailing them. It is quite a job on a Chinese pony, but my pony is better tempered than some, so I hope to succeed. A portable forge would be appreciated for such work as this. In lieu of one I have to heat the shoes in the kitchen range to reshape them and for want of an anvil use the stone step." (*Editor's note.* What a mixture! Parcel post and a kitchen "range" on the one hand, and every man his own horse-shoer on the other!)

Dr. Powell adds: "Perhaps a note about the Chinese ideas on the care of a horse will be interesting. They think that a horse will go blind if a light is not kept burning all night in the stable. I refused to allow it, and the hostler was quite indignant until I asserted that the horse was mine and any losses would fall on me. No signs of blindness have occurred yet." . . .

WHERE "FRIENDS OF FRANCE" MAY HELP

President Murlin of Boston University is sending out a letter to the Faculties, graduates and friends of the University asking for contributions to buy, equip and ship an ambulance to the front "somewhere in France." To do this and to maintain it for one year will cost \$1,600, and to equip and pay the transportation of a driver (who must volunteer to serve for at least six months) will add about \$350.

It is also suggested that the University try to raise a total of \$2,100, to pay for the car and driver and to buy six American flags, one for each department of the University.

Let the friends of Boston University rally to this work, which is undertaken in connection with the Boston Committee of the American Ambulance Field Service, of which Committee President Murlin is a member. Nearly every college in New England has already contributed an ambulance and Boston University certainly must not be allowed to be an exception. Remember what France did for America in our Revolution, and help now in her hour of need when she is doing such splendid and heroic work!

Contributions should be sent promptly to Silas Pierce, Treasurer, 688 Boylston St., Boston, Mass., or they can be forwarded through the *New England Medical Gazette*.

PLACE OF MEETING, A. I. H., 1918

Invitations for the American Institute of Homœopathy in the year 1918 should be presented to the Chairman of the Committee on Place of Meeting. Definite information should be sent regarding:

1. Co-operation of the local profession.
2. Hotel facilities for providing assembly rooms:
 - One to seat 500;
 - Two to seat 200 each;
 - One to seat 100.
3. Several committee rooms.
4. Space for exhibits.
5. Hotel rates.
6. Civic endorsement.

W. B. Hinsdale, M.D., Chairman,
Ann Arbor, Mich.

 PERSONAL AND GENERAL ITEMS

Dr. D. P. Mocas (B.U.S.M. 1915) has completed internship in the Massachusetts Homœopathic Hospital and has opened an office in Nashua, New Hampshire.

Dr. Elizabeth G. Bradt (B.U.S.M. 1915) has been appointed resident physician in the Out Patient Department of the Massachusetts Homœopathic Hospital.

FOR SALE.—A long established homœopathic physician's office centrally located, in a rapidly growing New England city.

Apply to "Retiring physician," Care *New England Medical Gazette*, 80 East Concord St., Boston.

FOR RENT.—Office hours in a physician's office. Inquire at Suite B., 483 Beacon St., Boston, 3 to 5 P.M. Telephone: Back Bay 8000.

Dr. George I. Lythcott (B.U.S.M. 1913) has removed from Darlington, South Carolina, to New Jersey, and having been admitted to practice in the State has opened an office at 88 West 44th Street, Bayonne.

Dr. George P. Dunham (B.U.S.M. 1891) formerly of Methuen, Massachusetts, and of Berlin, Connecticut, has acquired the practice of Dr. Howard A. Streeter (B.U.S.M. 1898) in Marblehead, Massachusetts, the latter having removed to North Adams, Massachusetts.

Dr. Harvey B. Pitcher (B.U.S.M. 1908) has removed from Leominster to 38 Prichard St., Fitchburg, Massachusetts.

Dr. Ettore Ciampolini, class of 1916 B.U.S.M., has returned to Italy to "join the colors" in defense of his country. He sailed from New York on February 23 on the "Guiseppe Verdi," and the steamer is reported as having arrived safely at Genoa on March 10, after a fifteen days' trip. Much anxiety was felt for its safety, especially on the Mediterranean, as it was carrying Italian reservists and horses for army use.

Dr. Cecil W. Clark (B.U.S.M. 1915) has removed from Augusta, Maine, and is now associated in practice with Dr. George H. Talbot of Newtonville, Massachusetts.

Dr. B. L. Whitehead (B.U.S.M. 1913) has removed from 355 Columbus Avenue to 19 Holyoke St., Boston.

Dr. W. H. Watters of Boston read a paper on "Antitoxins and Vaccins in Prophylaxis and Treatment," before the Worcester County Homœopathic Medical Society on the evening of February 14, and on the following Wednesday, February 21, one on "Urinary Diagnosis and the Allen Treatment of Diabetes" before the Twentieth Century Medical Club, Dr. Grace D. Reed, President.

Dr. James B. Comins has removed from 6 Maple Street to 4 Chestnut Street, Springfield, Mass.

Dr. Harriette Collins-Lingham (B.U.S.M. 1897) sends an interesting account of plans for a Community Welfare Exhibit which was held in March in Montrose, Colorado.

The Secretary of the Community Welfare was Arthur E. Gilman, of the University of Colorado, and the exhibit was wonderfully well planned to develop community spirit. Lectures and demonstrations were given by experts, and the different phases of community and individual life clearly explained. Practical methods for civic improvement, road building, concrete construction, etc., were demonstrated, and child life, school and home life had their respective booths, as well as care for mothers and babies. Prevention of disease and the health of the community were explained scientifically. Dr. Lingham was Chairman of the Baby Health Examination Committee. She is the wife of W. A. Lingham, a sheep rancher of Montrose.

Eastern towns and communities might very profitably conduct such an exhibit in the interests of better living.

Dr. Rudolph F. Rabe of the New York Homœopathic Medical College, and Dr. Frank W. Patch of Boston University School of Medicine have made an exchange arrangement in the courses in *Materia Medica* in their respective colleges, Dr. Patch lecturing in New York on March 5, and Dr. Rabe to lecture in Boston University on Friday, April 6, at 3 o'clock. An invitation is extended to the profession to attend this lecture.

Dr. and Mrs. David W. Wells left Boston for Pinehurst, North Carolina, on March 15 and returned April 2nd.

Dr. George I. Forbes of Burlington, Vermont, is secretary of the Vermont State Board of Medical Examiners. Dr. Edward Kirkland of Bellows Falls is another homœopathic member of the Board, elected to fill the vacancy caused by the death of Dr. Whittaker, of Barre.

HOSPITAL NOTES

Mr. Edward H. Mason, President of the Board of Trustees of the Massachusetts Homœopathic Hospital, died on March 21st, after an illness of seven months.

The Somerville (Massachusetts) Hospital is to receive a bequest of \$10,000, willed by a late ex-mayor, Edward Glines.

Our homœopathic institutions are fully alive to the possibilities of war, as evidenced by the fact that three of them have already agreed to turn their facilities over to the Government in case of need,—the Massachusetts Homœopathic, Boston, the Flower Hospital, New York, and the Metropolitan Hospital, New York's great municipal homœopathic hospital on Blackwell's Island.

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No. 5

ORIGINAL COMMUNICATIONS

A GROUP OF INTERESTING CASES*

By FREDERICK B. PERCY, M.D., Brookline, Mass.

Vitality in a medical sect or body does not necessarily imply virility; the former implies existence, perhaps long continued, the latter includes the procreative ability.

This Club to which we owe allegiance possesses both qualifications, and after thirty-six years membership I can truthfully say that it shows no less enthusiasm, no less productive ability, no less honesty of purpose than in the early years in its existence. What Marcus Aurelius said in his "Meditations" is particularly applicable to the members of the Hughes Club: "If any man can convince me and bring home to me that I do not think or act right, gladly will I change, for I search after truth by which man never yet was harmed. But he is harmed who abideth on, still in his deception and ignorance."

You all remember that wise saying of Thales, — "To know one's self is difficult. To advise another is easy."

The purpose of the Club has been from the beginning to add to the knowledge of medicine along clinical and pharmaceutical lines. This paper fulfils these requirements, but you have barely escaped a paper controversial in tone rather than clinical. In the casual reading of a recent article on "The History of Medicine" this paragraph attracted my attention: — "In respect of fiduciary allegiance to Hahnemann's original doctrines the modern homœopâth is often like a skeptical or backsliding clergyman. Scientific medicine is neither homœopathic nor allœopathic. Upon the *subject of treatment*, which is often very much in the air, hinges the whole tolerance of sectarianism and quackery. In the past as we have seen, many important features of medical treatment were actually introduced by laymen.

* Read before the Hughes Medical Club.
Received for publication March 15, 1917

“Therapeutics in fact began with herb doctoring. It is the purely experimental status of actual therapeutics which opens a loophole for the modern quack. The very candor of scientific medicine gives him his chance, for, just where the scientific physician admits his inadequacy the charlatan is most positive.”*

The temptation to answer this was great: but when I reflected that the whole history of the Hughes Club is a more unanswerable proof of the falsity of these statements than any wordy defense I reluctantly gave up the pleasant task.

The cases that I am asking you to consider are interesting, to me at least, and each of them has its lesson.

FOREIGN BODY IN BRONCHUS

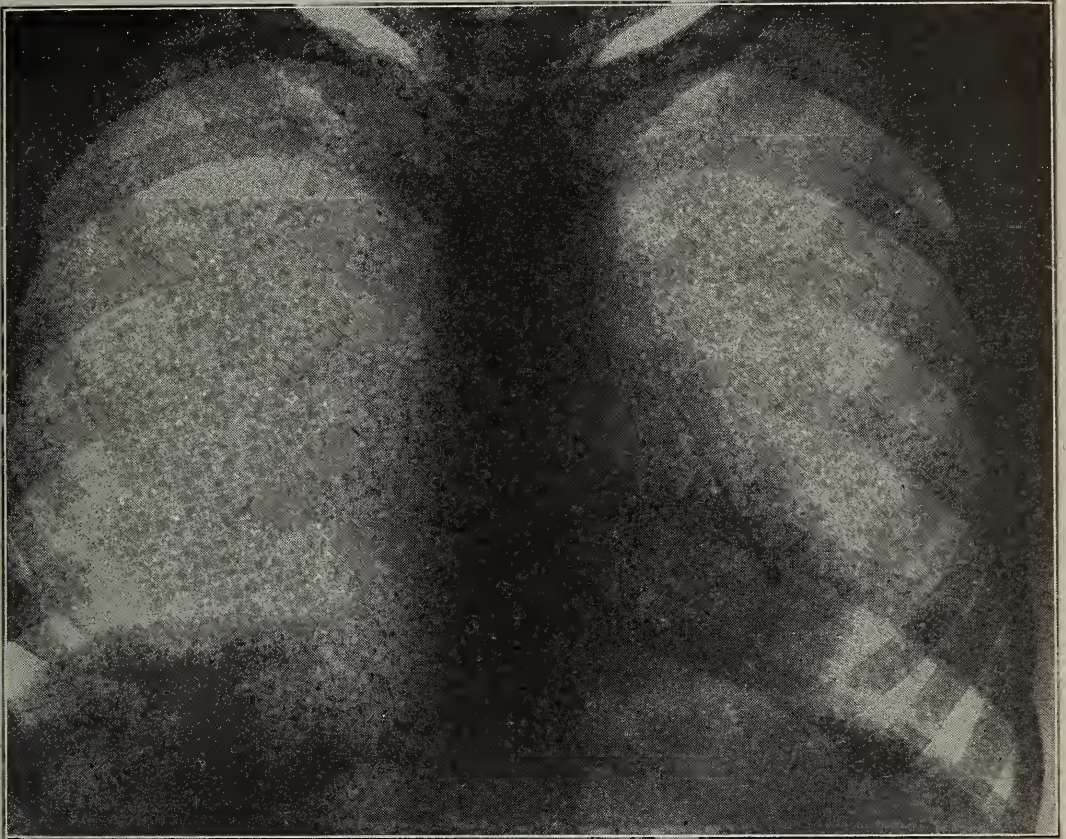
On September 7th Miss — came to my office complaining of persistent cough that had annoyed her for some weeks. She had been a patient of mine for a good many years, and had been singularly free from cough, only suffering occasionally from tonsillitis.

The history was an interesting one. — On August 8th, while summering in the mountain, she, with a group of friends, started for a boat ride. She had on a Tam O'Shanter hat which was fastened with a small pin with a black head. Her hat becoming disarranged she held the pin in her mouth while she arranged it, and some funny story or joke caused her to laugh and with a sudden inspiration the pin disappeared. Naturally she was alarmed and consulted a physician at the resort and he made two abortive attempts to secure the pin, using a probang for the purpose. No successful result followed, and the irritation being quite severe the mother and friends concluded to do nothing more about it, the physician assuring them that the pin would probably leave through the digestive tract.

She came to me because of the persistency of the cough, at times of spasmodic nature, and at times very distressing. Careful examination detected mucous râles over a rather well defined area, and that in one lung. I advised very strongly roentgenographic examination, but as they had been assured there was no possibility of the pin having become impacted they were unwilling at this time to have the pictures taken. The cough, as might have been expected, did not improve and roentgenograph by Dr. Percy Brown, the prints of which I am showing you now, clearly revealed the reason for her persistent cough. At this time the case was taken out of my hands and referred to Dr. Knowles for operative interference. On the 22d of October an attempt was made to secure the pin, but after

*Flexner in “History of Medicine.” Garrison.

the most skilful use of the bronchoscope for two hours the attempt was given up, as it seemed wise not to produce too much irritation. On the 5th of November it was again attempted, and this time with success; the young lady made an uneventful recovery, the irritation of the bronchial tubes entirely subsided, and I have no one on my list who has been more free from cough or cold during the past winter.



COLOCYNTH POISONING

On July 24, 1915, I was hurriedly summoned to attend a patient at a neighboring hotel. I found Mrs. K. in bed, suffering excruciating pain, and with persistent vomiting and purging. The patient was a young woman, 28 years of age. She had two children, the younger child ten months old. She gave a history of having been usually well the previous day, but a rather hearty lunch, quite an elaborate dinner, apparently, according to her story, were the cause of her undoing. The nausea came soon after the pain, severe, causing her to double up, and with much tenderness; the movements were mucus and some blood. My first thought was that I had to do with a sharp, acute attack of gastro-enteritis. In the night, later on, I was hurriedly summoned because the patient was apparently worse, and when I arrived I found her with increased pain, stools composed

almost wholly of blood, and a peculiar pinched look about the face. The attack of pain at this time was of a spasmodic nature, coming in paroxysms. Colocynth seemed to be clearly indicated on the first visit and was prescribed, and its failure seemed to me difficult of explanation. A more careful inquiry into the history of this attack revealed two or three things of interest. The first that her menstruation was overdue and, more important yet, that she had taken means to bring it on, and I was shown the remains of a bitter apple which she had taken the previous day. Then the explanation of the pain, vomiting, and the intestinal disturbance was made clear, and under the influence of opium, which I was obliged to use, white of egg, large quantities of tepid milk, and brandy, the condition cleared up. Strange to say that with all this suffering the purpose for which the apple had been taken was not accomplished. It would be impossible to have a more perfect picture of colocynth than this case presented. It is one of the authorized drugs, and, if you accept tradition, this is supposed to be the fruit which the servant of Elisha secured in the fields near Gilgal during the famine. After it had been gathered and boiled and the men began to eat it they cried out "Oh thou man of God, there is death in the pot," which may explain one common name for it, — *Mors in Alla*.

It may be of interest to recount two other cases and I give them to you for that reason.

ACTION OF LARGE DOSES OF COLOCYNTH

"A woman, aged forty years, had a chronic rheumatic pain in the left thigh and left shoulder. A kind friend advised her to infuse half a pound of colocynth in a half pint of red wine, — to drink the fluid before going to bed. By good fortune she took only half of the infusion. Scarcely had she swallowed this, when she was seized with fearful pains in the region of the stomach, great anxiety, vertigo, faintness and cramps. She vomited several times without relief; then evacuated copious stools, at first watery and fæculent, then consisting of pure blood, with distressing tenesmus; with the stools came large pieces of the inner membrane of the intestine. The pain then concentrated in the stomach and in the lower part of the rectum; the abdomen became collapsed; at last the tenesmus ceased, and the patient gradually fell asleep. Great exhaustion followed, but she finally recovered."

In another case of the kind, which proved fatal, the autopsy revealed that the intestines were red, with black spots, glued together by false membrane. A white fluid had exuded into the cavity of the abdomen and in it flocculi were floating. On the

coat of stomach, here and there an ulcerated spot could be seen. There was no trace of inflammation in liver, kidney or bladder.

Two things are of interest, first, that it is a hydragogue cathartic and has always been avoided in pregnant women for fear of its abortifacient property. The first case tends to prove that this theory is groundless. The second lesson is that the homœopathic use of the drug in gastro-intestinal disturbances can only be explained on the ground of the law of similars.

MERCURIC CHLORID POISONING

On June 9th I was called to a Boston hotel to see a patient who, over the telephone, was described as being desperately ill. The patient was Miss —, a nurse, age 45, who had been constantly in my employ for many years, and at this time was caring for a patient with whom she had been for some weeks.

When I arrived I found her in a most serious condition. She was vomiting almost continuously, the vomitus was streaked with blood, and at times was clear blood. The bowels had moved quite freely, and at this time the bowel movements were attended with a good deal of tenesmus. Careful questioning failed to reveal any reason for this sudden and violent illness; but a friend who was with her said that she had had a great mental and nervous shock, and that for some days she had been wretchedly unhappy, and on the afternoon of that day she had consulted her lawyer and made her will, and expressed a desire for death.

There was nothing to be found about the room which might offer any clue to the mystery, but I felt perfectly confident that it was a case of poisoning, possibly mercurial, and this was confirmed by the finding in her room of a partially emptied bottle of corrosive sublimate tablets. The only thing possible was removal to the hospital where she could have immediate care and attention.

The hospital records are as follows:—Admitted June 9th. Vomiting at this time was persistent, and it would seem that whatever was in her stomach must have been entirely cleared. Stomach washing was discussed and dismissed because of violent hæmorrhages and the fear of causing perforation. White of egg was administered every fifteen minutes, and mouth washed with chlorid of potassium.

10th. Vomited brown fluid and some clear blood; dejections black in color. Milk, Vichy and white of egg was advised, as much as possible, at short intervals.

11th. Vomiting continued, very thirsty, oatmeal tea was suggested. Severe pain in the stomach, hiccough, urine had been suppressed for twenty-four hours.

12th. Still no urine; hot saline baths, hot pack.

13th. No urine.

14th. Had a very restless night, constant desire to vomit, and raised a thick, yellowish substance almost continuously; was able to retain no, or very little, nourishment. Mouth very sore. Small amount of urine obtained by catheterization showed trace of albumin, a few red blood discs, no casts.

15th. Dejections light brown, of exceedingly bad odor and containing a good deal of blood. Menstruation began on this day. The mind up to this time had been exceedingly clear.

16th. Vomited continuously; frequent stools, at times involuntary; great tenesmus. Morphin was then advised both by suppository and by mouth.

17th. Had vomited pretty continuously since ten o'clock the previous night, blood, mostly in large clots which seemed to cause a choking sensation; a few minutes before this had a good deal of pain in the abdomen.

18th. Saline enema water came away with thick grayish material of offensive odor. Cannot swallow liquids for fear of choking. Very restless, mind wandering.

19th. Restless sleep, mind wandering, patient was unconscious for some time and, after some convulsive seizures, died.

The urine which was obtained on the morning of this day showed a specific gravity of 1013; a trace of albumin; total solids, 3 per cent.; urea, 1 per cent. Many granular casts, leukocytes, renal cells, old red blood discs, many squamous cells.

The following typical symptoms correspond closely to the ones I have narrated.

Blythe says if the poison has been swallowed symptoms come on almost immediately, within the first half-hour. In thirty-six cases collected by Folck eleven died on the first or the second day, eleven on the fifth, and the remainder from the sixth to the twenty-sixth day. The symptoms in the order of their appearance were as follows: Painful constriction of the throat; burning heat in the throat extending down to the stomach; all mucous membranes with which saline comes in contact shrivelled and whitened, back of throat looks as if nitrate of soda had been applied; local changes may be so intense as to cause œdema of glottis and death through asphyxia; nausea; vomitus blood streaked or of clear blood; purging, frequently bloody; body temperature becomes lowered; respiration difficult; pulse small, frequent and irregular; urine scanty and sometimes completely suppressed. In regard to this symptom, Soers reports two cases which confirm the view that when anuria is present the patient always dies.

Sometimes when there are profuse hæmorrhages from bowel,

stomach and other mucous membranes, the patient dies in a state of collapse or insensibility, and death is often preceded by convulsions.

The symptoms in cases of poisoning from external use are practically identical:—vomiting at first; on the third day, diarrhœa, tenesmus, diminution of renal secretion; on the fourth day, fœtid breath, stomatitis, hyperæsthesia, feeling of pins and needles in hands and feet; and death in about the same time as when taken by mouth.

Can you wonder that we prize mercury as a remedy in disturbances of so wide and varying natures? Its use in sore throats, in disturbances of the mouth and gums, in dysentery, in nephritis and in the varied manifestations of syphilis are among the choicest specimens of precisionizing in drug application.

Confirmed in our faith, confident of honorable effort to discern the truth and to practice it, we must remember that saying of Date: "It is better to have our medical pictures written on a blackboard with chalk so as to be readily modified to suit the revelations of increasing light than to have them engraven on tablets of stone never to be changed."

SYDENHAM'S CHOREA

By WINFRED OVERHOLSER, A.B., M.B., M.D.

Resident Physician, Evans Memorial Hospital, Boston, Mass.

The object in writing the present paper is not to present the results of any original work, nor yet to make a compendious survey of all the manifold aspects of this common disease. It is, rather, to offer to the general practitioner as comprehensive a review as is possible in these few pages of the more important phases of chorea minor, especially diagnosis, prognosis and treatment, together with such historical notes and debatable points as may seem to be of profit or interest.

Chorea is a generic term, derived from the Greek word meaning "dance," applied to a large number of more or less distinct pathological entities. In all these conditions there are at least two outstanding features: spontaneous movements and disturbance of coördination. It is upon the basis of the relative prominence of these symptoms, as well as the course of the disease, age of the patient, etc., that the classification is made. To those not inclined to be too meticulous in their use of words, "chorea" calls to mind invariably the clinical picture known under the various names of Sydenham's chorea, chorea minor, and St. Vitus' Dance. Sydenham's description¹ of this species of

chorea, which has inseparably connected his name with it, was first published in 1686. Though brief, it is complete and vivid, and is an excellent example of the powers of observation which characterized this great Englishman.

AETIOLOGY. Chorea minor is an acute disease, occurring almost exclusively between the ages of 5 and 15 years, but sparing no period of life. Girls are more frequently affected than boys, in the proportion of 2 to 1 or 3 to 1; the ratio is much higher after the age of 15 years. The consensus of opinion seems to be that the disease is due to the action of some toxic agent on the central nervous system, the latter usually being, in turn, unstable. As far back as 1850² it was suggested that chorea (using the word from now on in its ordinary acceptation) might be related to "rheumatism." The latter term has been so loosely used that it has now almost altogether lost such definite meaning as it may once have possessed; we may assume that in the present case it refers to the condition more accurately known as acute infectious polyarthritis, or some similar disease-state. This tradition has persisted.^{2,12} Abt and Levinson,³ in a series of cases of chorea, found a history of arthritis in 13, none in 130; nevertheless, they affirm their belief in a relation between the two conditions. The rest of the present paper might easily be devoted to a discussion of this point alone, but further expatiation is uncalled for.

In many cases the onset is preceded by some infection, such as arthritis, dental abscess, tonsillitis, typhoid fever (and less rarely), scarlet fever, measles, influenza, diphtheria, or colitis. This fact, together with the frequent complication of endocarditis, the increased pulse and temperature, and the typically acute course of the disease, points to the possibility of the condition's being caused by a microorganism, such as one of the streptococcus viridans group.^{4,5,11} The ever-suspected syphilis has come in for its share of blame, of course, but a luetic ætiology is now seriously questioned.⁶ Unfavorable physical conditions, such as anæmia, abuse of alcohol, and unhygienic surroundings, predispose. One of the most notable features, however, is that in almost every case a history of "nervousness," either personal or familial, is obtainable. The child is of excitable temperament, manifests motor unrest upon slight provocation; is neuro-pathic, that is, shows in some way evidences of an unstable nervous system. So prominent is this instability that often the patient's own parents cannot tell at what point the twitchings became so noticeable as to appear unusual in the child. Fright is an important predisposing factor; whether it alone can produce true chorea is somewhat dubious. Trauma may play a part in causation. Pregnancy is at times an important factor

as well, there being noted a chorea gravidarum.⁷ Imitation is often accused; the twitching arising in the "epidemics" occasionally noted in schools, orphanages, etc., however, are not due to a true chorea, but partake rather of the nature of tics.

The latest theory, perhaps, is that of Haneborg,⁸ who suggests that deficient functioning of the thymus body may deprive the central nervous system of a stabilizer, thus rendering it susceptible to irritation; he points out the coincidence of the period in which chorea is most common with that of thymus-activity, and suggests that were infection the sole cause, chorea would be much more frequent among adults. Finally, we must acknowledge that many cases occur apparently without either physical or psychic provocation.

SYMPTOMS. The onset is gradual and insidious. There is first noticed usually a grimacing or a stretching of the fingers, and a general fidgetiness. The movements of the extremities and facial muscles and the alterations in the voice are the most noticeable. Certain characteristics of the movements, if discussed here, may elucidate some of the symptoms to be mentioned. The twitchings are, first of all, involuntary, but resemble voluntary movements rather than spasms. They are spontaneous, purposeless, vary in intensity, and are not rhythmic. An important point is that they are not confined to synergically associated muscles and muscle-groups; a natural corollary, is then, that they are neither imitative nor imitable, since imitation demands the use of synergism. They are incoördinated, and are frequently accompanied with associated movements. They are never confined to one part of the body throughout the disease, and are constantly changing in form and direction. Any voluntary effort to control them usually results in an increase in their intensity.

Bearing these facts in mind, we may now consider in more detail the symptoms. The pupils are usually large, regular, and active. At times inequality and irregularity are noted, the larger pupil being the more sluggish. Difficulty is experienced in fixing the eyes, and a transient strabismus has been noted. The retinae remain normal to ophthalmoscopic examination, although concentric limitation of the visual field has been known to appear. The tongue may be rather unmanageable, interfering not only with articulation, but even with eating. The vocal cords and respiratory muscles are probably affected much oftener than was formerly thought. Graves,⁹ from a series of studies by means of the pneumograph, found numerous deviations from normality, such as: sudden halts or "cogs," more frequent in expiration; sudden deep inspiration, followed by forced expiration; sudden changes from abdominal to costal

breathing, or the reverse; irregularity and usually acceleration of rate. Swift¹⁰ found in his voice studies changes of pitch and intensity, especially in pronouncing *a*, these changes being fairly constant. These are, of course, attributable directly to the respiratory changes outlined above, plus a similar condition in the vocal cords. Articulation is often so indistinct as to be incomprehensible; at times the patient does not attempt to speak on this account, thus giving the illusion of mutism or aphasia.

The extremities, especially in severe cases, naturally attract the most attention. The gait may be normal or decidedly uncertain. At times the lower extremities are so markedly affected as to make locomotion impossible; the patient lies in bed, thrashing about, and at times may even throw himself upon the floor by the violence of his movements. Coördinated movements are difficult; writing, and often self-feeding, become impossible. Even voluntary movements are followed by involuntary movements, so that the former are quick and abrupt.

Opinion does not seem to be unanimous as to the possibility of a true paralysis in chorea; if it does occur, it is certainly rare. A recent writer¹³ has classed the manifestations in four categories: (1) involuntary but conscious twitching; (2) inability to maintain steady contraction; (3) apparent loss of power, dependent on lack of control; (4) chorea mollis, actual loss of power, but never complete paralysis. Oppenheim mentions a chorea paralytica, in which a flaccid condition with weak or absent reflexes is found, but questions the existence of a true paralysis. Atrophy is rare. The reflexes are usually normal. The French writers, and some Americans, speak of finding an extensor plantar reflex (Babinski), but Oppenheim reports that he has never found it present. Twenty years ago Shaw¹⁴ described an abnormality of the knee-jerk which he considered more or less characteristic. In this condition, the ascent is usually regular, though occasionally interrupted for a fraction of a second; the descent, however, is usually irregular and jerky; again, the foot may remain stationary a second or more at the height of the impulse. Heiman¹⁵ has recently described a sign which he considers of value, but which Mayer and Mayer⁴ report as occurring also in neurotic children. The reader is referred to Heiman's article for further details. Sensory disturbances are practically always absent in true chorea. It should be said, perhaps, that chorea may remain unilateral. The temperature and pulse are usually increased at the beginning, at least. If eating is not interfered with, the general state of health usually remains good.

The psychic aspect is an important one in this disease. In most cases, especially adults, excitability, capriciousness, distraction, and poor memory are found. More rarely is found

mania, hallucinatory delirium, or a depressive state. Any excitement markedly increases the violence of the movements. Even the entrance of the physician or nurse into the room may cause a decided aggravation. The importance of this fact will be considered under treatment. In sleep the motions almost entirely cease. Very rarely a paradoxical condition (chorea nocturna, Oppenheim) is observed.

By far the most frequent complication is endocarditis. Figures are not readily obtainable, but 25 to 40 per cent. would probably be a fair estimate of the frequency. Nearly all patients coming to necropsy show endocarditis,² but as only those with the severest cases usually die, the impression given by this statement is not fair. To be distinguished from an endocarditis, however, is a functional murmur, which is of very common occurrence in chorea, and soon disappears. Mitral regurgitation of varying, but usually not great, severity is likely to follow the endocarditis; emboli are rare. Almost the only other complication is arthritis, usually mild and of brief duration. It should be remembered that chorea may be accompanied, more or less independently, by various psychoses, by hyperthyroidism, and hysteria. The simultaneous presence of hysteria is often very confusing. A small proportion of cases,¹⁶ occur in mental defectives, the manifestation usually assuming one or two forms: recurring attacks of twitching without much general disturbance, or the typical chorea picture.

The average duration is from 2 to 8 weeks, the violence of the movements gradually subsiding until they finally cease. It must not be thought, however, that no cases last longer than 8 weeks. Six months or longer is not an unknown period; and Oppenheim reports the case of a woman who suffered with chorea from her 7th to her 24th year, pregnancy finally effecting a cessation. A chronic form is described. Needless to say, a severe endocarditis may prolong the patient's disability indefinitely. As a general rule, the older the patient, the longer the duration.

PROGNOSIS. The prognosis is favorable, a complete cure being the usual outcome. The mortality varies according to different observers from 1³ to 5¹⁷ per cent., the usual causes of death being exhaustion, fatty degeneration of the heart, or endocarditis. Rapid emaciation, delirium, and a hyperpyrexia are unfavorable signs. Chorea gravidarum shows a mortality rate of about 25 per cent. The form occurring in old age (chorea senilis) rarely recovers, though the prognosis *quoad vitam* is not bad. This form is frequently accompanied with psychic disturbances. Inasmuch as chorea attacks by preference persons of a neuropathic make-up, the soil for a residual tic is fertile. To guard against the development of these tics is an important part

of the treatment. Recurrences in this disease are moderately frequent, as many as 9 attacks in an individual having been recorded. The attacks may be repeated so frequently that one may almost speak of a chronic intermittent form. The incidence of these recurrences seems to bear no relation to the course of treatment followed.³

DIFFERENTIAL DIAGNOSIS. Chorea minor is to be distinguished chiefly from the athetoid form of cerebral palsy, hysteria, and tic. Cerebral palsy causes, in addition to athetoid movements, a spastic paresis or paralysis, the spasticity being readily demonstrable. An organic brain lesion must be suspected in any continued choreic condition in early childhood. The hysterical condition simulating chorea usually comes on rapidly after some emotional disturbance, or is imitative. Hysterical stigmata and choreogenic zones are often found. Of prime importance, however, is the character of the movements, which are rhythmic, repeated changelessly, and are systematic. After an indefinite duration, they suddenly disappear. Of most significance to the diagnostician is the differentiation of chorea from tics or habit-spasms. The latter are, of course, familiar to us all, yet it is not uncommon to have cases misdiagnosed as chorea. To make the distinction as clear as possible, the following parallel columns are given, showing the chief points enumerated by Graves¹⁸ in his valuable article on this subject:

CHOREA	TIC
Movements never confined to one part of body throughout course; never to synergically associated muscle-groups.	Movements rarely general, are confined to one part; synergically associated muscle-groups exclusively are affected.
Movements incoördinated, worse from effort to control.	Movements coördinated, can be controlled voluntarily.
Movements purposeless, never imitative, worse in emotional state.	Once purposeful or imitative. Emotional states often inhibit.
Movements are not capable of imitation.	Movements can be imitated.
Associated movements present.	Absent.
Movements are unpleasant to patient.	Is satisfaction in giving way to impulse.
May be apparent weakness.	Strength intact.
Respiratory function and articulation involved almost always.	Seldom.
Nutrition often impaired.	General health normal.
Disposition altered.	Unchanged. Attention may be decreased.
Tends to recovery.	Tends to perpetuate itself.
Is a disease entity.	Is a habit.

PATHOLOGY. At present the anatomical substrate of chorea minor is unknown. Numerous changes have been found in the central nervous system, but none constantly. Hyperæmia, hæmorrhages, thrombosis and dural hæmatomata are reported.

Whether or not these are secondary cannot be said. As a rule, no gross anatomical changes are present. Either, then, the changes are fine and capable of regeneration, or else no material lesions exist. The toxic swelling of ganglion and cortical cells which has been demonstrated⁴ suggests, of course, that the phenomena may be wholly a functional disturbance due to a toxin or to toxins present in the lymph. Oppenheim concludes that chorea is a brain affection, but that we cannot say whether the cortex, the ganglia, or the cerebellum is the primary seat.

TREATMENT. From the historical standpoint, Sydenham's views¹ on treatment are of interest, especially as they were held by many until rather recently. This illustrious physician recommended venesection, repeated several times, and drastic purging. In addition, he gives several imposing prescriptions, each containing from three to twelve ingredients. Data as to the mortality under this treatment would be well worth study, were they available.

The prime requisite in the treatment of any case of chorea is rest in bed. It is best to place the patient in a large, airy room by himself. If it is necessary that he be in a ward, screens should be placed about the bed in order to isolate him as much as possible. The reason for the solitude is, of course, the importance of avoiding excitement or emotional disturbance, inasmuch as these increase the violence of the twitchings. If the movements are so severe as to be likely to throw the patient out of bed, it is well to place a mattress on the floor to prevent injury. The patient should remain in bed until the twitchings have almost entirely ceased. If the patient is at home, his family should be warned not to scold or threaten him, as such action exercises a deleterious influence. That hospital care is by far preferable goes without saying; conditions are better controlled, and recurrences are said to be less frequent.¹⁶ Prolonged warm baths have a quieting effect if the movements are severe.

A plain and nourishing diet should be allowed. Oppenheim lays stress on the value of sleep, and recommends the use of a hypnotic in case natural sleep is impossible.

The number of drugs which have been recommended and used in the therapy of this disease is eloquent witness to the sad truth that here again no specific exists. Among these are arsenic, bromids, chloral, iron, zinc, opium, atropin, cannabis indica, antipyrin, and the salicylates. Of these, arsenic seems to be the favorite, being used chiefly in the form of Fowler's solution in ascending doses. Such basis as exists for the use of this drug would seem to be homœopathic. In the method of administration usually followed there is danger of an arsenical neuritis or conjunctivitis. Abt and Levinson,³ in their extended observa-

tions, came to the conclusion that arsenic is of no value, and in too large doses may be pernicious. Sodium cacodylate and salvarsan have been employed, the latter probably on the basis (rather a dubious and uncertain one) of the supposed ætiological relation of syphilis to chorea. Bromids and choral are palliative, decreasing the violence of the movements, and in severe cases may be of value in preventing exhaustion. Morphine is recommended by Oppenheim under similar circumstances. The same authority speaks of antipyrin merely as a hypnotic. Of the list given above, the salicylates are the only other drug still much used. This group has been used for many years in the treatment of acute arthritis, and has often been lauded as a "specific" for the condition which many still loosely refer to as "rheumatism." It was shown several years ago¹⁹ that salicylates do relieve pain in acute polyarthritis, but that with their use, relapses were more frequent, cardiac complications fully as common, and the period of stay in hospital as long as in untreated cases. Furthermore, salicylates are not germicidal unless the reaction of the fluid in which they are present is sufficiently acid to cause their conversion to salicylic acid. In other words, their action is probably wholly analgesic. Nevertheless, acting on these two more or less unfounded assumptions, viz., that salicylates were a specific in "rheumatic" conditions, and that chorea was a manifestation of "rheumatism," many physicians have administered drugs of this group to patients affected with chorea, but without, as we should expect, signal success.^{4, 20}

So much for the more or less classical drug-treatment. For homœopathic remedies, which seem to offer more hope than anything so far reviewed, the reader is referred to an article on this subject appearing elsewhere in the present issue.²¹

Numerous methods have been proposed recently. Haneborg,⁸ acting on his thymus-theory, recommends the administration of thymus extracts 3-6 times daily, discontinuing when jerky movements cease. He reports encouraging results. Pardini²² believes that lumbar puncture, by reducing pressure, is of value. Others,^{6, 23} however, have found that results are not always satisfactory. The subcutaneous injection of magnesium sulphate has been employed without conspicuously favorable effects.²⁴ Goodman²⁵ has recently advocated an auto-serum therapy, injecting 15-18 cc. of the patient's blood-serum intraspinaly. He reports very prompt improvement following this procedure. There remains to speak of only the use of phenol 1 per cent. in 10-drop doses intravenously, repeated daily on one to four occasions. This is said to yield prompt and gratifying results.⁴

The value of electricity is questionable.

In chorea gravidarum forcible delivery should be employed as soon as the child is viable.

The importance of deep breathing, relaxation, and the performance of voluntary movements has recently been emphasized^{13, 26} in overcoming weakness and incoördination, and in decreasing the danger of a tic's developing. It is hoped that in the future more attention may be paid to this phase, one which promises to contribute largely to the future happiness and comfort of the patient unfortunate enough to be the victim of this peculiarly trying disease.

1. Sydenham, T.: *Schedula Monitoria I. Opera Omnia*, Sydenham Society, London, 1844, 495-7. See also, *Processus Integri*, *ibid.*, 568-9.
2. Sée, quoted by Fraser, M. S.: Relation of chorea to rheumatism; analysis of 300 cases. *Practitioner*, 1912, lxxxviii, 461-9.
3. Abt, I. A., and Levinson, A.: Study of 226 cases of chorea. *Jour. A. M. A.*, 1916, lxxvii, 1342.
4. Mayer, E. E., and Mayer, W. H.: Chorea; including a new treatment. (Large bibliography.) *International Clinic*, Philadelphia, 1916. Series 26, I, 1-25.
5. Richards, J. H.: Chorea. *Jour. A. M. A.*, 1914, lxii, 110.
6. Morse, J. L., and Floyd, C.: A Study of the etiology of chorea. *Am. Jour. Dis. Child.*, 1916, xii, 61.
7. Albrecht, H.: Chorea gravidarum. *Zeitschr. f. Geburtsh. u. Gynäk.*, 1915, lxxvi, 677-84.
8. Haneborg, O.: Corea minor. Aetiologie og pathogenese. *Norsk Mag. f. Laegevidenskaben*, 1916, lxxvii, 1040.
9. Graves, W. W.: Study of the respiratory signs of chorea minor. (Large bibliography.) *Jour. A. M. A.*, 1909, lii, 364.
10. Swift, W. B.: A voice sign in chorea. (Large bibliography.) *Am. Jour. Dis. Child.*, 1914, vii, 422-7.
11. Gordon, A.: Is chorea an infectious disease? *Jour. A. M. A.*, 1910, lv, 1198.
12. Grabois, G.: Etude étiologique des cas de chorée observés dans le service de M. le Prof. Hutinal. Paris Thèses, 1912-13, No. 298.
13. Grossman, M.: Treatment of chorea. *N. Y. Med. Jour.*, 1916, ciii, 1018.
14. Shaw, H. L. K.: The knee-jerk in chorea. *Albany Med. Jour.*, 1897, xviii, 249.
15. Heiman, H.: A valuable diagnostic and prognostic sign in chorea in children. *Arch. Diag.*, N. Y., 1914, vii, 148.
16. Bailey, P.: Hospital treatment of simple chorea. *N. Y. Med. Jour.*, 1916, civ, 580.
17. Oppenheim, H.: *op cit.* (See below.)
18. Graves, W. W.: Differential diagnosis between chorea minor and tic. *Med. Record*, 1907, lxxii, 315.
19. Miller, J. L.: Specific action of salicylates in acute articular rheumatism. *Jour. A. M. A.*, 1914, lxiii, 1107.
20. Strauss, I.: The present conception of chorea. *Arch. Pediat.*, 1915, xxxii, 134.
21. See page 252 this issue.
22. Passini, F.: Ueber Lumbalpunktion bei Chorea Infectiosa. *Wiener klin. Wchnschr.*, 1914, xxvii, 1363.
23. Timme, W.: Lumbar puncture in chorea. *Jour. Nerv. and Ment. Dis.*, 1916, xliii, 505.
24. Heiman, H.: Effect of magnesium sulphate subcutaneously in chorea. *Am. Jour. Dis. Child.*, 1916, xii, 109.
25. Goodman, A. L.: Auto serum therapy of chorea. *Arch. Pediat.*, 1916, xxxiii, 649.

26. Langmead, F.: Sydenham's chorea, diagnosis, prognosis and treatment. *Lancet*, 1913, clxxxv, 1753.

In addition to the above-mentioned books and periodicals the following volumes have been of service in preparing this paper:

Oppenheim, H.: *Lehrbuch der Nervenkrankheiten*, 6th ed., Berlin, 1913, pp. 1706-22.

Jelliffe, S. E., and White, W. A.: *Diseases of the Nervous System*. Phila. and N. Y., 1915, pp., 433-7.

Wilson, J. E.: *Diseases of the Nervous System*, 2d ed. Phila., 1916, pp. 605-15.

THE APPLICATION OF DRUGS TO CHOREA, BASED UPON THEIR PATHOGENIC PROPERTIES

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It is not my purpose to discuss the treatment of chorea in all its different phases but rather to direct attention to a few drugs, which, from their pathogenesis, seem to have a homœopathic application to the disease.

We are at once confronted with two serious difficulties. The first is the exceedingly meagre details as regards the pathogenesis and pathology of chorea. The second is the confusion which exists in the differentiation of the pathogenic and the "clinical" symptoms of the drugs. Hence the difficulty in selecting a true *simillimum*. The best we can do is to compare, as accurately as possible, the symptoms of the disease and the drug in question.

ACTÆA RACEMOSA: This drug exerts a disturbing influence on the nervous system, causing an irritable condition with weakness, trembling, and feeling of faintness, terminating in exhaustion. There are sharp, lancinating pains in various parts of the body. There is muscular soreness. The spine is tender to touch and is the seat of burning sensations. There is tremulousness of the whole body, nervous restlessness, jerking of the limbs and insomnia. Mental activity is difficult, impeded, distracted or confused, while in some cases there is irritability leading to delirium. The heart action is irregular and tremulous with catching pains. All symptoms, both mental and physical, are aggravated by excitement and ameliorated by rest and warmth.

AGARICUS MUSCARIUS: Seems to exert its chief action on the nervous centres. There is over-sensitiveness of the whole body, especially in the lumbar region of the spine. Paræsthesias are common. Pain in the limbs causes restlessness and sleeplessness. There is muscular restlessness with inclination to rhythmical movements, showing special agility of the upper and lower extremities. There is trembling, jerking, and twitching of single muscles or groups of muscles, including the facial muscles, eyelids and eyeballs. The condition may partially or wholly con-

tinue during sleep. There may be angular contractions of one upper extremity and the opposite lower extremity. The mental attitude is one of weakness of memory, indifference, despondency and fretfulness.

ARSENICUM ALBUM: With small doses irritation predominates; with large doses paralyses follow. Great restlessness is a marked symptom, accompanied by anguish and despair. The mental attitude is one of indifference, distraction, weakness of thought and memory, and aversion to effort. There is restless sleep, often resulting in insomnia. Irritation of the motor nerve cells and fibres results in increased sensitiveness, culminating in attacks of pain, spasmodic jerks, convulsions and tetanic spasms, or, in depressed functional activities, resulting in weariness, trembling and paralysis of single limbs or parts. There is an inflammatory condition of the muscle of the heart and encasing membrane, with subsequent insufficiency of the mitral valve and eccentric hypertrophy. The heart action is accelerated and violent, with stormy, irregular and painful heart-beats. There is tumultuous palpitation with great anguish.

The prolonged use of arsenic leads to the disintegration of red blood corpuscles and the diminution of the proportion of fibrin,—a secondary anæmia. There would seem to be some analogy between the anæmia of arsenic and that of chorea, since in the latter the anæmia is less often an antecedent than a sequence of the disease.

BELLADONNA: Particularly significant from the intensity of muscular incoördination. The mental state is that of excitability or depression, with enfeebled capacity for thinking. In the nervous system there is intense excitement leading to spasmodic, convulsive twitchings, jerking and tension in single muscle groups, which may result in weakness or paralysis. Neuralgic pain in the track of single nerve branches, which is suddenly transferred from one region to another. It induces intense febrile reactions and the toxic state. It increases the elimination of the solid constituents of the urine, of carbonic acid in the expired air, and also the biliary secretion. For this reason it has a special application to those choreas which develop during the toxæmia of pregnancy.

COCCULUS INDICUS: This drug may have a limited application to chorea. It exerts a specific action on the *crus cerebelli* resulting in tonic and clonic convulsions. Spasmodic contractions occur, with nausea, due to action on the cervical circulation and nerve centres. Loss of sleep may induce the condition or aggravate it when present.

CAUSTICUM: The application of *causticum* to chorea, based upon its pathogenesis, is very limited. It acts upon the func-

tions of the cerebral and medullary cells and fibres. Weakness predominates but there may be convulsive movements of single muscles or of groups of muscles, especially of the face, tongue, and lips, less commonly of the arms. Motions continue during sleep. Speech is often defective.

CUPRUM: Its primary action is upon the alimentary tract, but secondarily, after absorption, upon the nerve centres. It causes characteristic cramps which may be local or general, clonic or tonic, or which may take the form of simple trembling or may go to violent convulsions. The spasms begin in the fingers and toes and extend up the limb. There is restlessness between the paroxysms. The patient is better while asleep but the contortions and awkward movements recur on waking.

GELSEMIUM: Exerts a functional action on the cerebrospinal axis. There is muscular weakness and even paralysis, especially of the sixth nerve. There is muscular incoördination, but chiefly due to weakness. Mentally the patient is depressed and indifferent, or, less frequently, irritable. It is frequently employed in material doses of the tincture as a sedative and antispasmodic, which action is probably not homœopathic.

HYOSCYAMUS: The mental state of obscenity and silliness is prominent. There is great restlessness, twitchings of muscles, including the face and eyes. The gait is tottering. Can use neither hands nor legs efficiently. There is a distorted sense of distance as evidenced by the patient's grasping for objects.

LAUROCERASUS: The records of the pathogenesis of this drug are very meagre. It is probable that most of the symptoms recorded are from clinical observation. It is said that the patient can neither sit, stand, nor lie quietly on account of the continuous jerking. Speech is indistinct. There are fearful contortions while the patient is awake, and sleep is restless.

MYGALE LASIDORA: The patient is sad and despondent with a tendency toward hysteria. The gait is unsteady and the limbs drag while walking. There is constant motion of one arm or of the whole body, tremulousness, twitching of the limbs and facial muscles. Restless, uncontrollable movements of the arms and legs.

STRAMONIUM: The mental condition takes a form of maniacal excitement. Its chief action is expended on the brain, but there is less inflammatory condition than in *belladonna*. There are convulsions of the upper extremities and isolated groups of muscles. Partial spasms which are constantly changing. Trembling and twitching of tendons resulting in a staggering gait.

TARENTULA HISPANIA: The pathogenic and clinical observations are not well defined. There is general muscular incoördination, often preventing the patient from walking, dressing,

or feeding himself. Grief and fright bring on the choreic storm. There are restless movements at night. The patient is restless, must move constantly. The spine is sensitive and there is trembling. Can run better than walk. There is considerable muscular rigidity. There is amelioration by mental diversion and from music.

VERATRUM VIRIDE: This drug causes violent congestion of the nervous centres, base of brain, and lungs. There is marked arterial excitement and irregular heart action. There are severe muscular contractions and twitchings in the extremities.

ZINCUM: There is cerebral depression and defective vitality. It produces a condition of impending brain paralysis. There are choreic twitchings induced by fright. There is automatic motion of the hands and head. Lameness, weakness, trembling, and twitching are present in various muscles. The feet are kept in continuous motion. The patient cries out in sleep, there are body jerks during sleep, or there may be somnambulism.

Obviously there are many other drugs which may be useful in the treatment of a patient afflicted with chorea, but the chief benefit from their use lies in the removal or correcting of predisposing or associated conditions, examples of which are seen in *calcareea carbonica*, *cicuta*, *ignatia*, *nux vomica*, *pulsatilla* and numerous others which need not be mentioned here.

Perhaps the most pointed lesson to be drawn from the study of the drugs so briefly discussed above is the confusion encountered when one attempts to differentiate the symptoms of the drug as shown by provings, and the symptoms recorded from clinical observation. All of the drugs discussed have shown the power of producing a choreic state in the healthy individual, and hence would seem to have some application, according to the law of similars, to the disease known as chorea.

CINCHONA OFFICINALIS*

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Peruvian bark, cinchona bark, is obtained from several species of an extensive order of evergreen shrubs and trees, varying from six to eighty feet in height. The bark is obtained from the branches, trunk and root. It is native to South America but is also cultivated in India, Ceylon and Java.

Cinchona was introduced into Europe about 1632-1640 through the instrumentality of the Countess of Cinchon, wife

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of the Viceroy of Peru, from whom it takes its name. It was afterwards distributed by the Jesuits as a febrifuge.

The history of the discovery and early uses of cinchona in medicine is one of the interesting stories connected with drug study.

Up to Hahnemann's time it had been used only in crude form, largely as a specific for general debility, and had been considered a perfectly harmless substance. It was first tested by him in 1790, and it becomes of particular interest to us from the fact that it was through these studies of cinchona that Hahnemann discovered the law of "similia."

A number of alkaloids have been separated from cinchona, chief of which is quinin. The fluid extract and the tincture are also known in Old School medicine.

The physiological action of cinchona in material doses is that of a vegetable bitter stimulating the gustatory and gastric nerves and increasing the secretions. In large doses it may cause nausea and vomiting.

Quinin has been shown to have an especial action on the blood, diminishing the leukocytes, poisoning the white corpuscles and preventing acid fermentation. It causes contraction of the arterioles and a quickening of the action of the heart; derangement of the sense of hearing; mental depression; a general stimulation of all the tissues of the body, followed by the natural reaction of depression. In febrile conditions it has a decided antipyretic effect.

The use of material doses of cinchona, or especially of quinin, soon brings about a condition known as cinchonism; fullness of the head; tinnitus aurium; slight deafness; disorders of vision and cerebral disturbances; occasionally the appearance of a cutaneous eruption.

Death following the use of quinin is of rare occurrence. Other alkaloids of cinchona act in a similar manner, though they are less effective than quinin.

In old school medicine, cinchona or its alkaloids are frequently prescribed in digestive troubles as a tonic in combination with iron or nux vomica. Quinin is also largely used on account of its antipyretic effect in many forms of simple illness where a rise of temperature is one of the prominent symptoms, but its especial field is as a so-called specific in intermittent fever, where its action on the plasmodium malariae is supposed to be all sufficient.

It is used in greatly varying doses, say from one to thirty grains, and in simple acute cases usually results in a rapid suppression of the symptoms. This is not the case, however, in a large proportion of old cases.

It is given in the form of compressed tablets or pills, although it also forms the basis of most of the proprietary malaria cures such as "Warburg's Tincture," for instance, and is frequently combined with many other drugs.

Quinin bears the same relation to cinchona that atropin bears to belladonna; in homœopathic practice it has usually been found that better results are obtained by the use of the whole drug rather than one of its alkaloids.

Consequently, *cinchona officinalis*, otherwise known as china, is the drug which was so extensively studied by Hahnemann, proven and reproven by many other men, and largely used in homœopathy ever since its discovery.

Chininum sulphuricum has received a separate proving and has developed many symptoms as an individual drug, yet it has never obtained the prominence of the bark itself.

"Next to opium there is no medicine that has been more abused than cinchona."

In studying remedies like cinchona it is necessary to recognize clearly their double nature. One should understand the scope and power of every drug in its crude form from the old school or "physiological" point of view, yet it is more important that we keep in mind the homœopathic provings and uses of these drugs and apply them strictly according to the law of similars if we are to expect satisfactory results.

It would be utterly useless to give a potency of cinchona in intermittent fever solely on its pathological aspect. Strange as it may seem, cinchona in purely homœopathic practice is indicated in only a very small percentage of the cases of intermittent, all of which goes to prove the necessity of studying the disease individually in exactly the same manner that we undertake the analysis of any other group of symptoms. Intermittent fever is a difficult disease to combat successfully under a strictly homœopathic régime.

Many physicians will tell you that its cure is impossible without the use of crude quinin and will scoff at the idea of overcoming it in any other way.

On the contrary we know that intermittent fever in practically all of its forms has been and is being successfully handled by many men who have learned through experience the value of their remedies in this disease. There are ample published reports to prove this fact, and moreover a majority of individuals in whom the disease has been eradicated homœopathically remain immune for all time, while crude quinin suppresses the symptoms through the physical effects of the drug and the patients are liable to develop the disease over and over again,

or it becomes fastened upon them in a chronic form which is most intractable.

Further, many individuals are especially sensitive to quinin and suffer from cinchonism scarcely less than from the disease itself. Notwithstanding the infrequency of the indications for cinchona in intermittents it nevertheless is a very important remedy, and its provings show it to have a wide application in different forms of disease. This has been well substantiated in practice for more than a hundred years.

Cinchona patients suffer much from neuralgia due to malarial influences. They are especially sensitive to exposure, to cold; are cachectic and are liable to hæmorrhages of different parts.

The remedy is of value in many forms of sickness occurring in broken-down constitutions; catarrhal states, and in the treatment of the bad effects which follow excessive tea drinking.

The mental symptoms are largely those seen in weakened conditions resulting from the loss of animal fluids or from other debilitating cause. Patients dislike any mental or physical exertion; are indifferent and apathetic; low spirited; morose. They are inclined to be irritable and to blame others for their troubles; are forgetful; use wrong expressions. They are full of fears and indefinite anxiety; even get to the point of harboring suicidal thoughts though they seldom have the courage to carry out such desires.

They are dull and stupid, with heaviness of the head and vertigo, which is worse on motion and relieved by lying quietly; severe, congestive, throbbing headaches after loss of blood, where it seems as though the skull would burst on account of the great waves of pain. Headache from occiput over the whole head from morning to afternoon; worse lying; is obliged to stand or walk; the whole head feels bruised; is aggravated from a draft, from exerting the mind; relieved by hard pressure.

These headaches often occur after sexual excesses or from the loss of an excessive amount of blood from any cause.

Loss of vital fluids in common with phosphoric acid is really one of the most prominent centers around which are gathered a large number of cinchona symptoms. We see it brought out in the dimness of vision and sensitiveness of the eyes to bright sunlight; ciliary neuralgia occurring after a similar cause.

Cinchona is sometimes indicated in rheumatic or catarrhal conditions affecting the muscles about the eye with photophobia and pressure as from a foreign body; sometimes ulceration of the cornea; there is likewise much ringing in the ears associated

with the headache or following hæmorrhage and occurring especially in connection with the defective hearing.

It is useful in coryza with sneezing; over-acuteness of the sense of smell and frequent bleeding from the nose. In facial neuralgia occurring as a result of malarial conditions, supra-orbital or one-sided; periodical and excessively painful; worse from touch, although the headaches, as before noted, are relieved by hard pressure; *light* pressure seems to aggravate.

Dental neuralgia in nursing women, relieved by pressing the teeth together; bitter taste in the mouth; food tastes bitter or salt; dirty, yellowish white, heavily coated tongue; salivation in patients who have taken mercury recently.

Cinchona patients are sometimes indifferent to eating and drinking or even averse to food or the thought of it. At other times they have a voracious appetite and are ready to eat anything and everything, though they are inclined to highly seasoned food. If loss of appetite is present they have a sense of fulness all the time. Appetite is very variable; they do not bear intoxicating liquors well, though they have considerable thirst; water seems to be the only thing that is well borne. Cinchona is often useful in the digestive disorders of inveterate drinkers, and cinchona patients *generally* suffer much from disorders of the digestive organs.

There is much belching of sour or bitter matter; frequent eructations tasting of food, and vomiting of mucus, water, food or bile; rumbling in the epigastrium; cold feeling in the stomach.

Unlike *carbo vegetabilis*, there is no relief from belching. The sensation of fulness with flatulence and belching is very similar to the condition found under *lycopodium*, except that we do not get the four o'clock aggravation of *lycopodium*, and the feeling of satiety is less prominent.

There is much fermentation and acidity after eating fruit; sensation of emptiness in some, sensation of fulness in others. Digestion is slow; the food remains long in the stomach; milk disagrees.

Cinchona patients sometimes have hæmatemesis with consequent depletion. There is much pain and discomfort in the hepatic region; the liver becomes swollen and hard; aching and stitching pains when walking; malarial conditions of the spleen, which becomes hard and large.

Cinchona has some reputation in the treatment of biliary calculi, though my own experience with it has been too limited to be of value, and at the present time severe cases of biliary disease are pretty sure to become surgical.

Cinchona patients suffering from digestive troubles get much

flatulency, fermentation and distention of the abdomen, with no relief from eructation; neither is there any relief from passing gas by way of the rectum.

The drug is of considerable value in the treatment of diarrhœa of children where again it has a strong resemblance to *carbo vegetabilis* and is often followed by *calcareæ phosphoricæ*. Both *carbo vegetabilis* and *cinchona* are useful in conditions of great prostration and are accompanied by fermentation and flatulency.

The especial characteristics of *cinchona* cases are the aggravation after meals and at night; this perhaps is the most prominent distinguishing feature.

The stools are yellow, watery, undigested, profuse or involuntary.

If the patient is debilitated by loss of fluids, *cinchona* would be doubly indicated; also if the case seems to proceed from the eating of fruit. The diarrhœas usually come on gradually, constantly progressing with greater and greater severity; more common in hot weather or after severe, acute disease.

It is interesting to note in this connection that petroleum is indicated in a chronic diarrhœa occurring only in the day time, opposite to *cinchona* with its nightly aggravation.

Cinchona is useful in conditions resulting from excessive loss of semen on account of its affinity to conditions arising from the loss of vital fluids.

In women the menstrual flow is inclined to be early and profuse and the blood dark; many conditions resulting from excessive menstrual flow may call for this drug, but these are usually general states bringing symptoms in other parts of the body rather than an immediate trouble with the reproductive organs themselves.

It is especially useful after abortion where there has been much loss of blood following uterine hæmorrhage occurring at the time of labor from a variety of causes, and again in the lying-in room where the lochia is profuse and long-lasting, and the mother becomes jaundiced and pallid from this cause.

Cinchona is not a frequently indicated remedy in diseases of the chest, except as they may result from the source of so many of the *cinchona* symptoms — the loss of vital fluids.

This brings it into play in the treatment of the distressing weakness following hæmoptysis and even in those severe cases of phthisis where the loss from excessive secretion thrown off from the bronchial mucous membrane, and the night sweats, render the patient *in extremis*.

There are loud, coarse râles in the chest, continued suffocative cough with bloody, fœtid expectoration, anæmia, and great

debility. These patients are bathed in perspiration and aggravated from the least motion or exertion.

Another use of the remedy in a tuberculous condition is that sometimes arising in hip disease where there is profuse suppuration and loss of pus in great amount.

In these conditions of extreme debility we usually have also a dropsical condition; swelling of the extremities; relaxation of all the muscular parts; swelling about the joints, and coldness.

The nervous system often becomes extremely sensitive; the senses over acute, later to be followed by great torpor and excessive weakness.

These patients in spite of their fatigue are unable to obtain restful sleep; they are particularly wakeful during the first part of the night, when through the crowding of ideas through the mind they are kept in a state of mental unrest, or if they drop away they are pursued by frightful dreams.

The only form of intermittent fever in the treatment of which cinchona is really valuable is the perfectly uncomplicated well defined chill, fever and sweat. The chill is without thirst, extending over the whole body; the heat also is without thirst or the thirst is very inconsiderable; perspiration is profuse especially on covered parts and during sleep, and is accompanied with great thirst. If there is a history of loss of fluids, cinchona is the more likely to be indicated. The period between the attacks is marked by great debility and exhausting sweats. The characteristic fever may be noted not only in these occasional intermittents but in typhoid, or other low fevers, and in the hectic condition accompanying phthisis pulmonalis.

Intermittents having the above characteristics are not common in this vicinity, and if you search conscientiously for the symptoms which cinchona has brought out, your experience will verify it.

The relations of cinchona to other remedies are somewhat as follows:— Ferrum is complementary; it does not succeed well after digitalis. Calcareo phos. as well as ferrum are often indicated after cinchona, especially in diseases of children.

OCCUPATIONAL DISEASES

BY J. EMMONS BRIGGS, M.D., Boston, Mass.

Occupation plays a very important part in the ætiology of many medical disorders. This fact is so well understood that certain occupations are considered hazardous and is so universally recognized that insurance companies make various classifications and charge increased rates. Among those dangerously employed may be classified all workmen engaged in the manufacture of high explosives, workers in poisonous acids and poisonous metals such as lead, antimony, arsenic, copper and phosphorus. The danger arises from absorption from long continued contact with these toxic substances. Workmen engaged in structural iron work, in mining, in the construction of subways and tunnels, in diving, as well as firemen and railroad men, are liable to severe accidents from which men in less hazardous occupations are exempt.

Physicians are frequently exposed to contagious diseases and therefore often contract them; surgeons suffer from blood poisoning. Neuroses are encountered in a peculiar type of cramp which is observed in telegraphers, typewriters, pianists and penmen. Unhygienic conditions surround workers in sweatshops and in tobacco factories. Stokers are subject to diseases of the respiratory tract, due to sudden changes in temperature. Deafness is frequently encountered in boiler workers.

Much light has recently been thrown upon diseases and injuries incident to the various vocations through the workmen's compensation act, which has brought out the fact that many diseases are indirectly due to occupations which were formerly considered not hazardous.

The surgical lesions which are indirectly attributable to occupation may be classified under the headings of burns, ulcers, malignant disease, infections and trauma.

BURNS

Burns may result from contact with very hot substances, electrical currents, the Röntgen ray, and from the setting off of high explosives. Since the introduction of the automobile, many severe and fatal burns have occurred from the explosion and ignition of gasoline. (Severe or fatal inhalation poisoning from the exhaust of an automobile into a small and poorly ventilated garage has also been observed.)

Electricians frequently sustain severe and deep burns through contact with direct or alternating currents. These injuries may be exceedingly serious, result in deep necrosis,

show great obstinacy in healing and be very painful. The slough is a long time in separating and the necrosis so deep that bony structures are frequently involved, resulting in necrosis of bone and exfoliation. The areas of necrosis are not painful, but the zone surrounding the line of demarcation is sensitive to a high degree. So obstinate are these wounds in healing that amputation is frequently required.

In surgery, we have unfortunately had occasion to observe the severe burns which follow exposure to the Röntgen ray. The burns produced may be of trivial character, resulting in erythema, or may be extensive and be followed by necrosis of superficial and deep structures. These burns are always slow in healing and tend to break down in areas which appear to be securely healed.

Röntgenologists frequently suffer from cracks in the hands, followed by ulcers, which are intractable in healing and result in epithelioma. Before this danger was fully recognized, many of the early cases required amputation.

Foundrymen occasionally meet with severe burns from molten metal. One such case occurred in my experience several years ago. A molder emptied a ladle of molten iron into his boot leg which resulted in a perfect casting of the contour of his foot and leg. When his leg was disengaged from the casting, an exceedingly deep burn of the lower extremity was disclosed, which later necessitated amputation.

NECROSIS, CHRONIC ULCERS

The matchmaking industry has been responsible for countless cases of phosphorus poisoning. The yellow phosphorus from which nearly all of the "strike-anywhere" matches were manufactured, is the most dangerous. Yellow phosphorus is exceedingly toxic; from 1 to 3 grains will cause death. The Swedish safety matches which strike only upon the box do not contain phosphorus. The match heads contain potassium chlorate and their manufacture is unattended by danger.

The lucifer match worker was constantly subjected to the poisonous fumes of phosphorus. Phosphorus attacks the long bones, rendering them peculiarly brittle and susceptible to fracture. While this poison may attack any bone, it has a predilection for the jaw bone. It gains entrance through carious teeth. The gum becomes swollen and the jaw bone painful; pus forms, the teeth loosen, fall out or are extracted. The inflammation extends by a process of molecular caries; a chronic periosteitis and osteitis with necrosis develops, and pus continually oozes from necrotic areas. Pus swallowed with food produces toxæmia; inhaled, it produces septic pneumonia. An

extension of the necrotic process upward may involve the meninges, resulting in meningitis.

A recent article in the *Annals of Surgery* of February, 1916, on the subject of "Tanner's Ulcer," by John C. DaCosta, describes a peculiar ulceration due to chromium and chromates upon the integument. Tanners working with the old tan-bark method are not affected; only the workmen who actually come in contact with the bichromate salts suffer. Chrome workers suffer from vesicles, pustules or eczema upon various parts of the body and ulcers upon the hand. These ulcers are chiefly characterized by induration, pain, and tendency to deep penetration. They reach tendons, enter joints or destroy bone.

CANCER

The most typical form of malignant disease which is strictly occupational in origin is chimney sweepers' cancer, which usually manifests itself by a small, hard, warty growth upon the scrotum, which progresses slowly for many years, when it assumes active growth, quickly followed by enlargement of inguinal glands and general dissemination.

This disease is supposed to be due to irritation by chimney soot, but is not confined to chimney sweeps, as it occurs in paraffin workers and others, in whom the scrotum is liable to irritation by the material with which they work.

As time goes on, more and more importance is placed on the theory of the traumatic origin of carcinoma. Long continued irritation in a localized area predisposes to this disease. Trauma inflicted upon the lateral border of the tongue, in contact with a projecting tooth becomes a focus of carcinoma. Other instances are found in the smoker's cancer, due to the contact of the pipe stem against the tongue or lower lip; the epithelioma arising in an indolent varicose ulceration of the lower extremity; the carcinoma of the breast following injury; carcinoma of the gall bladder and common duct, the sequelæ of constant irritation from gallstones; and the carcinoma of the stomach, which is usually preceded by chronic ulcer. These are all illustrations of the theory of the traumatic origin of cancer.

The transitional step between chronic inflammation and cancer is short, dependent upon prolonged irritation with consequent changes in cell arrangement and excessive proliferation. In order that we may consider cancer as an occupational disease, we have but to point to certain vocations in which there is a continuous irritation of a definite part of the body, brought about by the type of work performed.

Your attention is called to epithelioma due to continued irritation by the Röntgen ray; to the malignant ulcers of the

skin that occur in workers in coal tar and pitch products; to miners' cancer of the knees and hands, and the frequent development of malignant disease in any locality where trauma has been inflicted.

INFECTIONS

Anthrax, known also as "malignant pustule," or "wool-sorters' disease," is due to the entrance into the system of the *Bacillus anthracis*. Anthrax is an occupational disease, as it affects workmen whose business compels them to handle hides, wool, horsehair and pigs' bristles. The slightest abrasion of the skin is sufficient for inoculation and infection. Men employed in the tanning of hides, in the sorting of wool, in the manufacture of hair cloth and in the making of bristle brushes and hair mattresses, are most frequently infected.

The organism clings to the hides and hair of animals that have died from the disease, or that have been slaughtered because of it. The wool of "fallen fleeces" is the most dangerous to handle. The bacilli frequently are found in South American hides, Persian wool, hair and van mohair from Asiatic Turkey, horse-hair from China, bristles from Siberia.

The entrance of anthrax bacilli into the body is followed by local or general infection. Locally, a hard red swelling develops known as "malignant pustule." This infection is usually situated upon the face, neck or hands. When purely localized, these pustules may be excised with good results. After systemic infection occurs, resection is useless. The manifestation of this disease known as "malignant œdema" resembles a severe erysipelas, and is more dangerous than the malignant pustule.

Wool-sorters usually develop pulmonary anthrax from inhalation of the dust containing the anthrax bacillus. The prognosis is exceedingly bad.

Anthrax may be abolished by subjecting all raw materials from infected districts to steam sterilization. This prophylactic measure has been adopted in many industries and has greatly diminished the prevalence of this disease.

TRAUMA

In certain kinds of work, laborers are subject to violent traumatism. Occupations necessitating great muscular effort in lifting, subject the laboring man to severe muscular strains, ruptures of tendons, fractures, dislocations and herniæ.

Certain types of fractures are peculiar to certain occupations:—fractures of the spine and pelvis as a result of railroad accidents, multiple fractures resulting from falls of structural

iron workers, carpenters, masons, roofers, etc. A peculiar type of fracture of the wrist results from the back kick of an internal combustion engine. This is frequently observed in chauffeurs and operators of motor boats.

Many intra-abdominal conditions are directly traceable to injury; peritonitis and internal hemorrhage from gunshot and stab wounds, volvulus from excessive strain and appendicitis which may be the result of direct violence.

I have thus far attempted to outline a few of the occupational surgical conditions encountered in various vocations. In conclusion, your attention is directed to two diseases of the osseous system which are not confined to any vocation; nevertheless they occur in any kind of labor which subjects the bones to trauma and to rapid changes in temperature. Both of these diseases presuppose the presence of virulent microorganisms in the blood stream, which become localized in the medulla of bone and result in caries and necrosis; the tubercle bacillus, the offender in tuberculous osteomyelitis and pyogenic organisms in osteomyelitis.

Tuberculous disease of the bone is usually secondary to a primary lesion located elsewhere. The bacilli float free in the blood stream and become lodged in the medulla of bone at a point of irritation, where a typical tuberculous process is developed. Here, traumatism plays an important role, for it affords an opportunity for the lodgment of tubercle bacilli.

Of still greater interest is the pyogenic form of osteomyelitis which very frequently follows sudden changes of body temperature.

There is always a primary suppurative focus, which, however, may be trivial in character. Bacteria become disengaged from the antrum of infection and are deposited in the medulla of bone. When the body is subjected to high temperature, the circulation is peripheral. When the integument is suddenly chilled, the blood is driven to the internal structures, congesting and overcrowding them. In this manner, the pyogenic microorganisms are conveyed to the marrow of the bone.

This short paper is not intended to cover completely the field of surgical occupational diseases. It is merely a résumé of a few of the most frequently encountered lesions which have come under the writer's observation.

WHAT THE GENERAL PRACTITIONER SHOULD KNOW ABOUT TONSILS*

BY BURTON HASELTINE, M. D., Chicago, Ill.

The general practitioner's knowledge of tonsils should begin with a differentiation between fact and theory. It is unusual to hear a discussion of this subject in which the two are not badly confused. Anatomically the history of both normal and abnormal tonsils belongs in the domain of established facts. Physiologically we have little more than uncertain speculation. Pathologically much has been established beyond question, but the lines between fact and theory are as yet by no means precisely defined.

The mass of lymphoid tissue known as the faucial tonsil is discernible about the fourth month of foetal life, but even at birth it has attained only a moderate development. It increases rapidly during the early years of childhood, attaining its maximum at five to seven years, than diminishing until maturity. In very many cases this natural history is modified by inflammatory changes which, first, bring about an over production of tissue (hypertrophy or hyperplasia) and, second, hinder the physiological process of involution.

As to the function of this tissue nothing is positively known. It has not been possible either by experimentation or by clinical study to demonstrate any change in the general metabolism of the individual due to the presence or absence of these structures in a normal state. The fact that nature gets rid of them in healthy persons would suggest that they are useless at least after the period of childhood.

Pathologically, two facts concerning the faucial tonsils are so well established as to be beyond dispute. First, it is a weak point in the individual's defense against bacterial invasion, and, second, it is a favorite spot for the lodgment and retention of infective material from which a great variety of abnormal conditions may result.

Tuberculous infection has been shown to gain access to the organism more often through the tonsil than at any other single point, and it is probable that this is also true of some of the acute infections. The relation between cervical adenitis and abnormal tonsils is of course obvious. Almost equally well known is the sequential relation of certain forms of arthritis to tonsillar infections. Less understood but perhaps equally important is the fact that certain anæmias, toxæmias and perverted thyroid functions can be traced to chronically diseased tonsils and cured by their removal.

* Received for publication, March 17, 1917.

These few simple facts form a good basis for the physician who would discuss or treat tonsils, but he needs much more before he assumes to give advice that is of value. A simple inspection of the throat, whether made by general physician or specialist, is a small factor in determining the needs of any given patient. The question of tonsil pathology and its relation to general metabolism is well worth the combined attention of the general diagnostician and the specialist, and the best clinical results are obtained when these two work in coöperation.

The general physician should know that if he is adequately informed he is the best judge as to whether a patient's health is impaired because of a local pathology. He should know that the size and gross appearance of the faucial tonsils are of practically no value in estimating the amount of damage they may cause. He should know that a diminution in size and a lessening of acute attacks in adolescence is not the effect of medication but a natural process occurring in nearly all cases, even those that are growing steadily worse. The most serious and permanent damage from tonsil pathology often takes place after the stage of enlargement and discomfort is passed. These are usually the cases that have been "cured" by medicines or applications. Both the general physician and the specialist should know that there is no need for the removal of tonsils that are not pathologic, even though they be larger than normal. They should know that the only treatment worth considering for tonsils that are pathologic is their clean surgical removal. This should be done with the same conservatism and skill that is given to any other serious surgical work, and here also intelligent coöperation is called for.

When adequate study is given every tonsil case and all operations are clearly indicated and skilfully made we shall hear no more of unnecessary or injudicious surgery or of disappointed patients.

122 S. Michigan Ave.

AUTOMOBILE TRIP TO ROCHESTER

Several of the New England members are planning to go the Rochester meeting of the American Institute of Homœopathy in their automobiles. It is suggested that the company leave Boston on Friday afternoon, June 15th. A stop for the night will be made at Greenfield. The following morning the Mohawk trail will be crossed and the day spent in traveling. On the third day, Sunday, the 17th, Rochester should be reached at a comparatively early hour. This will allow one to make the trip in relatively easy stages. The return is planned by Jacob's Ladder. The roads are in excellent condition over the entire route. Those desirous of making the trip may communicate with Dr. W. H. Watters, 80 E. Concord Street, Boston.

CLINICAL DEPARTMENT

Paralysis of Seventh Nerve: Case 1. Boy, age 15 years, came to the clinic January 15, 1917, because he couldn't close his right eye or whistle, and food caught in his right cheek. He said that on January 1 last he was struck on the right cheek near the nose with a hockey stick. A week later the above symptoms developed somewhat suddenly. Examination showed the boy to be in good health except for his facial paralysis. He could not wrinkle the right half of his forehead or move any of the facial muscles of that side. He could close the upper lid somewhat, but the lower lid could not be drawn up to it. The mouth was drawn to the left because of the weakness of the opposing muscles. The ala of right nostril was flaccid. There were no ear or tongue disturbances. The muscles reacted sluggishly to an interrupted galvanic current. He was given *gelsemium* 2x q i d, and five minutes' application of an high frequency tube. The electricity was repeated on successive Saturdays. It should have been given every other day, but he could only come weekly because of school. January 20, medicine changed to *causticum* 3x every two hours, and this has since been continued. February 29 he was about well, could close his eye but had a slight conjunctivitis. Food no longer caught in his right cheek, and he could whistle.

Case 2. The patient, a male, colored, age 30, came to clinic April 7 for paralysis of the right facial muscles. Eight days ago he says that he noticed his face twisted to the left when he ate, and he could not whistle, also that he could not close his right eye and for two days it had been watering. He says that just before the condition came on he got over-heated and then rode on the front platform of a trolley car. He has a bad upper right molar. When he shovels coal there is a queer, empty sound in his right ear, and he cannot breathe through his right nostril. He has been subjected to sore throats. Examination shows that the normal wrinkles of the right half of forehead are gone and skin is smooth. He cannot close his right eye. The normal naso-labial fold on right is gone and is intensified on left cheek. Mouth is drawn to left. He cannot whistle. Tongue protrudes straight and is red and teeth-marked, but it is not anæsthetic nor is there other alteration of sensation in it. Otherwise physical examination is negative.

Here, then, are two unmistakable cases of Bell's palsy, the first traumatic and definitely peripheral, the second inflammatory and extending back into the stylomastoid foramen far enough to irritate the chorda tympani branch.

Facial paralysis is a very common condition during the cold

weather. Every general practitioner sees more or less of it. The most common cause is exposure to cold wind, and, for that reason, persons out much or driving in the winter are particularly predisposed. In the cities many cases seem due to riding on the front platform of the trolley cars. It is rather rare to find a traumatic cause such as exists in our first case. The first question to be determined is whether or not the location of the lesion is within or external to the skull. If the paralysis is external to the skull, there will be no disturbance of the ear, no anæsthesia of outer half of the tongue. If the lesion is just inside the skull, this symptom will be present. In examining a case of facial paralysis, we have to think of: (1) lesions anywhere in the course of the pyramidal fibers passing from the lower end of the precentral gyrus in one cerebral hemisphere to the facial nucleus on the opposite side of the pons varolii (supranuclear paralysis), (2) lesions involving the facial nucleus itself (nuclear paralysis), (3) a lesion of the seventh nerve between its origin in the nucleus and the point where it divides in order to supply the various facial muscles (peripheral paralysis). In the first instance, owing to the fact that pyramidal tract fibers concerning facial muscles cross the mid line of the brain stem only a short distance above the seventh nucleus, the facial paralysis is on the side opposite to the lesion. Only these fibers may be involved, although more commonly the fibers destined for the corresponding arm and leg suffer, in which case the facial paralysis forms part of a hemiplegia; hence our first thought in facial paralysis should be to examine the leg and arm of the same side to determine whether or not the condition of the face is part of the hemiplegia. In case it is, the upper part of the face will not be as much involved as in Bell's palsy, the patient is able partly to move the eyebrows and close both eyes, though these muscles will show weakness as compared with the healthy side. After exposing the teeth, the facial asymmetry will be more striking. The nutrition and the electrical excitability of the muscles undergo no alteration, and this is in contrast to the nuclear and peripheral types. In nuclear paralysis, besides the sensory disturbance of the tongue, there is paralysis of the stapedius muscle, so that the patient suffers from excessive sensitiveness to deep tones, and perhaps from tinnitus. A lesion between the facial nucleus in the pons and the internal auditory meatus will probably interfere with the vestibular and cochlear parts of the eighth nerve, and so give rise to vertigo and impairment of hearing. In a lesion at the level of the geniculate ganglion, the chorda tympani is unlikely to escape, and the taste fibers coming from the anterior two-third of the tongue lose their functions. At the same time irritation of the ganglion

may provoke a herpetic eruption on the auricle and around the external auditory meatus. It will, therefore, be seen that facial paralysis may be caused by lesions in a variety of locations, and the term "Bell's palsy" should be limited to cases in which the exciting cause operates at some points within, or just below, the Fallopian canal. Any inflammatory processes which exert pressure may be the cause. In the clinic we are in the habit of giving these patients *gelsemium* or *causticum* every two hours unless some other remedy is definitely indicated. After two weeks from the onset, which is allowed for the subsidence of the inflammatory process, interrupted galvanism is given for ten minutes, followed by high frequency electricity. The duration of the treatment necessary varies greatly. One patient who came in two years ago with paralysis of the left seventh nerve, and again this winter for a similar condition of the right nerve, recovered in two weeks on *causticum* and the use of a small faradic battery at home. The average duration in our hands, however, is about three months. During the treatment it is usually necessary to protect the eye with an eye pad, since the condition usually occurs during the months of February, March and April, and the inability of the patient to close the eye allows particles of dust to irritate the conjunctiva and set up an inflammation.

If the patient suffers from atrophy of the paralyzed muscles, there is alteration in the electrical excitability. Owing to the situation of the facial nucleus in the pons varolii, lateral nuclear palsy may be associated with the paralysis of the external rectus muscles of the same side, and paralysis of the opposite arm and leg. The clinical picture of peripheral paralysis has been sufficiently indicated in the cases described. All the muscles supplied by the seventh nerve are affected in more or less equal degree. The differential diagnosis depends chiefly upon the presence of additional symptoms in tongue and ear.

HOMŒOPATHIC FAILURES?

HABIT-HYSTERIA

Four winters ago it was the writer's opportunity to attend an evening lecture delivered at the Evans Memorial. The following morning, meeting an equally eminent homœopathic physician on the steps of the Massachusetts Homœopathic Hospital, I commended the finely delivered lecture of the evening before. "Oh! That was no great mental effort," replied the physician, "Dr. Blank has delivered that same lecture so many times that the ease of delivery and rhetorical perfection have become a habit."

This is not, however, the habit to which we now refer. In the lecture there was cited a case of a female patient who had, in the rain, traveled many miles, climbed the steps leading into offices of several physicians, and had considerable cough left when she consulted Dr. Blank.

Dr. Blank told his large and attentive audience at the Evans Memorial that he first asked this patient all about the origin and history of this persistently bad cough; then told his patient that she had fallen in love with her own cough; but if she would apply to the "Court of Mental Effort" that she and her long-existing cough could be "duly divorced." We were told that the patient followed this prescription and soon recovered from her chronic laryngitis.

We are not sure that this cited case would have so indelibly photographed itself on one page of our book of memory had this lecturer not said his patient had come from "Maine." "Maine" is where we "get off the cars." I thought that there might be other cases of "mutual admiration" diseases, and bided my time.

Some months later there came to my office an aged mother accompanied by her daughter. When I had prescribed for the mother, she said, "I wish, Doctor, you would prescribe something for my daughter's nerves; she is crying altogether too much, and it seems to be almost a disease."

By way of prefatory explanation we will say that the daughter had recently lost her arteriosclerotic husband, and for more than a year back, her husband's vocabulary, as far as his wife was concerned, was not much more than a grunted "yes" or "no." The husband's death came very suddenly one holiday forenoon, when he was cleaning up his cellar floor. His wife found him in convulsions that lasted for some hours till death ensued. Knowing well the circumstances, for I had, assisted by some passers-by, carried the convulsed man from cellar to chamber and remained with him till he breathed his last, I considered her heavy, deep mourning suit sufficient evidence of grief, and such a feshet of tears uncalled for under these later circumstances.

When the editors of the *Gazette* wrote recently to their subscribers, asking them to make suggestions that would help to make an already pretty good medical journal still more profitable reading, we had written back in answer that it might not be a very bad plan to devote one page in each number to "reporting" our "failures"—for we learned fully as much, if not still more, from our failures than from our successes. With the *Gazette's* permission we head such a page, and here report our failures.

It is not very difficult to find among the provings of *ignatia* and of *pulsatilla* the symptoms of "grief" and "tears." These and several other remedies, all having symptoms in their provings similar to the symptoms of the case I have mentioned, were administered, but produced no results. The flood-gates still remained open.

I have already mentioned that I was biding my time. One afternoon when mother and daughter called again for more "nerve medicine," as they styled it, I called the mother into my private office and said, "Your daughter is crying because of a habit. Probably on the day of her husband's funeral she found the sensation of tears a pleasant one and she has been encouraging and cultivating this crying business, this tearful sensation, until it has become a habit."

The aged mother did not agree that her daughter could be crying because she loved the crying sensation part of it.

"We will go back to my front office and you can ask your daughter just what she is crying about."

To make a long story short, the daughter did own up before her mother and myself, when we had given her the "third degree," that she was not crying because of grief, but because she liked to cry. In other words, my patient had acquired the habit of crying just as Dr. Blank in his lecture in the Evans Memorial gave his audience to understand that his cough patient had learned to enjoy her cough, and had learned a "bad habit" of coughing.

My patient recovered from her freshet of tears; but not because of any "low" or "high" potencies. And I am just as strong a champion of the "Law of Similars" as ever I was, which is considerable. Such cases as the above-mentioned can be cured only by "mental suggestion."

See that such patients occupy their time by what is most pleasing to eye and to ear, to hand and to limb.

We physicians become equally "Creatures of Habit" when we persist in prescribing drugs for every case that consults us.

We, as physicians, may learn much, one from the other, by reporting our cases.

EDWARD E. BRIRY, M.D.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the GAZETTE only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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THE NEED OF SATISFACTORY CASE REPORTS

The March issue of The North American Journal of Homœopathy contains "A plea for a more scientific presentation of case reports, as an aid in the advancement of the interests of homœopathy, with an illustrative case in demonstration" by R. F. Rabe, in which he points out some decided weaknesses in published case reports and calls attention to the fact that conclusions based upon them often "assume the character of dogmatic assertion unsupported by convincing proof." He says that this "is of little value to men who are trying to place homœopathy upon a sound scientific basis." For instance, "Dr. B. may report an instructive case of aneurysm of the thoracic aorta, apparently cured by *baryta carbonica*. He may, in his presentation of the case, detail good *baryta carbonica* symptoms which no one can dispute, but if his dogmatic ability is such as to fail to command the confidence of others, no one will place any credence in his statements, nor any value upon the supposed cure.

"Yet these asserted demonstrations of the alleged superiority of homœopathic therapy, have cluttered our literature for years and in reality have absolutely no value as scientific evidence. 'One swallow does not make a summer,' and similarly, one case proves nothing. Patients get well without medicine, or often in spite of it. . . . If we are to advance, nay more, if we are to survive, we must depart from time-worn methods and among the numerous things which we must do, is the necessity for scientific demonstration of homœopathy in our clinical reports and these furthermore, must be presented in series of hundreds and not as isolated scattered examples here and there."

After this excellent discourse, Rabe appends "an example of the kind of case reports" he has in mind, although it is "not by any means urged as a finished model."

The record of the history of the patient and his illness and of the physical and laboratory examinations is, indeed, good, and the diagnosis of chronic malaria, based upon finding the malarial organism in the blood, is indisputable. That portion of the report, however, which is most pertinent in this connection and which, even more than the others, should be based upon unassailable facts, is the one dealing with treatment; because careful records of reasonable homœopathic drug application will do much toward placing "homœopathy upon a sound scientific basis."

Rabe describes the treatment of his unfinished model case as follows: "With the symptoms detailed above, no one of our well-proved remedies seemed to agree, so that by a process of exclusion, rather than by direct choice on symptomatic grounds, *malaria officinalis*, a product of decaying vegetable matter in water, was given in the 200th potency, four times, each day and continued for three days. An immediate improvement was manifested. At the end of eight days, the temperature 97.2, one dose only, of *malaria officinalis* in the 6000th potency, was given. Five days later a decided improvement was noted, with a temperature mostly normal, but never lower than 98. Strength and vigor were rapidly returning. Two weeks later the patient presented practically no symptoms. One dose of the same remedy in the 50,000th potency was given and was the last that was required."

"On January 19, 1916, less than two months after the previous examination of the blood, another was made and . . . no malarial plasmodia were to be found. Moreover, the patient looked well and felt well, complaining of nothing, was able to return to college, and has remained well since.

"Surely this interesting case is of value as a concrete demonstration of the truth of the law of similars and of the curative power of the high and highest potencies. The evidence, it seems to the writer, is conclusive and cannot be disputed or cast aside. The remedy used, *malaria officinalis*, is to be sure, not a polychrest and needs reproof, development and further verification."

It is not difficult to point out weaknesses in this account of treatment and in the deductions made therefrom. The selection of the remedy "by a process of exclusion" is, perhaps, permissible; but it is a weak point in a report that is supposed to be scientifically impregnable. The remedy itself, *malaria officinalis*, is a decidedly unfortunate choice for demonstration

material to prove the soundness of homœopathic drug therapy. Rabe himself says that it "needs reproof, development and further verification." It is not mentioned in the U. S. Homœopathic Pharmacopœia. Even if it possesses potential merits as a therapeutic agent, it would, nevertheless, seem the wiser course to depend upon better proved remedies for the substantiation of the principle of symptom-similarity in pharmacotherapy.

The name of this drug, if drug it be, seems to have been applied rather thoughtlessly. Why should "a product of decaying vegetable matter in water" be called *malaria officinalis*. Is it because mosquitoes, of which some representatives when fully developed serve as hosts for malarial plasmodia, spend their larval days in pools that may at the same time contain decaying vegetable matter? Perhaps, this is the reason, also, for according this "product of decaying vegetable matter in water" (what is this product, anyway?) therapeutic merits in malaria.

Aside from the use of an insufficiently studied and unidentified remedy, other objections might be advanced against Rabe's near-model case report. He commits the very sins which he condemns, for he himself says that "one swallow does not make a summer, and similarly, one case proves nothing. Patients get well without medicine, or often in spite of it"; and, therefore, cases "must be presented in series of hundreds and not as isolated scattered examples here and there." Yet of his own case he states that it is surely "of value as a concrete demonstration of the truth of the law of similars . . . "and that "the evidence is conclusive and cannot be disputed or cast aside." Does this not "assume the character of dogmatic assertion unsupported by convincing proof"? Either, Rabe considers his power of persuasion irresistible, since he says that if an author's "dogmatic ability is such as to fail to command the confidence of others, no one will place any credence in his statements, or any value upon the supposed cure," or he himself actually believes and expects his readers to believe that his single case proves the value of *malaria officinalis* in the treatment of plasmodial infection.

With Rabe we lament the fact that "these asserted demonstrations of the alleged superiority of homœopathic therapy, have cluttered our literature for years," although they "have absolutely no value as scientific evidence"; but we are convinced that there exists an increasing number of "men who are trying to place homœopathy upon a sound scientific basis" — and to these we must look for the vindication of the principle *similia similibus curentur*.

“MILLION DOLLAR RESEARCH LABORATORIES”

In the March number of the *Homœopathic Recorder* appears an editorial by Dr. Clifford Mitchell of Chicago, entitled “The Million Dollar Research Laboratories.” We are rather pained to find so sane and able a man as the author of this editorial attacking salaried research workers and endowed laboratories. If we are to believe the eminent Chicagoan, “the incentive of any salaried man is never as great as that of the man who works for number one.” Again: “The real man of medical action will never accept a salaried position pertaining to medicine. . . . Any man on a medical salary is not the man on whom medicine can depend for advancing medicine.” The example of Robert Koch and Sir James McKenzie is adduced as showing that research is not incompatible with busy general practice. But if such geniuses as these men were (and such examples are rare), had been able to devote all their time to study and investigation, instead of spending a major portion of it in earning their sustenance, is it not fair to suppose that we might have looked for even more stimulating results? Our friend wisely refrains from mentioning such brilliant examples of subsidized ability as Flexner, Noguchi, Carrel, and Theobald Smith; have they lapsed into innocuous desuetude merely because they receive a salary? Dr. Mitchell, we fear, has made the error of judging others by his own standard. The fact is, that there are men who are best fitted for the secluded life of the scholar and research worker, just as others are better adapted for the hurly-burly and bustle and worry of general practice. The average investigator does not receive an exorbitant stipend; in fact, his income is less than that of most general practitioners.

His satisfaction is in discovering new truths and disseminating them, hoping that his colleagues in practice may find them of service. Conditions nowadays, also, require close and continued application and a carefully-acquired technic. A different state of affairs obtains now, compared to that in the days when those striking (because so rare) examples adduced above, Koch and McKenzie, learned the truths which have since immortalized them.

W. O.

THE PRESIDENCY OF THE A. I. H.

A history of the presidential elections in the American Institute of Homœopathy reveals the fact that the successful incumbents of this post of honor have rarely been elected the first time their name was proposed. The fact that Dr. John M. Lee of Rochester was thus formally introduced to the profession

last year in Baltimore is the slightest of the many things that presage for him a successful campaign this June when the Institute meets in his home city.

There are many reasons why his candidacy should have the whole-hearted support of the members of this august body. It is well to remember the staunch and loyal support which Dr. Lee has always given to homœopathic institutions. He has been the "oak tree" not only of his immediate community but of the State of New York as well. His skill and well deserved renown in his special field of work are but the outgrowth of his high ideals and of the tenacity he has shown in adherence to them. His generosity and attitude of mental tolerance, his natural endowments and experience qualify him as *the* man who will solve many of the questions which has perplexed the Institute for years. The *Gazette* takes pleasure in endorsing Dr. Lee's name for the coming election, and hopes that its readers will think twice before casting a vote for any other man.

STATE BOARD STATISTICS FOR 1916

In last year's May issue we commented upon the excellent showing made in 1915 by graduates of Boston University School of Medicine before the various examining boards throughout the country. In that year Boston University led the group of Massachusetts medical schools in all departments.

The statistics for 1916 are now at hand and again we may well be proud of the results obtained by Boston University graduates. Among those graduated in 1916, Boston University had no failures, Harvard had 4.3 per cent. failures, Tufts 5.4 per cent., and the College of Physicians and Surgeons 53.8 per cent. The figures concerning all candidates examined regardless of the year of graduation, are a little less favorable; here Harvard leads with 7.1 per cent failures, but Boston University is a very close second with 8 per cent. (this represents two failures, one in Massachusetts and one in New York), Tufts is third with 14.1 per cent, and the College of Physicians and Surgeons follows with 61.9 per cent.

At the Massachusetts examination held in November, 1916, the highest mark given (84.7 per cent.) was secured by a graduate from Boston University. Fifty-four candidates were examined at that time.

As splendid as the showing of Boston University was in 1916, it is, nevertheless, surpassed, among homœopathic schools, by the Hahnemann Medical College and Hospital of Philadelphia, whose record of no failures among all graduates is truly remarkable.

HOMŒOPATHIC PERIODICAL LITERATURE

The North American Journal of Homœopathy, March, 1917

1. *The general practitioner and obstetrics.* 137. Hardy, E. A. P.

2. *An epitome of comparisons in homœopathic materia medica and therapeutics.* 142. McMichael, A. R.

This includes comparisons of *bryonia*, *iodin*, *phosphorus* and *veratrum viride* in "croupous" pneumonia; of *carbo vegetabilis*, *baryta carbonica*, *antimonium tartaricum* and *senega* for "loose, rattling cough"; of *allium cepa* and *phosphorus* in laryngitis; of *apis*, *bryonia* and *cantharis* in pleurisy; and of *belladonna*, *bryonia* and *rhus toxicodendron* in appendicitis.

3. *Verifications and cured symptoms.* 146. Hayes, R. E.

4. *A plea for a more scientific presentation of case reports, as an aid in the advancement of the interests of homœopathy, with an illustrative case in demonstration.* 152. Rabe, R. F.

(For comment upon this article refer to the editorial department of this issue.)

5. *Improperly treated measles followed by an eruption on the scalp which was suppressed by ointment and followed by blindness.* 156. Lutze, F. H.

6. *Radium and its rays.* 161. Alliaume, C. E.

7. *The Hahnemannian physician's equipment.* 167. True, R. J.

Pacific Coast Journal of Homœopathy, March, 1917

8. *Menstrual anomalies during pregnancy — with cases.* 108. Citron, I. J.

Citron calls attention to the relative frequency of post-conceptional menstruation. In view of the practice of reckoning the inception of the pregnant state from the cessation of menstruation, it seems probable that many supposedly prematurely born children are, in reality, full-term babies whose mothers continued to menstruate after conception had occurred.

9. *The retinitis of pregnancy.* 112. Buffum, J. H.

10. *Excision of the clavicle.* 116. Barnard, F. S.

11. *Diabetes insipidus.* 118. Holland, J. H.

12. *Baptisia tinctoria.* 121. Boericke, W.

13. *A case of bone disease.* 126. Campbell, R. A.

H. U.

The Homœopathic Recorder, March, 1917

14. *The true homœopathic spirit* (ed). 99.

A plea for us to do our best to put the claims for homœopathy on a scientific basis. The need for some truly homœopathic research is pointed out.

15. *Materia medica and clinical therapeutics vs. serum therapy.* 104. Hawkes, W. J.

A rather rambling article, devoted chiefly to a laudation of homœopathy as the best method of treatment, and broadsides against vaccination for smallpox and typhoid. We are told that intermittent fever, yellow fever, cholera, and the plague have been "even more thoroughly eradicated than has smallpox." This, of course (assuming the statement to be true), proves beyond a doubt (to the author's mind, at least) that vaccination is inefficient or worse. If some writers would study anti-vaccination literature less and the principles of immunity more, we should be less looked upon by outsiders as antiquated fogies, and should perhaps be accorded the degree of respect which the majority of us deserve.

16. *Palliation.* 111. Coleman, D. E. S.

A discussion of the use of homœopathy in chronic diseases. A case of diabetes mellitus said to have shown improvement on *natrum muriaticum* is cited. Several urinalyses are given, but the only remark concerning the diet is to the effect that it was the same as the patient was receiving under his former physician. A highly definite and illuminating statement! Needless to say, such a report must needs fail to cast much credit on anyone concerned. The use of *iberis* and *cactus* in heart-disease is illustrated in several case-reports.

17. *Ferrum picrate and hernia.* 121. Johnson, C. E.

Report of a case (from memory) of femoral hernia cured by *ferrum picrate*. Lest we be thought too critical, we refrain from comment.

18. *The indicated remedy.* 124. Jones, E. G.

"In chorea with constipation *natrum sulphuricum* should always be given, whatever other remedy may be indicated." If we remember correctly, a certain S. Hahnemann once said that we should individualize our patient, and give the *single* remedy. However, these German notions are at a discount now, we presume.

19. *Clinical urinology.* 136. Mitchell, C.

Mitchell emphasizes the fact that the "absence of albumin or of casts in urine of specific gravity below 1.015 is not conclusive." This is due, of course, to the undue dilution of urines of a low specific gravity. The effects of sodium bicarbonate, phenolphthalein, and the salicylic acid compounds on the urine are briefly discussed.

The Homœopathic World, March, 1917

20. *A subjective proving of glycerin.* 103-107. Briggs, W. B.

Nothing is said regarding the method of proving except that it "has been conducted along modern scientific lines of investigation." The provers "were examined thoroughly before and during the proving." Nine males and three female provers and controls were studied.

"A critical analysis of the provers shows, first, that *glycerin* is capable of disturbing the nutrition of the vital economy in its primary action, and secondarily, that it seems to improve the general state of nutrition."

In one prover analysis of the urine showed sugar, and this has been verified as curative in clinical work. One clinical case had "albumen, casts and sugar in the urine . . . examined by a Philadelphia chemist." "*Glycerin* in the 30th and 200th eliminated sugar and albumen in three months, and patient gained fifteen pounds." "Another case had 'diabetes' for years . . . urine saccharose (*sic*) with acetone . . . he was placed on a strict diet and given *Sulphur*, *Phosphoric acid*, *Uranium nitrate*, *Arsenicum album*, *Syzygium jambolanum*, and potentized blood. *Glycerin* was then given with the result that the urine cleared up."

S. B. H.

The British Homœopathic Journal, February, 1917

21. *Subacute and chronic diseases of the respiratory organs from the homœopathic standpoint.* 33. Goldsbrough, G. F.

For the purpose of selecting a drug, Goldsbrough has chosen "cough" as a symptom around which may be grouped the occurrence and nature of other symptoms in relation to cough, and their accompaniments and conditions and modes or times of occurrence. The following group of cough remedies is considered with reference to (a) quality of the cough; (b) reference to organs and functions; (c) accompaniments; (d) modalities.

ACONITE.—Short, dry, or hoarse, dry, loud cough; (b) referred to larynx and chest, with soreness and sensitiveness, pain, anxiety and dyspnoea with sighing breathing; (c) expectoration of blood or viscid mucus; (d) aggravated in a warm room, during sleep, by any irritating substance, *e.g.*, tobacco smoke, and lying on back. Useful in subacute catarrhs at the beginning, or at other stages when symptoms correspond.

ANTIMONIUM TARTARICUM.—Following aconite in similar states, if there is nausea, white tongue and a free expectoration, frothy or purulent. Useful also in chronic bronchitis without acute symptoms.

ARALIA RACEMOSA.—Violent cough, aggravated after midnight sleep.

ARSENICUM ALBUM.—(a) Spasmodic irritating cough; (b) referred to throat or chest; (c) accompanying symptoms especially important, red tongue, thirst, restlessness, tendency to diarrhœa; (d) aggravated at night.

BELLADONNA.—(a) Cough, paroxysmal, hard, dry; (b) referred mostly to larynx or pharynx; (c) laryngeal soreness, tenderness and dyspnœa, heat of head and face, excessive sensitiveness of sensory nerves; (d) aggravated by exertion, lying down, and deep inspiration. Compares with *aconite* in similar cases.

BROMIUM.—(a) Dry cough; (b) referred to laryngo-tracheal region; (c) hoarseness, difficult inspiration, aggravated from drawing deep breath. Compares with *iodin*.

BRYONIA.—(a) Cough dry and hard; (b) referred to chest and trachea; (c) some expectoration (may be bloody), pains in chest, aching, sharp; (d) aggravated morning, on least motion, entering warm room. Follows *aconite* well, and compares with *antimonium tartaricum*, *ipecacuanha* and *phosphorus*.

COCCUS CACTI.—(a) Cough, spasmodic and progressive, like mild whooping-cough; (b) referred to chest, excessive tickling; (c) expectoration abundant at the end, but lumpy. Compares well with *belladonna*, *cuprum*, *drosera*, *lachesis* and *mephites*, especially in whooping-cough.

DROSERA.—(a) Cough, paroxysmal, with rapidly increasing successive coughs leading up to gagging, retching, or whooping-cough; (b) referred to larynx and pharynx; (c) slight expectoration, redness of face. Useful in whooping-cough, but not only in such cases.

HEPAR SULPHUR.—(a) Dry continuous cough; (b) referred to pharynx, uvula and larynx; (c) excessive tickling; (d) aggravated evening, speaking, stooping. Compares with *belladonna*, *rumex*, *lachesis*.

HYOSCYAMUS.—(a) Persistent, troublesome cough only on lying down, aggravated on lying down, ameliorated on sitting up.

IPECACUANHA.—(a) Dry cough, spasmodic rather than continuous, or continuously spasmodic; (b) referred to trachea and chest; (c) nausea, blood-stained expectoration. With or following coryza, may be retching and vomiting.

KALI BICHROMICUM.—(a) Persistent dry or semi-loose, hoarse cough; (b) referred to larynx, trachea or chest; (c) impossible yet necessary difficult expectoration of ropy character. With above characters useful in all forms of catarrh.

KALI CARBONICUM.—May be said to be like *antimonium tartaricum*, but with aggravation 2 to 4 A.M., and sharp stitches in the chest.

LACHESIS.—(a) Dry, hacking, continuous or spasmodic cough; (b) referred to trachea or larynx; (c) pain in throat to ears, right to left side, hoarseness. Aggravated on waking, on touching throat or neck by pressure of clothes. Compares with *belladonna*, but the above characteristics are important.

LOBELIA INFLATA.—(a) Cough slight; (b) referred to chest; (c) difficult respiration deep in chest. Useful in the asthmatic paroxysm rather than for the asthmatic patient who requires constitutional treatment.

LYCOPodium.—(a) Character of cough scarcely noticeable, but present with catarrh, salt expectoration, worse 4 to 8 P.M., also characteristic gastric and abdominal symptoms.

NITRIC ACID.—(a) Dry, rough, violent, shaking cough; (b) referred to larynx, bronchi or lungs; (c) white or bloody or no expectoration, chronic nightly aggravation, constipation. Contrasts with *arsenicum*.

NUX VOMICA.—(a) Violent cough; (b) referred to trachea, behind sternum and abdomen; (c) no or slight expectoration, shaking of head, straining abdomen, with gastric catarrh, constipation. Aggravated after food, alcoholism or excess in tobacco.

OSMIUM.—Requires more careful proving. (a) Dry cough; (b) referred to deep in the chest; (c) accompanied by prostration and possibly nephritis. Useful mostly after influenza.

PHOSPHORUS.—(a) Dry or loud cough; (b) referred to trachea or chest; (c) scanty, difficult or profuse, foul, bloody expectoration, tickling, rawness, soreness in chest induced by deep inspiration; may be hoarseness and sensation of weight, much prostration; aggravation, night or day, especially morning after rising, sitting, lying, reading aloud, cold air, drinking.

PULSATILLA.—(a) Cough loose in day, dries up in evening; (b) referred to throat or chest; (c) free expectoration. Aggravation on lying down at night and on sitting up.

RUMEX CRISPUS.—(a) Dry, paroxysmal, quickly successive coughs; (b) referred to suprasternal fossa; (c) slight or no expectoration; heat of head, much fatigue; (d) aggravation by pressure at throat-pit, deep inspiration, cool air. Compare with *drosera*.

SQUILLA.—(a) Cough loose; (b) referred to air passages, including nose and larynx, with much irritation; (c) free expectoration, frequent urination. Useful in chronic cases because of combination of irritation and looseness.

SPONGIA.—(a) Dry, barking, metallic cough; (b) referred to larynx or trachea; (c) hoarseness, tenderness, often aphonia.

Frequently homœopathic to the syndrome of common laryngeal catarrh in children (croup).

SENEGA. — (a) Dry, shaking cough; (b) referred to chest; (c) thick, tenacious expectoration, roughness in throat, coryza, oppression and aching in the chest. Useful in the chronic bronchitis of old people. Contrasts with *antimonium tartaricum* and *squilla*. Compares with *kali bichromicum*.

22. *Petroleum*. 46. Stonham, T. G.

In addition to a discussion of the drug a number of cases are given.

MARCH, 1917

23. *A symposium on Sulphur*. 65. Stonham, T. G.

A rather detailed account of sixteen cases in which sulphur was prescribed is presented in this symposium.

Stonham suggests that sulphur may stimulate the production in the liver of the various alexins and other poison-destroying ferments in sufficient quantities to antagonize all the septic material arising from the seat of disease, and so the blood is left pure and the leukocytes unhindered in their phagocytic action and therefore are able gradually to remove the exudations at the affected localities.

24. *Cases of comocladia dentata*. 80. Miller, R. G.

This drug belongs to the Anacardiaceæ which includes *anacardium*, *rhus toxicodendron*, and others.

25. *Bipp and some results*. 83. Lewin, O. M. S.

Bipp is a paste for the treatment of wounds. It is composed of bismuth subnitrate one part by weight, iodoform two parts, and liquid paraffin enough to make it of a suitable consistency. It is said to have abated threatening gangrene; acute abscesses have healed, and fractures united without the formation of sequestra.

S. B. H.

EXPERIMENTAL THERAPEUTICS

The treatment of experimental tuberculosis in guinea-pigs and rabbits by taurin alone, and in combination with gold chlorid and sodium oleate.—Takeoka, Minokichi. Jour. Infect. Dis., 1917. xx, 442-456.

Several investigators have found that the liver and bile exhibit an inhibitory action upon the growth of the tubercle bacillus. The writer, acting upon this assumption, has treated tuberculous guinea-pigs and rabbits with taurin, at first in combination with gold chlorid and sodium oleate and later alone. His results with taurin alone were as favorable as in combination. In a series of six experiments, including a total of 69 guinea-pigs and 26 rabbits, distinctly favorable results were

achieved. The progress of the disease was arrested and apparently cures were effected even when treatment was begun as late as three weeks after infection. Similar results were found with animals infected with the bovine and human types.

[In view of the belief upon which these therapeutic experiments are based, — the inhibitory action of the liver and bile upon the tubercle bacillus, — it would have been especially interesting and instructive if avian tuberculosis had been studied, since in this type, the liver is the most prominently affected organ of the body, a fact which does not entirely correspond with the reason for the use of this remedy. Ed.]

D. L. B.

BOOK REVIEWS

The Newer Methods of Blood and Urine Chemistry. By R. B. H. Gradwohl, M.D., Director of the Pasteur Institute of St. Louis, and A. J. Blaivas, Assistant in the same. Pp. 235. Illustrated, C. V. Mosby Co. St. Louis. \$2.50.

Since the development and perfection by Folin and others of practical microchemical methods, a large literature which deals with the refinements of blood and urine chemistry has been amassed. The authors have ably reviewed this literature, added the results of their own experience, and arranged the material in logical sequence. It is the latest book on these subjects.

Blood chemical analysis adds greatly to our knowledge of metabolic changes and furnishes a more reliable diagnostic and prognostic basis than does a uranalysis alone. An individual may have a hyperglycemia long before the sugar overflows into the urine.

The technic of chemical examination of the blood for sugar, creatinin, creatin, uric acid, urea, nonprotein nitrogen, cholesterol, total solids, total nitrogen, chlorids, and for carbon dioxid combining power by the Van Slyke method, are discussed in detail and about ninety pages are given over to the interpretation of blood findings.

The part devoted to chemical analysis of urine takes up total nitrogen, urea, ammonia, uric acid, creatinin, creatin, chlorids, the phtalein test, in addition to general analysis, sediments, and colorimetric methods.

An extensive bibliography accompanies each section. The book is valuable.

S. B. H.

Freud's Theory of the Neuroses. By Dr. Edward Hitschmann (Vienna), Authorized Translation by Charles Rockwell Payne, M.D., Introduction by Ernest Jones, M.D., M.R.C.P. Published by Moffat Yard and Company. \$2.00.

The material of this book follows naturally Dr. Wm. A. White's "Mechanisms of Character Formation," reviewed in our March number. It is written by a man who has worked close to Freud and who undertakes to formulate Freud's theories and put them in a concise form under one pair of covers, and he has succeeded wonderfully well.

The subjects treated in its ten chapters are:

1. General theory of the neuroses.
2. The true neuroses.
3. The sexual instinct.
4. The unconscious.
5. The dream.
6. Hysteria.
7. The obsessional neuroses.
8. Psycho-analytic methods of investigation and treatment.
9. General prophylaxis of the neuroses.
10. Application of psycho-analysis.

Then follows a chronological review of the Freudian writings and Freudian literature in English. The introduction is written by Ernest Jones, M.D.,

M.R.C.P. In it he speaks of the book as being "an especially faithful presentation of both the theory and the practice of the subject. Dr. Payne is especially well equipped to do the translating and has transcribed the original German into most readable English."

The book is done on light pulp paper and in large type. The publishers deserve great credit for presenting Dr. Hirschmann's book in such pleasantly readable form.

A. H. R.

NERVOUS AND MENTAL DISEASES

Practical Medicine Series, 1916, Vol. X. Edited by Patrick V. Bassoe. Pp. 232. Price, \$1.35. Year-Book Publishers, Chicago.

This volume is intended, as its title-page states, to cover the year's progress in nervous and mental diseases. This it does very acceptably, taking up symptomatology, neuroses, diseases of the meninges, syphilitic diseases of the central nervous system, psychiatry, etc. Under each heading, abstracts of recent important articles, foreign as well as American, are carefully abstracted, the reference being given in each case. The book may be highly recommended to the neurologist or psychiatrist who, while desirous of keeping abreast of the times, finds himself unable to peruse all the numerous publications as they appear. He will find here, in convenient form, a synopsis of the year's contribution to the sum-total of knowledge in his field.

W. O.

Statistical evidence as to whether cancer is hereditary or contagious. Abstract of Mr. Hunter's address before the Tenth Annual Meeting of the Association of Life Insurance Presidents. Hotel Astor, New York. Dec. 14 and 15, 1916.

There were over 80,000 deaths from cancer during last year (1915). Nearly 750,000 in the last decade in the United States were due to cancer. The death rate has risen 30 per cent. in fifteen years, *e.g.*, from 63: 100,000 in 1900, to 81: 100,000 in 1915, part of which is due to more accurate diagnosis and to wider registration. According to one large life insurance company, cancer is the third most important cause of death in men over 44, and the leading cause in women of the same age.

He quotes Loeb: "No undisputed case, in animal or in man, has ever been recorded where cancer was known to have spread through infection caused by microbic organisms." Also: "All we can say at present is that it might be advisable to avoid interbreeding between strains in both of which the tendency to cancer is dominant. But in the case of man, even this conclusion can at present be drawn only in a tentative way."

Of 234 parents of persons who died of cancer only two died of the same disease, showing that cancer can hardly be hereditary. This is also substantiated by statistics of deaths among children of cancerous parents (both), for of "175 sons and daughters who lived beyond the age of 40, 19, or 11 per cent., had died from various diseases at an average age of 52.

None of these deaths had been from cancer. The remainder (156) were living at an average of 53. As the average age at death from cancer among life insurance policy holders is about 55, many of the progeny of the cancerous parents were within the danger zone, yet there were no deaths from cancer." Again, of 810 persons, one of whose parents had died of cancer, only 2 died from this disease; according to the "Mortality Statistics of the Census Bureau — the number of deaths to be expected would be about three."

In the conclusion Hunter states that his investigation "justifies the belief that cancer is not hereditary, and that there is no hereditary predisposition to that disease. Certainly the statistics show that a man or woman, one or both of whose parents died from cancer, is not more likely to die from that disease than those whose family history was free from that blemish; strong proof should be presented in the future to justify asking the public to take any other point of view."

H. U.

SOCIETIES

Boston District of the Massachusetts Homœopathic Medical Society

The regular monthly meeting of the Boston District Society was held as usual in the Evans Memorial, East Concord Street, on Thursday evening, April 5. Dr. Hugh Heaton was elected to membership, and the names of Drs. Henry M. Pollock, David Williams and Sarah Williams proposed for membership.

The Society was privileged to hear explained in detail the workings of the Framingham Health and Tuberculosis Demonstration of the National Association for the Study and Prevention of Tuberculosis, by Dr. Donald B. Armstrong, Executive Officer. This is a pioneer movement in public health administration, and those present at the meeting were fortunate in seeing so practical a plan outlined.

Mr. Thomas Jordan, Deputy Health Commissioner, gave an illustrated talk on the administration of public health from the sanitary standpoint, demonstrating the numerous difficulties encountered and the practical means of overcoming them.

The general plan for more general participation of the members of the Society in working out beforehand the plans for a meeting along some special line seems to be meeting general favor, but attendance is not what the meetings deserve. It should be better.

H. E. DIEHL, M.D., *Secretary*.

Worcester District of the Massachusetts Homœopathic Medical Society

The quarterly meeting of the Worcester District was held on Wednesday afternoon, February 14, in Grand Army Hall, Worcester, Dr. Lamson Allen, Chairman.

Dr. George R. Spooner of Worcester was elected to membership in the Society, and the following program was presented:

"Nephritis," by Dr. John E. Willis.

"A Case," by Dr. Edgar A. Fisher.

"The Trend of Medical Thought and Practice," by Dr. J. P. Rand.

"Serum and Bacteria: Their Destructions and Uses," by Dr. W. H. Watters, Boston.

C. W. Wood, Esq., spoke on the bill before the Massachusetts Legislature on Health Insurance.

The list of officers of the society elected is as follows:

President, F. P. Glazier, M.D., Hudson.

First Vice-President, Emma H. Fay, M.D., Westborough State Hospital.

Second Vice-President, G. W. Butterfield, M.D., Hopkinton.

Secretary, Leslie P. Leland, M.D., Worcester.

Censors, John E. Willis, M.D., Worcester; Edwin R. Lieb, M.D., Worcester; Albert E. Cross, M.D., Worcester.

LESLIE P. LELAND, M.D., *Secretary*.

Homœopathic Medical Society of the State of New York

The sixty-fifth annual meeting of the Homœopathic Medical Society of the State of New York was held on April 10 and 11, the first day's sessions at Hotel McAlpin, New York City, and the second day's at Metropolitan Hospital, Blackwell's Island. An extremely interesting program was presented, beginning on the afternoon of the 10th with papers by Drs. W. H. Watters of Boston, Dr. H. L. Northrop of Philadelphia, Dr. W. A. Dewey of Ann Arbor, and Dr. C. E. Sawyer of Marion, Ohio.

The annual banquet was held in the ballroom of the Hotel McAlpin, with the President, Dr. George R. Critchlow of Buffalo, as toastmaster, and the speakers were Dr. William W. Van Baun, President of the American Institute, on "The American Institute of Homœopathy"; Dr. W. A. Dewey, on "How Homœopathy is to be perpetuated"; Dr. Royal S. Copeland, on "The day we celebrate" (Hahnemann's birthday, April 10), and Dr. Chas. E. Sawyer, on "When to act and how." For lighter entertainment the company enjoyed a Keith vaudeville show late in the evening.

The hospital program included a business session at the Nurses' Home and a luncheon there, inspection of the Hospital, and clinical sessions in medicine, neurology, dermatology, obstetrics, pediatrics, surgery, urology, ophthalmology, rhinology and otology, and orthopedics.

Dr. Frederick M. Dearborn of New York City was Chairman of the local committee of arrangements.

The New Jersey State Homœopathic Medical Society will hold its annual meeting on the 24th, 25th and 26th of May, at Hotel Chalfonte, Atlantic City.

Massachusetts Homœopathic Medical Society

The annual meeting of this Society, which was due to be held on April 11, has, by request of the American Institute of Homœopathy, been postponed until May 16.

Western District of the Massachusetts Homœopathic Medical Society

At the annual meeting of this Society, held in Springfield on March 21, the following officers were elected for the ensuing year:

President, M. W. Conrow, M.D., Springfield.

First Vice-President, Bina Seymour, M. D., Springfield.

Second Vice-President, A. J. Lobdell, M.D., Winchester, N. H.

Secretary and Treasurer, Emil U. Dillenback, M.D., 705 Sumner Avenue, Springfield.

Censors, E. W. Capen, M.D., Monson; Grace Stevens, M.D., Northampton; Samuel E. Fletcher, M.D., Chicopee.

American Medical Editors' Association

The annual meeting of the American Medical Editors' Association will be held at the McAlpin Hotel, New York City, on June 4th and 5th, under the Presidency of Dr. G. M. Piersol, Editor of the *American Journal of Medical Sciences*.

A most interesting and instructive program is now being prepared and it is contemplated that the forthcoming session will be the largest ever held in the history of the Association.

The 48th anniversary of this Society will be celebrated by a banquet on the evening of June 5th, at the McAlpin Hotel.

RECENT DEATHS

Dr. Winfred Newell Emery died of Bright's disease on April 4, at his home in Waltham, Massachusetts, in his fifty-first year.

Dr. Emery was born on June 11, 1866, in South Chatham, Massachusetts, educated in the Boston Public schools, and a graduate of Boston University School of Medicine, of the class of 1891. After three years in practice in East Boston, he settled in Waltham, Massachusetts, where he built up an extensive clientèle. His life there was a busy one, full of good deeds, and he leaves an enviable record as a good citizen, a good physician and an active Christian worker.

He was a member of the First Methodist Church of Waltham and chairman of its music committee, the Board of Trustees of the Waltham Hospital, the Boston Homœopathic Medical Society, Massachusetts Homœopathic Medical Society, the Massachusetts Surgical and Gynaecological Society, the New England Hahnemann Association, and belonged to both the Masonic and Odd Fellows orders.

Dr. Emery leaves a widow, formerly Miss Harriet Louise Chase of Watertown, and three children.

Mr. Charles A. Boynton, for many years with the firm of Otis Clapp & Son, but during recent years in business independently, died of apoplexy at the Emerson Hospital, Jamaica Plain, on April 15, in the sixty-eighth year of

his age. Mr. Boynton was well known throughout New England and New York State, especially to the older generation of Homœopaths. Probably no non-medical man had a wider acquaintance with the homœopathic profession than he, and during the many years of his connection with "Clapp's" his advice was much sought. He had a cheery word for all, and many physicians will remember him pleasantly as "Charley" Boynton.

Dr. Waldo H. Stone, formerly of Providence, R. I., a graduate of Boston University School of Medicine of the class of 1882, died in Rehoboth, Mass., April 3, in his sixty-second year.

Dr. Laura W. Copp, class of 1879, Boston University School of Medicine, of 143 Bushkill Street, Easton, Pennsylvania, died on the 6th of September last, aged seventy years.

SYMPOSIUM ON CANCER HELD BY AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Although radium has produced very important palliative results in advanced cases of cancer, and has even, in a considerable number of cases, apparently caused a complete disappearance of the disease, yet it cannot be relied upon to effect a permanent cure in the late stages of inoperable tumors, and therefore the importance of early diagnosis of cancer is again emphasized.

Dr. James Ewing of Cornell University Medical College spoke from his experience with the radium treatment of cancer at the Memorial Hospital with which he is connected as Director of Cancer Research and which is receiving, through the generosity of Dr. James Douglas, a large part of the radium now produced under improved processes by the U. S. Bureau of Mines in cooperation with the National Radium Institute. The use of radium in cancer has within the last ten years established itself as an excellent method of dealing with benign and malignant tumors of the skin which, when properly applied, it usually removes promptly and with remarkably little scarring. In the major types of cancer of the accessible mucous membranes radium has also achieved considerable success. It has been chiefly tested in uterine cancer in which disease it has accomplished radical improvement of many inoperable cases and several apparently complete cures as attested by post-mortem examination after the patients had died from other causes. A number of foreign surgeons state that their results are better than with surgery and they employ radium in both operable and inoperable uterine cases. The leading American surgeons who are using radium obtain equally good results but take the opposite position that they prefer to operate in suitable cases.

Much the same situation exists in regard to many other forms of accessible cancer while a few authorities even report apparent success with such difficult cases as those of the lip, tongue, rectum, etc. "It has become apparent," said Dr. Ewing, "that success depends very largely upon the skill and accuracy of application, upon a knowledge of the anatomical character of the particular tumors treated, and above all upon attacking the disease before it is too far advanced."

Referring to the limitations of radium therapy as "numerous and formidable" Dr. Ewing pointed out that "the supply of this metal is small and generally restricted to a few institutions. The requisite skill to apply it safely and effectively and to choose suitable cases is still more restricted. Beginners often do more harm than good and it is easy to discredit the agent entirely. The methods are badly in need of standardization. Under-dosage may destroy superficial tumor cells only and leave the deeper ones to grow in the inflamed tissues. Over-dosage causes the destruction of normal or diseased tissues resulting in fistulas, hæmorrhage, and severe infection. With repeated doses tumor cells appear to become less and normal tissue more susceptible. Excessive scarring often results and prolonged exposure to large amounts often causes a peculiar and severe form of general intoxication. Several workers have had fatal results from their attempts to cure advanced cases.

Finally, radium has only a local effect extending at most to a depth of six to ten centimeters and if it has any constitutional influence this cannot be relied upon to deal with extensive local or generalized cancer. Under these circumstances a general recommendation to the public to resort to radium for all types and stages of cancer is decidedly inadvisable."

With reference to the future of radium Dr. Ewing did not venture a forecast but pointed out that very great significance must be attached to its selective action on many kinds of tumor tissue. In spite of rapid improvement in the technic of application, on the whole the methods are still comparatively crude although there is little doubt that exact dosage and accurate adjustment of the apparatus can be worked out to a much greater degree than is now accomplished. "For inoperable cases the value of radium, although great, is perhaps already over-estimated. To what extent it may establish itself in the treatment of operable cases it remains for the future to decide."

Dr. Joseph C. Bloodgood of Johns Hopkins University spoke from the surgeon's point of view on cancer in the human being, dwelling especially upon the importance of the pre-existing lesions which may develop into cancer and in the treatment and removal of which lies the chief opportunity of preventing this disease. Dr. Bloodgood made it clear that cancer in its early stages is easily cured. "The disease usually springs from a pre-existing lesion allowed to go unattended. Chronic irritation of a sore may also contribute. In external cancer the warning is visible or can be felt. Unfortunately pain is rarely present. A mole or a wart, a small area covered with a scab, a small lump or nodule beneath the skin, an unhealed wound, all of these may indicate potential cancer. The appearance of these defects should mean a call upon the physician for examination as to the probability of incipient cancer. Nothing is lost by taking the precaution if symptoms are not found, and on the other hand the risk is too great to allow the warnings to go unheeded. The question in this case is decided by the physician and in many cases a minor operation removes a probable cause of the disease.

"No man ever yet had a cancer on the lip or tongue without first experiencing some warning. The defect may be a burn from continued smoking or an irritation from ragged teeth. The probabilities of a cure are excellent when men heed such signals of possible danger and are treated at once. Tobacco users are more subject to cancer than those who do not use it. There is no means of preventing cancer of the breast, the appearance of a lump or a discharge from the nipple being the first sign, but when such lumps are at once removed on their discovery half will be found benign, that is, not cancerous. The removal of benign lumps undoubtedly prevents cancer in many cases since modern medicine clearly recognizes the danger of benign lumps turning into malignant disease of the breast. The chances of permanent recovery in true breast cancer vary with the exact type of the disease but are excellent if it is recognized early and completely removed. The chance of recovery grows less and less as the delay is more and more protracted until cancer is incurable from the extent of the local or general involvement. Cancer of the stomach is a more difficult proposition but even in such cases there is usually a warning. Abnormal sensations of daily recurrence should not be neglected. So-called indigestion or what is styled 'colic' may be the warning. The chances are that it is not, but it may be so. If the pain, the sensations, the message from this part of the body comes time and time again, especially among people over thirty or forty years of age, a physician should surely be consulted.

"The mortality from cancer could be reduced considerably if the average person knew how to take care of himself. It is not a 'blood disease,' it is not a disease which people have any reason to be ashamed of. So far as physicians can tell it is not brought on by ill health or food. It comes to the healthy man or the healthy woman, but if the simple easily noticed warnings be heeded the task becomes comparatively easy and the only miracle we have to perform is to educate a million people where we now educate one."

A historical survey of the crusade against cancer through the education of the public was given by Curtis E. Lakeman, Executive Secretary of the

American Society for the Control of Cancer. He said that the first widely known campaign of this kind was initiated by Prof. Winter of Königsberg, Prussia, in 1891. As a result the cancer death rate of that vicinity had been definitely lowered and a large increase in the number of women applying for treatment in the early and operable stages of the disease had been noticed.

In England the chief effort has been made at Portsmouth under the auspices of the health department and at the instigation of Dr. Charles P. Childe, a prominent surgeon whose book "The Control of a Scourge" published in 1906, is regarded as one of the best popular treatises on the means of recognizing and preventing cancer. The speaker reviewed the work of pioneer physicians in urging similar educational campaigns in the United States and referred to the appointment of cancer committees by the American Medical Association, the Clinical Congress of Surgeons, the Pennsylvania State Medical Society, and the action of various state and local boards of health. These local and independent movements have now been coördinated in the work of the American Society for the Control of Cancer which was founded in 1913 with the approval of all the leading professional organizations and with the active interest and support of many prominent physicians and lay people. "The results of the educational campaign are already becoming clear in such statistics as those reported by the Johns-Hopkins University Hospital, the Barnard Free Skin and Cancer Hospital of St. Louis, and similar institutions and clinics, showing a very definite and universal increase in the number of patients applying for early treatment. At the Barnard Hospital, for instance, a recent study of the records gives a striking picture of progress in the treatment of one form of cancer among women. From 1905 to 1907 there were 19 cases with an operability of 11.1 per cent. From 1908 to 1910 inclusive, there were 40 cases with an operability of 17.5 per cent. From 1911 to 1913 inclusive, there were 40 cases with an operability of 17.5 per cent. From January, 1914, to December 1st, 1916, there were 66 cases with an operability of 40.9 per cent."

KILL FLIES AND SAVE LIVES

Kill at once every fly you can find and burn his body.

Observers say that there are many reasons to believe there will be more flies this season than for a number of years.

The killing of just one fly NOW means there will be billions and trillions less next summer.

Clean up your own premises; see and insist that your neighbors do likewise.

Especially clean "out-of-the-way places," and every nook and cranny.

Flies will not go where there is nothing to eat, and their principal diet is too filthy to mention.

THE FLY IS THE TIE THAT BINDS THE UNHEALTHY TO THE HEALTHY!

The fly has no equal as a germ "carrier"; as many as five hundred million germs have been found in and on the body of a single fly.

It is definitely known that the fly is the "carrier" of the germs of typhoid fever; it is widely believed that it is also the "carrier" of other diseases, including possibly infantile paralysis.

The very presence of a fly is a signal and notification that a housekeeper is uncleanly and inefficient.

Do not wait until the insects begin to pester; anticipate the annoyance.

April, May and June are the best months to conduct an anti-fly campaign.

The farming and suburban districts provide ideal breeding places, and the new-born flies do not remain at their birthplace but migrate, using railroads and other means of transportation, to towns and cities.

Kill flies and save lives!

RECIPES FOR KILLING FLIES

The United States Government makes the following suggestion for the destruction of house flies: Formaldehyde and sodium salicylate are the two best fly poisons. Both are superior to arsenic. They have their advantages for household use. They are not a poison to children; they are convenient to handle; their dilutions are simple and they attract the flies.

Preparation of Solutions

A formaldehyde solution of approximately the correct strength may be made by adding 3 teaspoonfuls of the concentrated formaldehyde solution, commercially known as formalin, to a pint of water. Similarly, the proper concentration of sodium salicylate may be obtained by dissolving 3 teaspoonfuls of the pure chemical (a powder) in a pint of water.

The following container has been found convenient for automatically keeping the solution always available for flies to drink. An ordinary, thin-walled drinking glass is filled or partially filled with the solution. A saucer or small plate in which is placed a piece of WHITE blotting paper cut the size of the dish, is put bottom up over the glass. The whole is then quickly inverted, a match placed under the edge of the glass, and the container is ready for use. As the solution dries out of the saucer the liquid seal at the edge of the glass is broken and more liquid flows into the lower receptacle. Thus the paper is always kept moist.

Other Simple Preventives

Any odor pleasing to man is offensive to the fly and *vice versa*, and will drive them away.

Take five cents' worth of oil of lavender, mix it with the same quantity of water, put in a common glass atomizer and spray it around the rooms where flies are. In the dining-room spray it lavishly, even on the table linen. The odor is very disagreeable to flies but refreshing to most people.

Geranium, mignonette, heliotrope and white clover are offensive to flies. They especially dislike the odor of honeysuckle and hop blossoms.

According to a French scientist flies have intense hatred for the color blue. Rooms decorated in blue will help to keep out the flies.

Mix together one tablespoonful of cream, one of ground black pepper and one of brown sugar. This mixture is poisonous to flies. Put in a saucer, darken the room except one window and in that set the saucer.

To clear the house of flies, burn pyrethrum powder. This stupefies the flies, but they must be SWEPT UP and BURNED.

Recipes for Stables, Barns and Out-of-Doors

Borax is especially valuable around farms and out of doors. One pound of borax to twelve bushels of manure will be found desirable as a poison without injuring its manurial qualities or farm stock. Scatter the borax over the manure and sprinkle with water.

Lye, chlorid of lime, or copperas (sulphate of iron) dissolved in water, crude carbolic acid, or any kind of disinfectant may be used in vaults.

AMERICAN INSTITUTE 1917 SESSION

Sunday Evening, June 17, to Saturday, June 23, 1917, at Hotel Powers, Rochester, New York

The general program is of exceptionally high order and most profitable sessions are assured. There will be no papers read or sessions of any kind held by the Institute on Friday, June 22nd, and the time and attention of all the members will be invited solely to nineteen clinics in the various Rochester hospitals conducted by Rochester men, assisted by Dr. W. B. Hinsdale of Ann Arbor, Mich.; Dr. R. F. Rabe and Dr. F. M. Dearborn of New York City; Dr. A. H. Grimmer of Chicago, Dr. C. A. Potter of Gowanda, N. Y., and Dr. R. C. Woodman of Middletown, N. Y. The regular program of the Institute will be resumed on Saturday morning, June 23rd.

The chairmen of all the committees of local arrangements and clinics

constitute the General Committee which has in charge all of the local detail work of the convention.

Dr. John M. Lee, General Chairman, 179 Lake Ave., Rochester, N. Y.
Dr. Reuben A. Adams, Honorary Chairman.

LOCAL COMMITTEES

Information Bureau: Dr. A. R. Fritz, Chairman; Dr. F. R. Smith, Dr. W. F. Fowler, Dr. C. T. Graham, Dr. W. W. Schairer.

Committee on Press: Dr. David B. Jewett, Chairman; Dr. L. A. Dickenson, Dr. Frank Barber.

Committee on Badges: Dr. W. S. Rambo, Chairman; Dr. Marcena S. Ricker, Dr. Julia F. Haywood, Dr. Grace A. B. Carter, Dr. M. L. Schairer.

Committee on Finance: Dr. C. R. Sumner, Chairman; Dr. W. C. Daly, Dr. Cyril Sumner.

Committee on Printing: Dr. Lloyd H. Clark, Chairman; Dr. J. B. Deuel, Dr. W. H. Wetmore.

Hospitality Committee: Dr. J. K. Tretton, Chairman; Dr. Aida Eften Mellon, Dr. C. W. Newcomb, Newark, N. Y.; Dr. W. H. Wetmore.

Committee on Exhibits: Dr. F. R. Smith, Chairman; Dr. W. W. Schairer, Dr. Camp C. Thomas, Dr. W. Kirke Otis.

Committee on Entertainment: Dr. H. H. Baker, Chairman; Dr. F. R. Smith, Dr. C. R. Sumner, Dr. S. R. Snow, Dr. W. B. Carman, Dr. W. B. Gifford, Attica, N. Y.

Committee to Placard Hotels: Dr. A. C. Hermance, Chairman; Dr. A. R. Fritz, Dr. Judson F. Browne.

Committee on Transportation: Dr. J. S. Barnard, Chairman; Dr. S. Wright Hurd, Lockport, N. Y.; Dr. A. E. Wage, Albion, N. Y.

General Reception Committee: Dr. V. A. Hoard, Chairman; Dr. E. J. Bissell, Dr. C. R. Sumner, Dr. J. R. Hagaman, Dr. G. H. Welch, Dr. F. A. Rodgers, Dr. S. W. Bradstreet, Dr. L. L. Button, Dr. W. A. Keegan, Dr. M. S. Ricker, Dr. W. P. Fowler, Dr. A. C. Hermance, Dr. M. H. Adams, Dr. J. C. Dessloch, Rochester, N. Y.; Dr. Geo. R. Critchow, Dr. E. P. Hussey, Buffalo, N. Y.; Dr. H. W. Hoyt, Dr. L. S. Henry, Dr. J. M. Keese, Dr. J. Herbert Irish, Syracuse, N. Y.; Dr. C. E. Alliaume, Dr. A. R. Grant, Utica, N. Y.; Dr. R. A. Page, Dr. H. C. Senke, Dr. C. I. Newton, Geneseo, N. Y.; Dr. W. F. Clapp, Dr. G. F. Price, Fairport, N. Y.; Dr. J. E. Slaughter, Dr. L. M. Andrews, Warsaw, N. Y.; Dr. B. P. Andrews, Dansville, N. Y.; Dr. W. S. Trimmer, Livonia, N. Y.; Dr. C. A. Rowley, Victor, N. Y.; Dr. Arthur Bessemer, Marion, N. Y.; Dr. A. E. Leach, Mt. Morris, N. Y.; Dr. W. H. Sweeting, Savannah, N. Y.; Dr. J. R. Brownell, Perry, N. Y.; Dr. W. H. Hodge, Dr. W. D. Hough, Dr. W. Lewis Wilson, Niagara Falls, N. Y.; Dr. L. A. Martin, Dr. G. H. Jenkins, Binghamton, N. Y.; Dr. E. H. Noble, Elmira, N. Y.; Dr. W. B. Gifford, Attica, N. Y.; Dr. J. A. MacKenzie, Lima, N. Y.; Dr. Mary B. Jepson, Olean, N. Y.; Dr. P. H. Bourne, Salamanca, N. Y.; Dr. R. B. Partridge, East Rochester, N. Y.; Dr. Merton E. Skinner, LeRoy, N. Y.; Dr. C. F. Ormes, Jamestown, N. Y.; Dr. B. R. White, Honeoye Falls, N. Y.; Dr. E. M. Rosenberger, Macedon, N. Y.; Dr. E. W. Rude, Ilion, N. Y.; Dr. C. F. Hitchcock, Sodus, N. Y.; Dr. J. L. Thorpe, Clyde, N. Y.; Dr. E. E. Esley, Walworth, N. Y.

Committee on Hotels and Clubs: Dr. E. H. Wolcott, Chairman; Dr. W. A. Keegan.

Committee on Automobile Service: Dr. C. T. Graham, Chairman; Dr. F. R. Smith, Dr. E. Clayton Smith, Dr. Frank Bascom.

Committee to Arrange for Memorial Services: Dr. J. W. LeSeur, Chairman, Batavia, N. Y.; Dr. R. A. Adams, Dr. H. S. Hutchins, Dr. Horace LeSeur.

Committee to Increase Institute Membership: Dr. E. R. Sprague, Chairman; Dr. T. T. Huntington, Dr. R. R. Mellon, Dr. C. C. Lewis, Dr. H. C. Allen, Dr. J. L. Hondorf, Dr. Camp C. Thomas.

Committee on Arrangements for Stereopticon and Screen: Dr. L. J. Sanders, Chairman; Dr. Geo. A. Bachman.

Committee to Arrange for Alumni and Fraternity Meetings: Dr. H.

G. Shepard, Chairman; Dr. H. H. Baker, Dr. W. W. Winans, Dr. L. L. Button, Dr. J. R. Hagaman, Dr. H. W. Hoyt, Dr. F. A. Rodgers, Dr. D. B. Jewett, Dr. W. W. Schairer, Dr. Wm. Perrin, Dr. H. C. Allen.

CLINICS

Committee on Pathology: Dr. Ralph R. Mellon, Chairman; Dr. Herbert H. Brown, Dr. W. C. Daly.

Tuberculosis Clinic at Iola: Dr. E. H. Wolcott, Chairman; Dr. D. B. Jewett.

Committee on Clinical Work in Skin Diseases: Dr. S. Landauer, Chairman; Dr. F. M. Dearborn, New York City; Dr. Frank Barber, Dr. L. A. Dickenson.

Committee on Clinical Work in Mental and Nervous Diseases: Dr. P. W. Neefus, Chairman; Dr. C. A. Potter, Gowanda, N. Y.; Dr. R. C. Woodman, Middletown, N. Y.

Committee on Clinical Work in Obstetrics at Homœopathic Hospital: Dr. Wm. Perrin, Chairman; Dr. E. H. Wolcott, Dr. John Morgan.

Committee on Clinical Work in Obstetrics at Hahnemann Hospital: Dr. W. W. Winans, Chairman; Dr. C. G. Steinhauser, Dr. Wm. Perrin.

Committee on Clinical Work in Surgery and Gynæcology at Homœopathic Hospital: Dr. S. R. Snow, Chairman; Dr. W. A. Keegan, Dr. H. G. Shepard, Dr. Cyril Sumner, Dr. L. A. Dickenson, Dr. A. E. Davis, Dr. H. H. Baker.

Committee on Clinical Work in Surgery and Gynæcology at Hahnemann Hospital: Dr. J. S. Barnard, Chairman; Dr. Frank Bascom, Dr. W. F. Fowler, Dr. C. T. Graham, Dr. Gilbert H. Welch, Dr. F. S. Colgan, Dr. T. T. Huntington, Dr. J. L. Hondorf.

Committee on Clinical Work in Internal Medicine at Homœopathic Hospital: Dr. D. B. Jewett, Chairman; Dr. W. C. Daly, Dr. H. S. Schumacher.

Committee on Internal Medicine — Homœopathic Therapeutics — at Hahnemann Hospital: Dr. Glen I. Bidwell, Chairman; Dr. W. B. Hinsdale, Ann Arbor, Mich.; Dr. R. F. Rabe, New York City; Dr. A. H. Grimmer, Chicago, Ill.; Dr. S. G. Hermance, Clarkson, N. Y.

Committee on Clinical Work in Genito-Urinary Diseases at Hahnemann Hospital: Dr. E. R. Sprague, Chairman; Dr. Jos. O'Connor, Dr. Gilbert Welch, Dr. T. T. Huntington.

Committee on Clinical Work in Orthopedic Surgery at Homœopathic Hospital: Dr. L. A. Whitney, Chairman; Dr. E. B. Cook.

Committee on Clinical Work in Orthopedic Surgery at Hahnemann Hospital: Dr. E. B. Cook, Chairman; Dr. L. A. Whitney.

Committee on X-ray Demonstrations and Exhibition of Plates at Homœopathic Hospital: Dr. L. J. Sanders, Chairman; Dr. E. B. Cook.

Committee on X-ray Demonstrations and Exhibition of Plates at Hahnemann Hospital: Dr. E. B. Cook, Chairman; Dr. J. B. Deuel.

Committee on Clinical Work in Diseases of the Eye at Homœopathic Hospital: Dr. Frank Barber, Chairman; Dr. L. H. Clark.

Committee on Clinical Work in Diseases of the Nose, Throat and Ear at Homœopathic Hospital: Dr. H. W. Hoyt, Chairman; Dr. L. J. Sanders, Dr. L. H. Clark.

Committee on Clinical Work in Diseases of the Nose, Throat, Eye and Ear at Hahnemann Hospital: Dr. W. H. Doane, Chairman; Dr. A. V. Walker, Dr. J. R. Honiss, Dr. Gilbert Welch.

Committee on Clinical Work in Pediatrics at the Infants' Summer Hospital (23rd Ward): Dr. W. E. Dake, Chairman; Dr. W. C. Daly, Dr. E. R. Reynolds.

Bureau of Sanitary Science

Dr. E. H. Porter announces the following essayists in the Bureau of Sanitary Science: Scott C. Runnels, Guy E. Manning, Edward B. Hooker, E. A. Carr, Alton S. Fell, Frank Wieland, H. F. Staples. This program will probably be supplemented by a special assignment on Friday, Clinic Day.

Bureau of Homœopathy

J. Richey Horner, Chairman, Cleveland, Ohio

Chairman's Address.

1. Fraternal and Retrospective. S. P. Hedges, Chicago.
2. Progressive Homœopathy. F. C. Askenstedt, Louisville, Ky.
3. What are the Requirements for a Scientific Materia Medica? Philip Rice, San Francisco, Calif.
4. A Study of the Proving of the Colon Bacillus. Cora Smith King, Washington, D. C.
5. The Homœopathic Potency. Raymond del Mas, Hugo, Minn.
Discussed by Henry Gray Glover, Jackson Mich.
6. Does the Division of Drugs as Used in Potentization Increase Their Therapeutic Value? S. R. Geiser, Cincinnati, Ohio.
7. Homœopathy: Her Vulnerable Points and Her Strongholds. Mary E. Hanks, Chicago, Ill.
Discussed by DeWitt G. Wilcox, Boston, Mass.
8. The Logic of Infinitesimals. Frank W. Patch, Framingham, Mass.
9. The Homœopathic Prescription. E. M. Howard, Camden, N. J.
10. Correct Methods of Choosing the Indicated Remedy. Daniel E. S. Coleman, New York City.
11. Homœopathy and Its General Application in Practice. James W. Ward, San Francisco.

Bureau of Dermatology and Genito-Urinary Diseases

C. D. Collins, Chairman, Chicago

Ralph Bernstein, Secretary, Philadelphia

1. Chairman's Address: Forward and Review.
1. Management of the First Six Months of Syphilis. W. C. Hunsicker, Philadelphia.
2. Pus Kidney: Its Medical and Surgical Aspects. Leon T. Ashcraft, Philadelphia.
3. Cutaneous Tuberculides. Rollin H. Stevens, Detroit, Mich.
4. Eczema in Infants from Three Months to Three Years of Age. Wesley T. Lee, Boston.
5. The Significance of Prostatic Infections. Frank Wieland, Chicago.
6. Pellagra: Present Status and Early Recognition. Frederick M. Dearborn, New York.
7. Ultra-Violet Rays in Modern Dermatology. Ralph Bernstein, Philadelphia.
8. Intraspinial Medication in Syphilis. Albert A. Ogle, Indianapolis, Ind.
9. Unrecognized Syphilis. Sprague Carleton, New York.
10. The Clinical Significance of Lumbar Pains as found in G-U. Practice. E. Russell Sprague, Rochester.

NATIONAL BOARD OF MEDICAL EXAMINERS

The second examination to be given by the National Board of Medical Examiners will be held in Washington, D. C., June 13, 1917. The examination will last about one week.

The following states will recognize the certificate of the National Board: Colorado, Delaware, Idaho, Iowa, Kentucky, Maryland, North Carolina, New Hampshire, North Dakota and Pennsylvania. Favorable legislation is now pending in twelve of the remaining states.

A successful applicant may enter the Reserve Corps of either the Army or Navy without further professional examination, if their examination papers are satisfactory to a Board of Examiners of these Services.

The certificate of the National Board will be accepted as qualification for admittance into the Graduate School of the University of Minnesota, including the Mayo Foundation.

Application blanks and further information may be obtained from the Secretary, Dr. J. S. Rodman, 2106 Walnut Street, Philadelphia.

PERSONAL AND GENERAL ITEMS

Dr. Roland O. Parris (B.U.S.M., 1914) has removed from Commonwealth Avenue to 15 Englewood Avenue, Brookline.

Dr. Henry F. Dauphin (B.U.S.M., 1915) has located at 74 Brockton Avenue, Abington, Mass.

Dr. Frank L. Jones (class of 1915, B.U.S.M.) has located at Chatham, Mass.

Dr. Benjamin C. Woodbury, Jr. (B.U.S.M., 1906), who went to the Hawaiian Islands from Portsmouth, N. H., in the summer of 1916, has located at No. 431 Beretanio Street, Honolulu.

Ex-President William E. Huntington of Boston University and Mrs. Huntington have been spending the winter in DeLand, Florida, since Dr. Huntington's resignation as Dean of the Graduate School.

Dr. Thomas H. McClintock of Brooklyn (class of 1898, B.U.S.M.) is Surgeon-Major of the Twenty-third New York Infantry.

The Homœopaths of West Chester, Penn., and neighboring towns have been successful in raising \$30,000 to add to a gift of \$20,000 from Pierre S. DuPont for the enlargement and improvement of the hospital at West Chester. Mr. DuPont's gift was made conditional upon the raising of the \$30,000.

FOR SALE: A \$6,000 cash practice for sale in a thriving manufacturing community of 5,000 people, practically all Americans, within eighty miles of Boston. Good homœopathic location for the past thirty (30) years. Residence has private hospital facilities. Terms reasonable to the right party. Address "X.Y.Z.," care *New England Medical Gazette*, 80 East Concord Street, Boston, Mass.

Dr. Oscar W. Roberts of Springfield, Mass., has recently been a patient in the Massachusetts Homœopathic Hospital, under the care of Drs. Sutherland and Packard.

Dr. Cora Smith King of Washington, D. C., formerly of Seattle, Wash., has recently opened a house called King Cottage, 3015 Fourteenth Street, for the accommodation of a few patients for medical, electrical, minor surgical, maternity or dietetic care.

Dr. Esther K. Solakian (B.U.S.M., 1904) is located at 212 Huntington Avenue, Boston.

Dr. Harvey B. Pitcher (class of 1908, B.U.S.M.) was married on April 11, to Miss Edith L. Bigelow and has removed to 88 Myrtle Avenue, Fitchburg, Mass.

DESK AND CHAIR FORSALE: A flat-top office desk and chair are for sale at a low price and can be seen by applying to the *New England Medical Gazette*, 80 East Concord Street, Boston.

SENATOR JACOB H. GALLINGER, M.D.

Senator Jacob H. Gallinger, of New Hampshire, the oldest member of the United States Senate, celebrated his eightieth birthday on March 28th. Senator Gallinger is a graduate of New York Homœopathic Medical School, of the class of 1868, and previous to his election to the Senate in 1885 was in practice in Concord, New Hampshire. In 1879 and 1880 he was Surgeon-General of the State of New Hampshire, with the rank of Brigadier-General. He began his political career in 1872, when he was elected to the House of Representatives, and has been actively engaged ever since.

DOCTOR'S CORNER

TO LET—House 11 rooms, doctor's office and waiting-room, separate entrance, 335 Centre St., corner Gayhead St., Jamaica Plain. First-class repair; occupied by doctors for the past 30 years. HENRY S. HARRIS, 72 Equitable Building.

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ORIGINAL COMMUNICATIONS

THE HOMŒOPATHIC TREATMENT OF WHOOPING COUGH*

By CONRAD WESSELHOEFT, M.D., Visiting Physician to the West Department
(Contagious) of the Massachusetts Homœopathic Hospital, Boston.

In any consideration of the homœopathic treatment of a given disease it is advisable to prelude the mention of remedies and their indications with a brief discussion of the varieties of homœopathic treatment. All homœopathic treatment, as its name implies, is based upon the therapeutic principle, "Let likes be treated by likes." The application of this principle, however, is again made subject to therapeutic rules, but these are by no means in harmony with one another. In fact these so-called side issues of homœopathy, being often contradictory, have, since the early days of the last century, been the cause of much dissension in the homœopathic ranks.

The first of these side issues to be considered is the question of dosage. One faction claims that there is no limit to the potentization of the remedial powers of drugs through indefinite dilutions. These clinicians usually adhere rather strictly to the homœopathy as prescribed by Hahnemann in his later years. They lay especial emphasis on the value of the infinitesimal dose and the accurate use of a repertory. As they do not agree on the repertory to be used, and as the accurate use of different repertories leads to the selection of different drugs for the same symptom complex, they cannot be said to be entirely united in their method of procedure. This is merely an admission that prescribing is more of an art than a mathematical problem with but one answer, and concedes the proposition that different prescribers might bring about equally good results in the same case with different prescriptions. It is perfectly conceivable to

* From the Pharmacologic Department of the Evans Memorial. Read before the Alethean Club, April 23, 1917.

me that *ippecac* or *magnesia phosphorica* might do equally well for one patient with whooping cough, while in another case one remedy would have distinct advantages over the other. The high potentists are usually the most accurate prescribers, but their accuracy is so often nullified by the inaccuracies of the premises they use, — *i.e.*, inaccurate provings in the materia medica and incomplete observations on the case at hand, — that they fail in their effort in spite of the time and energy expended.

The low potentist is apt to place less credence in the correctness of the many and varied ideas of Hahnemann on homœopathy. He employs the principle "*similia similibus curentur*" in a given case more because it is the most logical method he knows of, rather than because he believes that it is the last and final word in all pharmacotherapeutics. Because of his tendency to be skeptical he relies more on general indications, feeling that the factor of error in provings makes the repertories too inaccurate to be relied upon, with the result that he tries a series of similarly acting remedies on a case, guided more by "key-note" symptoms than by the totality of symptoms.

This brings up the all-absorbing question of the individuality of the patient and its importance in prescribing. Hughes remarks that "the totality of the symptoms is, to the therapist, the disease."¹ How much shall be taken into consideration in the totality of the symptoms? Some would have us include the individualities of the patient, such as temperament, ameliorations and aggravations, peculiarities and symptoms, all of which existed previous to the onset of the diseased condition for which we are called upon to prescribe. For instance, an adult patient of sedentary habits, with an irritable disposition, who generally feels worse in the morning, comes down with whooping cough. These individualities are peculiar to the patient in health, and yet they are indications for *nux vomica*. This remedy is not expected to change his natural disposition, but if he suffers from an abnormal condition which this medicine is known to produce in provings, such as constipation with "an ineffectual urging to stool," then we should expect it to correct this condition more surely and effectually than in one not exhibiting these peculiarities, because people with these peculiarities are, according to provings, most susceptible to the drug. But how far shall these individualities influence us in the selection of a remedy when this patient has whooping cough? The cough might be dry, worse after midnight and in the morning, with vomiting, fear, choking, nosebleed and attacks after eating, all of which are

¹ Hughes, R.: The Principles and Practice of Homœopathy. London, 1902, p. 41

further indications for *nux vomica*.² The strict use of the repertory in this case would probably lead to the selection of this remedy.

On the other hand supposing the above case showed also a barking cough with paroxysms following closely on one another as in the indications for *drosera* or the very rapid coughing of *corallium rubrum*. Shall the individualities of the patient which persist in the disease outweigh the key-note symptoms which are the manifestations of the disease?³ In other words, are we treating the individual in particular, or are we treating the particular manifestations of the disease in this individual? Homœopathic literature asserts that it treats the individual rather than the disease, and this is a very distinctive feature of this form of therapeutics. This may be construed in two different ways. One prescriber may lay emphasis on the individual peculiarities of the patient, while another disregards these to lay emphasis on the peculiar manifestations of the disease in this particular individual. In either case the homœopathic prescriber does not have a specific medicine for each disease.⁴ On the other hand, Hahnemann informs us that certain epidemics of a disease call for one drug, while other epidemics call for another.⁵ This seems rather to contradict the last statement, and so it does. In fact it is this very point that I wish to bring out: namely, that homœopathic physicians, like physicians of the old school, have a way of prescribing for epidemic

² Lutz, A.: Lehrbuch der Homœopathie, Koethen, 1910, Auflage XIV, pp. 314-315

Kroener und Gisevius: Handbuch der homœopathischer Heillehre. Berlin, 1906, Bd. 1, 411

³ Paragraph 153 of the Organon may be construed as answering this in the affirmative.

⁴ The following words of Hughes are pertinent to the discussion: "But the leading physicians generally, from Hippocrates onwards, in their desire to be rational instead of empirical, have aimed at treating patients according to systems which they have excogitated, and have left specifics to quacks, — who have thriven accordingly. Hahnemann once more bent attention in the true direction; while, by discovering the law of specific action, he rescued it from empiricism and haphazard, and made it as rational as it is beneficial. I say beneficial; for would it not be an immense boon for suffering humanity if all diseases could be treated as ague is treated with quinin? It is because homœopathy is working towards this end, — and indeed towards something still more perfect, for to give quinin in every intermittent without discrimination is but rough practice, — it is for this reason among others that its method is not only positively but comparatively desirable."

⁵ ". . . . Each epidemic possesses a peculiar uniform character, common to all individuals attacked by the epidemic disease. By observing the complex of symptoms peculiar to all patients, this common character will be found to point out the homœopathic (specific) remedy for all cases in general. . . ." Hahnemann, S.: Organon. 5th ed., Wesselhoeft translation, §241

diseases according to the name of the disease rather than according to the individual expressions of the disease in the patient to be treated. Too often *belladonna* is prescribed in scarlet fever for no other reason than the fact that the physician always associates the symptoms of this drug with those of scarlet fever. The diagnosis seems to establish the treatment. The physician does not even look into the symptoms enough to establish the characteristics of the epidemic. He assumes that *belladonna* is the indicated remedy, primarily because of the reputed efficacy of this drug in his homœopathic text-books, and secondarily because his experience in the use of this drug in scarlet fever has been satisfactory to him. If the results in control cases do not warrant this confidence in the remedy, such treatment is purely empirical. Although the use of *belladonna* in scarlet fever had its origin in homœopathy, indiscriminate and even routine use of this drug in this disease may be anything but homœopathic treatment, because this drug may not be, and usually is not, indicated in all cases, or anywhere near all cases. Should *belladonna* be indicated in a given epidemic, however, and be demonstrated by control cases to be truly efficacious, we might then be justified in giving it as routine and call it homœopathy. It is certainly the duty of homœopathic institutions to carry out such studies if homœopathic therapeutics is to progress and to inspire interest in students and physicians of other schools. I am convinced that individualization in prescribing is largely impractical in the acute contagious diseases. Since the majority of cases are in little children, subjective symptoms are unreliable and we are forced to prescribe on comparatively few objective symptoms. This is particularly true of whooping cough. Consequently, we should endeavor to test the efficacy of such remedies as are indicated by their symptomatology in epidemic diseases. Whooping cough deserves especial attention in this respect, because the indications are few in uncomplicated cases and are confined almost wholly to the character of the cough once the whoop is established.

Another point that I wish to bring out is the relation of the seat of the drug's action to the seat of the disease. The pathological process in whooping cough, as has already been pointed out,⁶ consists in the accumulation of the bacilli among the cilia which line the trachea and the bronchi. The bacilli interfere mechanically with the function of the cilia, giving rise to a reflex paroxysmal cough, and, by giving off a mild poison they promote lymphocytosis, adenitis and the production of antibodies. Is there a drug in the materia medica which can

⁶ Wesselhoeft, C.: Whooping cough and its treatment. N. E. Med. Gazette, 1917, lii, 1-9

produce this pathological complex? Of course there is not; just as no drug can produce malaria plasmodia in the blood or diphtheria bacilli in the throat. But quinin can produce many of the symptoms of a malarial paroxysm, and it has been known to bring about a relapse of malaria itself, with multiplication of the latent plasmodia in the blood. Furthermore, certain salts of mercury have been known to produce the gross pathological picture of pharyngeal diphtheria. Neither quinin nor any drug, however, can produce the pathological picture brought about by the mechanical obstruction of capillaries through the accumulation of plasmodia; nor does the fibrinous membrane of the pharynx from corrosive sublimate poisoning spread down into the larynx or forward into the nasal cavities to give respiratory obstruction. The drug pictures are merely similar to, but by no means identical with, the symptoms of the disease. So in whooping cough we can only hope to find drugs which will produce symptoms similar to the disease in its various aspects. In so doing, however, it is essential to bear in mind the seat of the drug's action. *Nux vomica* may, through irritation of the gastric mucosa, give rise to a reflex cough. In this case the vomiting is primary, that is, it originates with the gastric irritation. But in pertussis the cough is the result of the bronchial and tracheal irritation, and the vomiting is secondary, being the result of a reflex through the vagus nerves. Consequently the *nux vomica* symptoms, though in some respects similar, are nevertheless remotely related to the symptoms of whooping cough. Much the same thing might be said of *ipecac* but to a lesser degree.

Let us consider the *modus operandi* of drugs administered homœopathically in whooping cough. Inasmuch as we have no drug that is vaunted to be especially reliable in all cases of whooping cough we must be content to discuss in general terms the homœopathic action of drugs in this disease. Bearing in mind the cause of the symptoms of whooping cough, what can we say as to the relation of these drugs to the pathological process by which we are confronted? So far as I am able to learn, no modern scientific pharmacological research has been made regarding the action of these drugs which pertains in any direct way to their possible *modus operandi* in this disease. This being the case, we can merely indulge in a speculative discussion of prevailing views on the subject. To some, the twentieth paragraph of the *Organon* offers a satisfactory answer.⁷

⁷ "Neither the spirit-like power concealed in drugs, and shown by their ability of altering the health of man, nor their power of curing diseases, can be comprehended by a mere effort of reason; it is only through manifestations of their effect upon the state of health that this power of drugs is experienced and distinctly observed."

Yet even Hahnemann placed "slight value upon an attempt at explanation."⁸

This concession on the part of the founder of homœopathy, although a frank admission of his inability to comprehend the *modus operandi* of the curative action of drugs, is, nevertheless, the weakest spot in his entire structure of homœopathic therapeutics. Assuming it is to be a law of nature that likes are cured by likes, he asserts that "scientific explanation of its *mode of action* is of little importance."⁹ Granted that such a law exists, how can we possibly be expected to apply this law without a clear understanding of what constitutes the similarity of the drug to the disease which we are to cure? If we had this clear understanding we should be far better able to explain its mode of action; and what is more we should be able to apply the law accurately. Consequently I deplore his minimizing the importance of a scientific explanation, because it tends toward dogmatism by discouraging research into the fundamentals of scientific and rational therapeutics.

It must be remembered, however, that Hahnemann was a physician of the early part of the last century, and that medical thought and progress are at a different stage today. Compared to his contemporaries of the other school his writings show superior medical philosophy. But the advances in medicine have given us a different language from that of his day. We should not and cannot discuss homœopathy in the terms of the *Organon*. Such terms as "miasms," "vital force" and "morbific potency" belong to an obsolete or even a dead language. In the light of modern medicine, Hahnemann's tentative explanation¹⁰ is likely to be viewed more with historic interest rather than with scientific respect. The medical student of today with his teachings in pathology, immunology and pharmacology can never be impressed by the significance of this argument.¹¹ And yet

⁸ "Since this natural law of cure has been verified to the world by every pure experiment and genuine experience, and has thus become an established fact, a scientific explanation of its *mode of action* is of little importance; I therefore place but a slight value upon an attempt at explanation. Nevertheless the following view holds good as the most probable one, since it is based entirely upon empirical premises." *Ibid.* § 28

⁹ Compare the words of one of our noted medical writers of today: "The treatment of *chlorosis* affords one of the most brilliant instances—of which we have but three or four—of the specific action of a remedy. Apart from the action of quinin in malarial fever, and of mercury and iodid of potassium in syphilis, there is no other drug the beneficial effects of which we can trace with the accuracy of a scientific experiment. It is a minor matter *how* the iron cures chlorosis." Sir William Osler.: *The Principles and Practice of Medicine*, 1916, p. 739

¹⁰ *Organon*, § 29

¹¹ Courses in homœopathic philosophy as given today in our medical schools fail to inspire interest in the students for the very reason that the

twenty years from now the theories of many of our eminent physicians, — theories which now constitute the last word in medicine, and according to which patients are subjected to many discomforts in treatment, — will probably be discarded and looked upon with the same degree of disgust that most of us look today upon the purging, blistering and vomiting of a century ago. With this possibility in mind it behooves us to speak more guardedly and modestly of our convictions in therapeutics.

Practitioners of homœopathy vary, as has already been said, in their application of remedies in acute infectious diseases. We have mentioned the divergence of opinion regarding the dose and the manner of selecting the remedy. It is also appropriate to bring to mind the alternation of remedies as is practised by many. Hahnemann¹² was opposed to this usage, and his close followers of today are outspoken in their denunciation of this practice, because it is not in keeping with the fundamentals of the doctrine of the single remedy. Their argument is that since the selection of a remedy is based upon the provings of single medicines the combination or alternation of remedies in the treatment of disease is not in keeping with the fundamental principle governing their application; because they are not proved in combination or alternation. This argument has always appealed to me sufficiently so that I neither use the combination tablets of our homœopathic pharmacies nor do I alternate medicines. Nevertheless this argument is purely a theory, and its correctness is dependent upon the relative efficacy of bedside tests.

One of the most discouraging things to the young student of homœopathy is the lack of clinical research regarding the application of homœopathic remedies. He is impressed by the statistics in favor of homœopathy in pneumonia, typhoid, *etc.*, *etc.*, but the statistics of high potentists, low potentists and those who alternate and those who do not, are all jumbled together in these compilations pertaining to the relative efficacy of homœopathic therapeutics. In the last hundred years homœopathic physicians have been guided largely by the logic of theories and their own, or their preceptors', experiences, rather than by the results of controlled and carefully conducted clinical researches. The old school has conducted such researches and the true students among them have accordingly discarded many

language used is not in keeping with that used in the rest of the curriculum. The lectures are based on the writings of a century ago, and only weak attempts are made to support these old doctrines with the results of modern investigations.

¹² Organon, § 272; note 138. Dudgeon, trans., fifth ed., § 272, footnote.

of their faulty notions regarding alcohol, strychnin,¹³ *etc.* In so doing they weighed many of their pharmacologic theories evolved in the laboratory and found them wanting in therapeutic efficacy. The homœopathic school has also made investigations, but these have been either of a general nature or confined to the efficacy or *modus operandi* of one drug in a given condition. But no comparative clinical statistics of any moment have been produced to show the relative efficacy of low potencies over high potencies, of the value of a particular repertory over another, of the value of alternating or combining over the single remedy. This self-satisfaction of individual homœopathic physicians as to the correctness of their views on homœopathic problems has acted as a damper to the investigations so essential to the advancement of medicine, and has resulted in the teaching of dogmatism to students in the guise of "the science of therapeutics."

Theories are essential to the advancement of medical thought, but this advancement only comes through scientific investigations in which bedside tests must corroborate laboratory experiments. This is by no means impossible of achievement in regard to the theories of homœopathy. In fact it is essential to the self-respect and even the very life of the homœopathic school. Meyer and Gottlieb¹⁴ have called attention to the rise of medicine with that of agriculture. We may compare a certain type of doctor with a peasant. Both may make a living from their efforts because in each there rests a sufficient degree of actual knowledge and practical skill. But the scientific physician who keeps himself informed of medical progress is as superior to the above mentioned type of physician as is the scientific agriculturalist superior to the comparatively ignorant peasant. However, it is not to be forgotten that the scientific farmer often learns valuable tricks from the peasant. So, in medicine, the laboratory scientist may be able to correct the views of the family practitioner, but the latter by his experience may and often does give the former a hint, — usually based on an erroneous theory, — which when tested and subjected to scientific research becomes a boon to suffering humanity.¹⁵

¹³ Cabot, Richard C.: Studies on the action of alcohol in disease, especially upon the circulation. *Medical News*, July 25, 1903

Measurements of blood pressure in fever before, during and after the administration of strychnin. *American Medicine*, 1904, viii, 31; Parkinson and Rowlands: *Quart. Jour. of Med.*, vii, 42; Crile, quoted by Cushny, A.R.: *Pharmacology*. Phil. 1915, p. 276

¹⁴ *Pharmacology*, Halsey trans., 1914, p. 581

¹⁵ *Salicylic acid* was introduced as a medicine for rheumatism in 1874 by an English army surgeon, Maclagan, who got the idea from the Hotten-

Consequently the study of drug idiosyncrasies may establish such truth as may lie in the high potency theory, and studies in the synergistic action of drugs may substantiate the practice of alternation and combinations. These truths, however, will only receive general recognition in therapeutics when the above studies shall have so limited their application that by following indications we may acquire a definite and high degree of success.

Hád my experiences in whooping cough convinced me that the disease was easy to control with homœopathic remedies it is doubtful whether I should have indulged in the above remarks, which are in the nature of an explanation and justification of what is to follow. On the contrary I have found it exceedingly difficult in my hospital wards to control whooping cough with any remedies, homœopathic or otherwise, which do not in the end do the patient more harm than good. I qualify this last statement because I am as capable of checking the symptoms of whooping cough as effectively and as completely as any physician living, simply by giving large enough doses of opiates, bromids, atropin or other poisons, by rigorously enough twisting their spines and yanking their nerves, by starvation, electric shocks and even by more direct but less cruel methods. But because these never appealed to me, and as the results of the use of the above drugs in whooping cough in this way never impressed me, I have leaned toward homœopathy, and in it I have found the solace of feeling that I have seen suffering humanity benefitted by this simple and, to my mind, logical, method of therapeutics. If my impressions are faulty, and I have been unwittingly deceived in this respect, there is a degree of satisfaction in having attempted to investigate the possible truth of these principles in the laboratory and the efficacy of their practical results by clinical research. The pursuit of these studies has led me into the intricate problems which entangle

tots of Africa. Thus the aspirin habit may be said to have originated in darkest Africa, — which is very appropriate.

Withering's attention was called to *digitalis* by the success of an old woman of Shropshire in treating dropsy. Although known to medicine since 1542, Withering's publication in 1785 gave this drug its prominence in the treatment of heart disease. Withering gave very sensible indications for its use which might well be followed with profit by a large element of the medical profession who are apparently as ignorant of how this drug acts as the old woman in Shropshire.

The efficacy of *cinchona bark*, in malaria, was first discovered by the American Indians. The bark was introduced into Europe through the efforts of the Jesuits, but was bitterly opposed for years by the medical profession. Up to a few years ago the pendulum had swung so far the other way that *quinin* was not only advocated for malaria but for colds, anæmia, pneumonia, dyspepsia and a host of other complaints. In malaria, where it could do good, it was usually interfered with by other ingredients in the prescription.

homœopathic therapeutics, problems as yet unsolved by science, and my results, though often discouraging to the cause of homœopathic propaganda, are none the less convincing that further investigations should be made.

HOMŒOPATHIC REMEDIES FOR WHOOPING COUGH

There is no occasion for my presenting a complete repertory for the symptoms of whooping cough. Those who wish to have recourse to such are referred to the work of Boenninghausen, "The Homœopathic Treatment of Hooping Cough," translated by Carroll Dunham,¹⁶ or to any of the large and general repertories on the market. However, it is worth while to give his enumeration of those remedies which he considers sufficiently often indicated to warrant their mention.

"*To the First Stage.* — Aconite, Belladonna, Bryonia, Carbo an., Carbo veg., Causticum, Chamomilla, Conium, Dulcamara, Euphrasia, Ipecacuanha, Mercurius, Mezer., Nux vom., Pulsatilla, Sabadilla, Veratrum and Verbascum.

"*To the Second Stage.* — Ambra, Antimonium crud., Antimonium tart., Arnica, Cina, Cuprum, Digitalis, Drosera, Hepar, Ignatia, Iodium, Kali, Lachesis, Ledum, Lycopodium, Magnesia carb., Magnesia mur., Mercurius, Mezer., Natrum mur., Sambucus, Sepia, Silicea, Squilla, Stannum, Stramonium, Sulphur, Sulphuric acid, Veratrum and Zincum.

"*To the Third Stage.* — Arsenicum, Belladonna, Bryonia, Calcarea, China, Conium, Dulcamara, Ignatia, Iodium, Kali, Kreosotum, Laurocerasus, Moschus, Muriatic acid, Phosphorus, Phosphoric acid, Sambucus, Senega, Stannum, Sulphur, Zincum."¹⁷

The same author gives the following as having been found to be useful in epidemics; Arnica, Carbo veg., Cina, Cuprum, Drosera, Hepar, Kali, Nux vomica, Sepia, Silicea, Sulphur and Veratrum.

The following summary of the materia medica of whooping cough is taken from thirteen standard homœopathic reference books. The numbers following each drug indicate the sources from which the indications were derived, each number referring to the number in the appended list of references. The potency given with a reference is that author's recommendation.

ACONITE. Clear, ringing or whistling whoop with burning in the larynx and trachea, slight expectoration. Worse evening, or after midnight; fever, anxiety and restlessness. 1, 2, 3, 7 (3x alternated with ipecacuanha 2x in first stage), 12

¹⁶ C. von Boenninghausen; a book of 200 pages, New York, 1870

¹⁷ The last paragraph in this chapter is worthy of consideration by all. "We conclude, then, with Hahnemann's oft-repeated admonition: 'Follow the example set — follow it full of confidence — but follow *precisely* as it has been detailed!' And we do not hesitate to add: 'If after having done this, the expected result does not ensue, relate the whole course of proceeding, honestly, truly, and fully, that every expert may pass judgment upon it and then venture, in full confidence, to warn every one against the homœopathic treatment of Hooping Cough.'" *Ibid.*, pp. 27-28

ANTIMONIUM TARTARICUM. Bronchitis, prostration, gasps for air at the start, sweating, worse at night. 4 (6x), 10, 12

ARNICA. Wailing and crying, spitting blood, bloody diarrhœa, tendency to hæmorrhage. 1, 3 (3x), 4, 12

ATROPIN. Periodic spasms, cyanosis, fear of choking, hæmorrhages, vomiting. 3

BELLADONNA. Hot dry skin, epistaxis, with involuntary urination; no expectoration; worse at night; first stage with sneezing, retching, vomiting, abdominal pain and headache. 1, 2, 3, 4 (3x)

CARBO VEGETABILIS. At the beginning of the second stage, retching, headache, pain on swallowing, offensive expectoration. 1, 2, 3, 12

CINA. Rigidity, grinding of teeth in sleep, bed wetting; white, watery stools; face pale or cyanotic, sneezing, clucking sounds after paroxysm. 1, 3, 6, 12

COCCUS CACTI. With much vomiting and expectoration, especially in adults, of tough, white, stringy mucus; worse morning, appetite increased, frequent urination with tenesmus, marked choking. 1, 2, 3, 4, 6, 7

CONIUM. Scrofulous children, dry cough, nausea without vomiting, especially after measles and scarlet fever. 1, 3

CORALLIUM RUBRUM. Violent paroxysms, preceded by a smothering feeling; short, quick, ringing cough, "minute gun cough"; later stages, anorexia. 1, 3, 6, 7 (12x)

CUPRUM METALLICUM. Convulsions, flexor spasms, paroxysms of sudden onset and long duration relieved by a swallow of water; approaching *laryngismus stridulus*; cramps. 1, 2, 3, 4, 6, 9, 12

DROSERIA. Barking cough, frequent paroxysms, retching and vomiting, cries a great deal; better while up and about, worse evenings and after midnight, worse by day; pain in chest, epistaxis, comparatively light cases. Worse from drinking water. 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13

HEPAR SULPHUR. Catarrhal stage, purulent, offensive expectoration, croupy cough, hoarseness, worse evenings, worse fresh air; emaciation. Chilliness with hot cheeks and hands, sweating. 1, 2, 3, 4 (6x), 6

HYDROCYANIC ACID. Cyanosis, dryness of mouth and larynx with tickling; slow enfeebled respiration. Violent paroxysm; abdominal pain, vomiting. Acts through the nervous system. 1, 4 (3x), 11

IPECACUANHA. Nausea, with relief from vomiting; convulsive, persistent, gagging cough; copious, tenacious mucus; stiffening of limbs and cyanosis with paroxysms; craves sweets,

worse from change in temperature. 1, 2, 3, 4 (3x), 6, 7 (2x), 9 (3x), 10, 11, 12

KALI BICHROMICUM. Late catarrhal stage, stringy, viscid mucus, hoarseness; ulcerations, rheumatic pains, general debility. 1, 6, 12

MAGNESIA PHOSPHORICA. Severe paroxysms; nervous temperament, blue, swollen, livid face with marked whoop; worse at night; dry cough, 3, 5, 6 (30x), 9 (12x)

MEPHITES. Marked laryngeal spasm, prominent whoop, smothering with the cough, slight catarrhal symptoms, rare vomiting, exhalation difficult. 1, 3, 6, 10

NAPHTHALIN. Long-continued paroxysms almost with suffocation; dry cough with constriction of chest, especially in adults. 3, 6, 7 (1x)

NUX VOMICA. Dry cough, absence of fever, worse in the morning; vomiting; anxious and restless, worse from eating and drinking. 1, 2, 3, 12

PULSATILLA. Hoarseness, catarrhal symptoms predominate, much white, watery mucus; diarrhœa; worse evening, warmth; involuntary urination. 1, 2, 3, 12

STRAMONIUM. Restlessness, barking cough, bloody expectorations; trembling and jerking of limbs. 1, 3

SULPHUR. Retching, vomiting, hoarseness; pale, scrofulous children, offensive expectoration; worse damp, wet weather, worse fresh air. 1, 2, 3, 6, 12

VERATRUM ALBUM. Feverish, persistent cases, desire to sleep; weak circulation and respiration, cold sweats; thirsty; involuntary urination, vertigo. 1, 2, 3, 12

References

1. von Boenninghausen, C.: *The Homœopathic Treatment of Hooping Cough.* Trans. by Carroll Dunham, N. Y., 1870
2. Lutze, Arthur: *Lehrbuch der Homœopathie.* 14th ed., by Paul Lutze. Koethen, 1910
3. Kroener, E. and Gisevius F.: *Handbuch der homœopathischen Heillehre.* Bd. 1. Berlin, 1906
4. Clarke, John H.: *The Prescriber.* 4th ed. London, 1893
5. Boericke, William, and Dewey, W. A.: *The Twelve Tissue Remedies of Schuessler,* 5th ed. Phil., 1914
6. Dewey, W. A.: *Practical Homœopathic Therapeutics.* 2d ed. Phil., 1914
7. Hughes, R.: *The Principles and Practice of Homœopathic Therapeutics.* London, 1902
8. von Grauvogel, E.: *Lehrbuch der Homœopathie.* Bd. II. Nuernberg, 1866
9. Boericke, F. A., and Anshutz, E. P.: *The Elements of Homœopathic Theory, Materia Medica, Practice and Pharmacy.* Phil., 1905
10. Van Denburg, M. W.: *Therapeutics of the Respiratory System.* Phil., 1916
11. Hughes, R.: *A Manual of Pharmacodynamics.* 6th ed. London, 1899

12. Jahr, G. H. G.: Therapeutic Guide. Forty Years' Practice. Trans. by C. J. Hempel, Phil., 1873

13. Farrington, E. A.: A Clinical Materia Medica. Edit. Farrington, H. Phil., 1908, p. 27

Having gone over the various drugs which have been described by homœopathic physicians in whooping cough, let us now go over a list of authors of homœopathic works and state which remedies these distinguished and successful men have found most useful in this disease. The list follows:

Hahnemann: *Drosera* 30 "cure every case."

Bähr: *Belladonna* and *cuprum metallicum*.

Bäyes: *Drosera* 1x.

Joussett: *Hyoscyamus*, *cuprum*, *coccus cacti*, *naphthalin*.

Hardmann and Weaver: *Naphthalin* 1x.

von Grauvogel: *Naphthalin*, in one epidemic: *drosera*; *china*, in another epidemic; *arsenicum*.

Testes: *Corallium rubrum*, *chelidonium*, *pulsatilla*.

William Boericke: *Magnesia phosphorica*.

Hughes: *Aconite* and *ipecac*, *cuprum*.

Jahr: *Belladonna* as a prophylactic.

If homœopathic prescribing is based upon symptom similarity, it is well to look into the symptoms of those drugs which are prescribed in whooping cough on supposedly homœopathic grounds, and to ascertain through such literature as we command whether or not the grounds for such prescribing are actually homœopathic or of an empirical nature.

Aconite does give us the symptoms of coryza, chilliness, fever and catarrhal cough, met with in the first stage. It does not have paroxysms of coughing except to a slight degree when accompanied by a sore throat with burning of the fauces. Furthermore, there is no suggestion of a whoop to the cough. (Cyclopædia of Drug Pathogenesis, 1886; Ringer, S.: Handbook of Therapeutics. 12th ed., N. Y. 1888)

Arnica causes a dry, irritative cough, and this is by no means a constant symptom of the drug. (Cyclopædia of Drug Pathogenesis).

Atropin. This drug has a definite action on the respiratory tract. In the first place, it stimulates respiration through its action on the respiratory center.¹⁸ Second, slight atropin poisoning is attended with motor unrest and later chronic convulsions of a more or less periodic character, due to its action on the central nervous system.¹⁹ Third, atropin through its influence on "all parasympathetic terminal nervous organs" depresses the tone of smooth muscles and the secretory activity of glands.²⁰

¹⁸ Meyer & Gottlieb: Pharmacology. Halsey trans. Phil., 1914, p. 335

¹⁹ *Ibid.*, 24

²⁰ *Ibid.*, 155

Rossbach²¹ showed by animal experimentation that this drug decreased tracheal secretion. Fourth, inasmuch as this drug tends to relax the spasms of involuntary muscle it might in sufficient doses tend to relax the bronchial spasm, causing the cough and the spasm which gives rise to the whoop.²² Fifth, used in this way the action would be of an allœopathic nature, but from the above pharmacological action the homœopathic physician ascertains more clearly the chief spheres of action of the drug, and is thus enabled to analyze the symptoms of provers and ascribe them to primary or secondary actions, *i.e.*, better to ascertain their true value in prescribing for conditions in disease.

In the provings²³ we find a dry, tickling cough, vomiting and a feeling of constriction in the larynx. These symptoms may be attributed to the depression of the secretory glands in the upper respiratory tract. The restlessness and muscular twitchings so commonly experienced are due to stimulation of the motor centers.

Belladonna has all the symptoms of its alkaloid, atropin, with the addition of those which may be attributed to hyoscin, the latter having a distinct narcotic action. Given in sufficient doses in whooping cough the hyoscin element may tend to quiet the patient. In the provings we find the dry or croupy cough, with a sense of constriction in the larynx, cyanosis, vomiting and convulsions. In the recent provings of the O. O. and L. Society we find: violent paroxysm of coughing excited by dryness of the throat; dry, hoarse cough, with expectoration of thick, nearly transparent, whitish mucus, worse from cold air; hacking cough; one coughing spell brings on another. (Cyclopædia of Drug Pathogenesy. The Test Drug-Proving of the O. O. and L. Society. A Repeating of *Belladonna*. Edited by Bellows, H. P., Boston, 1906, p. 545)

Bromids. On the respiratory tract the influence of the bromids may be compared to that of atropin. Through the central nervous system we have a decrease of reflex activity, but instead of decreasing the activity of the glands of the upper respiratory tract, we find the secretion increased. The activity of these glands is ascribed to the irritation of the free bromin which is liberated from the hydrobromic acid, in which form the bromids are probably secreted in acid mucus.²⁴ Consequently the administration of bromids in sufficient doses in whooping

²¹ Ringer, S.: Handbook of Therapeutics, 12th ed. N. Y., 1888, p. 321

²² Cushny, A. R.: Pharmacology and Therapeutics. N. Y., 1915, p. 333

²³ Cyclopædia of Drug Pathogenesy, 1886

²⁴ Meyer & Gottlieb, *loc. cit.*, p. 114

cough would tend to allay the cough by decreasing the reflex irritability of the respiratory tract, and tend to decrease the liability to convulsions, as well as quiet the patient. Schulz²⁵ sees in the manifestations of the bromids a similarity to the symptoms of whooping cough, and draws attention to the fact that both the drug and the disease have a selective affinity for the same portion of the respiratory tract, and explains its action on this ground.

In the records of provings and poisonings it is essential to exclude those where the vapor has been inhaled, as these cases give the respiratory symptoms found on internal administration in a more severe form with variations which will be considered later. We have coryza, sneezing and loose cough similar to that of the first stage of pertussis; tickling and a sense of constriction in the larynx; obstinate cough, bronchitis; and a profuse secretion of bronchial mucus; cyanosis, nausea and vomiting. (Cyclopædia of Drug Pathogenesis.)

Coccus cacti. In the provings of this remedy, the cough appears to be due to an irritation in the throat and larynx, but there is nothing further characteristic of pertussis either in the cough itself or the general symptoms. Its use in whooping cough, therefore, would appear to be almost entirely on an empirical basis, that is, the symptoms are those exhibited by patients relieved after the administration of this remedy, rather than on the results of provings. (Cyclopædia of Drug Pathogenesis.)

Corallium rubrum. The provings of this remedy show no similarity to any case of whooping cough I have met. A perusal of the provings would never lead me to think of it in the treatment of whooping cough. Its reputation in the treatment of this disease by homœopathic physicians must be based on empiricism, as the guiding symptoms of this remedy derived from actual provings would hardly justify its classification as a homœopathic remedy for pertussis. (Cyclopædia of Drug Pathogenesis.)

Cuprum. A study of the cases of poisoning in the Cyclopædia of Drug Pathogenesis fails to impress the reader that the symptoms of acute or chronic copper poisoning produce any constant symptoms similar to those of whooping cough. In only one of the thirty-one cases described do we find cough. In number 25 we have: "occasional paroxysms of coughing unattended with any physical signs of disease of lungs,"²⁶ and in

²⁵ Schulz, Hugo: Wirkung und Anwendung der unorganischen Arzneistoffe. Leipzig 1907, p. 70. (This author is not a member of the homœopathic school, although a student of homœopathy. He is director of the Pharmacological Institute of the University of Greifswald.)

²⁶ Quoted from Salter, Boston Med. & Surg. Jour., lv, 121

number 29: "very intense dyspnœa with laryngeal and bronchial spasm."²⁷ This would hardly seem to justify the place which cuprum holds as a homœopathic remedy for whooping cough.

Nevertheless Schulz²⁸ informs us that the symptoms of copper poisoning consist of catarrh of the larynx with marked hoarseness and prolonged cramp-like paroxysms of coughing which are worse at night. Unfortunately, this old school author does not give us the sources of this information. The emetic action of the copper salts seems to be entirely due to their local irritant action on the gastric mucosa.²⁹

Drosera rotundifolia: This drug warrants special consideration here, because it became famous as a remedy in whooping cough on the recommendation of Hahnemann, who based his indications on the observations of Wislicenus, one of the first provers.³⁰ In these first eight provings only two subjects experienced a cough. In one it was by no means characteristic of pertussis, while in Wislicenus the symptoms are not remarkable for their similarity to this disease. That part of this latter proving in which Hahnemann found his indications reads as follows: "Deep down in the fauces (and on the soft palate) a rough, scraping sensation of dryness exciting short cough, with yellow, slimy expectoration and hoarseness of the voice, so that it is only with an effort that he can speak in a deep bass tone; at the same time he feels an oppression of the chest, as if something there kept back the air when he coughed and spoke, so that the breath could not be expelled (lasting several days.)"³¹

The Cyclopædia of Drug Pathogenesis throws no new light on the subject. A later proving, recorded by Allen as number 9, was that of E. B. Shulldham.³² This was by inhalation of the steam from hot water to which an indefinite amount of the tincture was added. The prover had no cough, much less a whoop. Hering's "Guiding Symptoms" and Allen's "Encyclopædia of Pure Materia Medica" give a whoopy cough as an indication based only on symptoms recorded under the administration of the drug during disease.³³ Such indications then are

²⁷ Quoted from Arch. de Médecine Navale, Jan., 1865

²⁸ Schulz, H.: Unorganische Arzneistoffe, p. 292

²⁹ Cushny A. R.: Pharmacology & Therapeutics. Phil., 1915, p. 659

³⁰ Hering, C.: Guiding Symptoms. Phil., 1887, v, 152

³¹ Hahnemann, S.: Materia Medica Pura. Edited by Dudgeon, R. E., & Hughes, R. Liverpool, 1880, I, 576

³² Monthly Homœopathic Review. London, 1871, xv, 299

³³ If it were shown that *drosera* actually aggravated the whooping cough of pertussis this would be of interest and possibly of value from a homœopathic standpoint, but this cannot be gleaned from the literature.

purely empirical, and have no more to do with homœopathy than allœopathy; in other words, nothing whatever. On this point I take the most decided exception to those followers of Hahnemann who use such symptoms indiscriminately with the symptoms of actual provings. They may be following Hahnemann, but this author uttered many statements which have no connection with homœopathy except indirectly by the fact that he was their author. Furthermore, his indications for this remedy are as arbitrary as his recommendation that "a single smallest dose of the thirtieth potency is quite sufficient to effect a cure."³⁴ Unless further provings warrant the use of *drosera* in whooping cough it would appear that this drug is not indicated on homœopathic grounds in the treatment of this malady.

Magnesium. The various salts of this metal have won repute in the hands of homœopathic prescribers in the treatment of pertussis. von Boenninghausen³⁵ preferred *magnesium metallicum*, while William Boericke and Dewey found *magnesia phosphorica* in the 30th "given steadily" especially useful.³⁶ In the Cyclopædia of Drug Pathogenesis we find under *magnesia sulphurica*: fluent coryza, sneezing; frequent, dry cough, burning in the larynx, hoarseness, epistaxis, chilliness; tickling cough. When magnesium is injected intravenously into animals "it appears to have some effect on the myoneural receptors in muscle, for it arrests the twitchings induced by physostigmin and in large doses interrupts the path from nerve to muscle in the same way as curara."³⁷ Such injections may paralyze the respiratory center.³⁸ Schulz³⁹ gives as the symptoms of magnesium poisoning: coryza, epistaxis; feeling of pressure and tickling in the larynx with paroxysms of cramp-like cough; bronchial catarrh with painful raising of secretion and difficulty in taking a long breath. Unfortunately he does not give us the sources of these symptoms so valuable to the present discussion.

Zincum. The condition known as brass-founder's ague, due to inhalation of zinc fumes, gives rise to a dryness of the throat with a hard cough, constriction and soreness of the chest, nausea and vomiting, headache and profuse perspiration. Zinc seems to depress the central nervous system. Schulz gives the following

³⁴ Quoted by von Boenninghausen, C. *The Homœopathic Treatment of Whooping Cough*. Trans. by Dunham, C. N. Y., 1870, p. 21

³⁵ von Boenninghausen, C. *The Homœopathic Treatment of Whooping Cough*, p. 80

³⁶ Dewey, W. A.: *Practical Homœopathic Therapeutics*, 2d ed. Phil., 1914, p. 376; Boericke, W., and Dewey, W. A. *The Twelve Tissue Remedies of Schuessler*, 5th ed. Phil., 1914, p. 340

³⁷ Cushny: *loc. cit.*, 566

³⁸ Meyer and Gottlieb: *loc. cit.*, 202

³⁹ Schulz, H.: *loc. cit.*, 238

symptoms of zinc poisoning: coryza, catarrh of the larynx and trachea. The mucous secretions are not much increased, but sometimes contain blood. There is a nervous, tickling cough. In the twenty pages devoted to this metal and its salts in the Cyclopædia of Drug Pathogenesis, cough is mentioned not more than three times, and the character is not given. Coryza, chilliness, chill, feverish feeling, sweats and night sweats, are characteristic. The coryza is much more constant from inhalations of the fumes of this metal than where it has been taken into the stomach. Speaking generally, it does not appear that zinc or its salts show any marked proclivity for the respiratory system, except perhaps the nose; consequently I fail to see the justification for the asserted homœopathicity of zinc in whooping cough.

We now come to a consideration of those drugs known as *Expectorants* and *Emetics*. These may be divided into three classes. First, those which show a definite proclivity for the respiratory tract; second, those which show such a proclivity, but in which the reflex from their emetic action augments the respiratory symptoms; third, drugs whose respiratory symptoms are entirely dependent upon a reflex accompanying their emetic action. In my opinion this classification should be more clearly borne in mind in all homœopathic prescribing. The cough of ammonium chlorid and apomorphin, for instance, may be very similar, but the origin in each case is very dissimilar and consequently the other attending symptoms are not the same.

This consideration is particularly appropriate to the relation of drugs to whooping cough, because in this disease the seat of the cough lies in the direct irritation of the respiratory tract, and the interference with functions of the cilia by the growth of the Bordet-Gengou bacillus. In the course of this disease we may have retching and vomiting during or following a paroxysm of coughing and whooping, but this is a reflex from the respiratory tract. The result is that nausea is rarely present except at the moment of the retching.

Another point to be kept in mind is that the cough of the disease is of mechanical origin, while from drugs, except by the inhalation of insoluble particles, the cough has a chemical origin. Of course the action of fumes by inhalation is a direct local action, and this must not be confused with the action derived from the ingestion and absorption of drugs which have a selective action on the respiratory tract. Unfortunately, this confusion does exist in the homœopathic materia medica. The direct effect of the inhalation of fumes of a drug on the respiratory mucous membrane may be very similar to the

action of the drug on this tissue after its absorption and transportation by the blood to the respiratory tract. But in the first instance, the ammonia fumes, for instance, are brought in direct contact with the cells, while in the latter instance a salt of ammonium is brought to these cells. In the first case it is brought to the superficial cells first, and affects them most. In the second case, all the cells of the body are bathed in this ammonium salt simultaneously and those showing the strongest chemical affinity will attract the most and react accordingly; in the respiratory tract such an affinity is almost equally distributed. The results of inhalation of ammonia fumes and of ingestion of ammonium salts differ primarily in the fact that in the first case the cells highest up in the tract will be injured more severely than those lower down where the residual air will dilute the fumes already weakened by the absorption of ammonia by the upper cells. Eventually the cells of the lower tract will combine with ammonia absorbed by the blood, but this effect will always be less than where the strong fumes come in direct contact. Furthermore, the respiratory center is stimulated by stimulation of the nerve endings of the trigeminal and olfactory nerves in the nose. This reflex stimulation of the respiratory center is the basis for the use of ammonia, vinegar and smelling salts for fainting. When too strong, this reflex instead of stimulating respiration, temporarily checks all breathing during inspiration, and the individual chokes.⁴⁰

The anatomy and physiology of the respiratory tract need not be entered into here except as they contribute to an understanding of the effects of the disease, and the symptoms of drugs. There is no ciliated epithelium in the alveoli or terminal bronchi, and none is found above the larynx. It will be remembered that the ciliary involvement is the chief seat of the pathology of pertussis. The unstriped bronchial muscles act in conjunction with the cilia in raising mucus and foreign material to the mouth for expectoration. In removing mucus from the alveoli or terminal bronchioles where no cilia exist, the action of these muscles is essential, for, as already stated, neither of these have cilia to perform this function. This unstriped muscle of the lower respiratory tract is controlled by constricting and dilating impulses arriving through the nervous system by way of the vagus. Furthermore, the result of these impulses is an ascending peristaltic action analogous to the normal descending peristaltic motions of the intestines. Einthoven⁴¹ has shown that these rhythmic contractions of the unstriped bronchial muscles may go on spontaneously, independent of the nerves which regulate them. Whether or not drugs having an expectorant action exert any direct influence on these muscles has not been determined.

Salts of the sodium chlorid⁴² group including sodium chlorid,

⁴⁰ It is a pity that this last is not more fully appreciated in etherizing for surgical operations. If the ether is administered slowly this reflex is gradually abolished through the effect of the ether absorbed on the central nervous system so that no choking results.

⁴¹ Quoted by Meyer and Gottlieb: *loc. cit.*, 342

⁴² Tyrode, M. V.: *Pharmacology*. Phil., 1908. pp. 203-204

ammonium chlorid, potassium chlorid, lithium chlorid, sodium bromid, ammonium bromid, lithium bromid, calcium bromid, strontium bromid, sodium iodid, ammonium iodid, potassium iodid, potassium nitrate, sodium nitrate and potassium chlorate may exert an expectorant action by increasing the secretion of mucus. Inasmuch as these salts are partly excreted in the respiratory tract their presence in the mucous membrane through which they pass brings about an increased secretion of water. This increase in the water content is the result of osmotic influences in the epithelial cells. At the same time these secretions are rendered more alkaline (by the presence of alkaline carbonates), and this increased alkalinity diminishes the viscosity of the mucus, because, "the tenacity of the mucus is diminished as its alkalinity rises."⁴³

Ammonium chlorid exerts a pronounced influence in this direction because the ammonium carbonate markedly liquefies the mucus and stimulates ciliary activity as well.⁴⁴

The bronchial secretions are also affected by drugs of the emetic group including apomorphin, ipecac and its alkaloid emetin, and the salts of antimony. Rossbach showed by animal experimentation on the exposed trachea that emetin, apomorphin and pilocarpin⁴⁵ arriving through the blood increased the tracheal secretion, while atropin and its allies acted in the reverse way. The expectorant action of these drugs resulting from this increased secretion of mucus is a part of their emetic action. Whenever nausea is present there is a tendency to increased bronchial and tracheal secretion, although conflicting phenomena may prevent this from becoming apparent.

Apomorphin induces emesis through its selective action on the medulla oblongata, as has been demonstrated by pharmacologic experiments which need not be cited here. Consequently, all the symptoms attendant upon emesis occurring with this drug are merely the result of reflex action. The symptoms include an increase in the secretions of the bronchial mucous glands as well as the increase in sweat and tears and the mucous secretions of the nose and throat.⁴⁶ Since these secretions are not

⁴³ "Small quantities of CO₂, ether and ammonia stimulate the ciliary movements, while larger amounts depress them." Meyer and Gottlieb: *loc. cit.*, 342

⁴⁴ Quoted by Ringer: *loc. cit.*, 321

⁴⁵ The œdema of the lungs following poisoning from pilocarpin in man is thought to be due to the slowing of the circulation through the lungs by the weakened heart action rather than through the expectorant action of this drug. Cushny: *loc. cit.*, 342

⁴⁶ On the cat and dog, morphin has much the same action as apomorphin in this respect, producing marked salivation, nausea and vomiting. In certain instances in man the vomiting center in the medulla may be particularly susceptible to this action, resulting in nausea, vomiting and def-

increased when the dosage is insufficient to produce the slightest nausea, it would appear that the action of this drug is far removed from the phenomena occurring in whooping cough.

Ipecac, through its alkaloid emetin, brings about an emetic action by a direct local irritant action on the mucous membrane of the stomach. Furthermore, emetin exerts an irritant action on all mucous membranes.⁴⁷ Consequently we have a triple effect from this drug on the mucous membrane of the respiratory tract. In the first place, the irritation of the gastric mucosa brings about a reflex, through vagus excitation, which stimulates peristalsis in the bronchial tubes; secondly, the irritation of the gastric mucosa, inducing nausea and vomiting, reflexly stimulates the bronchial secretion as well as the secretions of the trachea, larynx, throat, nose and conjunctivæ. In the third place, the emetin absorbed may act directly upon these mucous secretions, thus augmenting the result of the reflex stimulation. The occasional emetic action following the hypodermic administration of emetin is explained by the local effect of this alkaloid when it reaches the stomach, although it may possibly in some individuals directly stimulate the vomiting center in the medulla. Under these circumstances we should have an even more complicated action of this drug on the respiratory tract.

Tartar emetic (antimony and potassium tartrate, or the double tartrate of antimony and potassium, $K(SbO)C_4H_4O_6$) was at one time thought to exert its action in part through the potassium, but it has been shown that the emetic action produced is the result of the antimony content alone.⁴⁸ In the stomach the antimony is dissociated and acts as an irritant. Since it is not readily absorbed, this irritation is prolonged until it is vomited or passed out of the duodenum. Large quantities injected intravenously induce vomiting and purging, but this effect is produced by much smaller doses by mouth, thus proving that it is the local effect of the antimony on the stomach, rather than a central emetic action. The vomiting of antimony is accompanied by diarrhœa, sweating, collapse, cold perspiration and salivation similar in many respects to arsenic and many other poisons which produce profound gastro-intestinal irritation.

Since the action of the emetic drugs on the respiratory tract is comparatively well established by pharmacological experiments

æcation from the fact that the depressant action of this drug on the higher centers is insufficient to overcome the stimulating action on the medulla and cord.

⁴⁷ This is especially marked on those individuals showing an idiosyncrasy to *ipecac* where after minute doses we get "considerable swelling and injection of the conjunctival and nasal mucous membranes, with salivation, tears, sneezing, coughing, and bronchial catarrh." Cushny, *loc. cit.*, 437

⁴⁸ Cushny, *loc. cit.*, 618

to be due largely to reflexes, the respiratory symptoms found in provings and poisonings may be analyzed to show that they bear very little relation to the causative symptoms of whooping cough. *Ipecac* is the only exception, and here only when an idiosyncrasy exists. With *apomorphin*, the respiratory tract is influenced through the action on the medulla, far removed from the exciting factors of the coryza and cough in pertussis. In *ipecac* and *tartar emetic* the cough and increased bronchial secretions are largely secondary to the gastric irritation, the reverse being the case in whooping cough. *Ipecac*, however, may, like the sodium salts, have a proclivity for the respiratory mucous membranes. It is to be borne in mind that the sodium salts bring about their expectorant action through osmotic and chemical changes in the epithelial cells while the symptoms of the second stage of pertussis are largely the result of mechanical interference with the function of the cilia. *Ipecac*, then, may in certain cases exert a homœopathic action in pertussis, especially as the respiratory tract is more likely to be influenced by this drug in children than in adults;⁴⁹ but even so, it requires considerable imagination to see a marked homœopathicity of this drug to the disease in question. Were *ipecac* to stand out as especially efficacious in the treatment of whooping cough its *modus operandi* might be construed on these grounds. The provings show little to suggest pertussis except the coryza and bronchial cough of the early stage which is in most respects similar to the onset of a variety of affections of the respiratory tract, including hay fever, common colds, and even measles. Consequently, *ipecac* may command a place in the homœopathic treatment of the first stage. In the later stages its homœopathicity is dubious, and its efficacy, according to the testimony of the homœopathic literature and according to my own hospital experience, corroborates this statement.

What drugs are homœopathic to whooping cough? This question is answered by the contents of this thesis, and it would be difficult and hazardous to make affirmative statements in this respect. Briefly we may say, that *drosera*, *corallium rubrum*, *coccus cacti*, *zincum*, *apomorphia* and *tartar emetic* do not show by their pharmacological action or provings on healthy subjects to have sufficient similarity to the nature or symptoms of pertussis to warrant their homœopathic use. *Aconite*, *ipecac*, *belladonna*, *cuprum*, and *magnesia* would appear to be indicated on homœopathic grounds, and their reputation in the hands of homœopathic physicians, other than myself, would seem to warrant their further use and study in this disease.

The results of my many failures in the homœopathic treat-

⁴⁹ Meyer and Gottlieb: *loc. cit.*, 343

ment of whooping cough may be explained by my ignorance. Had I carried out this study previous to the two epidemics of whooping cough, I might have been able to give a more optimistic and a more valuable contribution to homœopathic literature from my clinical experience. As it is, my clinical failures in the treatment of this scourge prompted me to make this study. Certain errors in my prescribing are now apparent to me. By publishing this, it is to be hoped that others will escape the pitfalls of the homœopathic materia medica into which I fell.

HANDICAPS TO THE GENERAL PRACTITIONER IN PRESENT-DAY METHODS OF DIAGNOSIS AND TREATMENT, AND SUGGESTIONS AS TO OVERCOMING THEM *

By GEORGE F. WORCESTER, M.D., Merrimac, Mass.

It seems fit to preface these remarks by emphasizing the fact that present-day medicine is very rapidly weaning itself from pills and powders. In fact I might even go a step further and say that drug treatment does not constitute more than ten per cent. of modern therapeutics. It is being largely replaced, and wisely so, by dietetic, hygienic, electric, serum and vaccin treatments, all tending towards one aim,—prophylaxis. One needs but to glance at the work done by the United States Public Health Service to be convinced of the popularity and success of such endeavors.

STRIDES IN THE LAST DECADE

And indeed all of this has taken place in an exceedingly short space of time; it seems that no other era of medical history has carried with it so many advances as the past decade, and now with the great field for clinical material supplied in the battle-ground abroad, we are furnished with new material that carries with it problems worthy of the ingenuity of our greatest medical and surgical minds. However, thus far, reports seem to indicate an overwhelming balance in favor of the surgical successes. Who, even five years ago, would have believed his eyes when he read of a series of cases of bullet extraction from the heart muscle or its cavities under local anæsthesia?

Then, too, in our every-day practice, case after case presents itself that calls for urine, blood, spinal fluid, sputum and fæces examinations, to say nothing of the Roentgen ray, ophthalmoscope and others of the more complicated methods of diagnosis. Our current medical literature is teeming with newer

* Read before the Alethean Club, March 9, 1917.

methods of determining the causes and results of disease processes.

A decade ago it might well have been within the bounds of reason to expect a general practitioner to treat such diseases as syphilis, anterior poliomyelitis, typhoid fever, pneumonia, cerebral hæmorrhage, and others more common, such as tuberculosis, nephritis, and heart disease, single-handed, but now with the advent of salvarsan, the Wassermann test, lumbar puncture, vaccins, electrocardiographic tracings, all of which are at times necessities, he needs a corps of consultants at his elbow constantly to supply his various demands.

HOSPITAL VS. PRIVATE CASES

In a measure, all of this is simplified by the fact that there are provided hospitals with equipment available for such procedures, where funds are at hand for the treatment of the poorer classes and where the latest methods may be used. But all is changed in our private work, where there are but limited funds to be expended for the quickest and surest means of return to health. Physicians are not as a rule able to equip their offices with costly instruments which are but occasionally used and which are difficult properly and intelligently to manipulate.

SOLUTION OF THE PROBLEM

a. *Education of the lay public.* Among the possible solutions of the problem, the education of the laity seems uppermost. Through public health talks and magazine articles the laity is beginning to learn of the value of many of the newer methods; the ultimately successful solution of this educational problem, however, lies with the family physician. He it is whom his patients trust and believe, and he it is who must act as a wise counsellor, as well as healer of their ills, to acquaint them with the right ways and keep them from the wrong paths. It is his duty gradually to bring them up from the era of poultices, purges and blood tonics into the scientific, common-sense era of present-day medicine. It is also his duty to acquaint himself with all that is of value in up-to-date practice, that he may be fitted for his office as medical adviser. His position is one of great responsibility and one that demands diplomacy and tact. It is through his efforts that the greatest strides will come in the next few years.

b. *Simplicity in diagnostic and therapeutic methods.* As I have previously stated, our handicaps are multiplied because of the fact that of the methods now in use, many are so com-

plicated that trained and expert men are required to use them properly. If there could but be a greater tendency toward simplicity in these methods a far more lasting and permanent benefit might be derived from them. Although we feel that accuracy should have preëminence over speedy, slipshod methods, still, long, time-consuming tests and treatments are very unconvincing and tax the patience and courage of not only our clients but of ourselves.

The latter statement leads me to speak of the intelligent practice of homœopathic therapeutics. To my mind there is no one factor that has so worked to the detriment of homœopathy as the tedious and difficult process of selecting the so-called indicated remedy. How many of us would sit down and carefully differentiate *arsenicum iodid*, *allium cepa*, *euphrasia*, and *nux vomica* in a case of common coryza in a patient who just stepped in the office for something for a "cold in the head"? The practice of allœopathic materia medica is "dead easy" compared with the homœopathic method, hence, I am sure, much of its popularity, — like an express compared to a freight train.

c. *Specialization.* All of these above mentioned factors have tended greatly toward the absolute necessity that men shall make a specialty of certain branches of present-day medical practice. All are complex studies and many so technically difficult that the general practitioner has neither the skill nor the time to utilize them, valuable as they may be. It were well so, because it were much better that a man know one thing well than to know many things none too well. And, along with our specialists on the various laboratory methods of diagnosis and treatment, let us have specialists in homœopathic materia medica.

d. *General practitioner a middle-man.* In order that we may safely guide many of our cases through the maze of intricate paths to a satisfactory conclusion in regard to the exact diagnosis or proper method of treatment, we are then required to seek help from other men, skilled in one particular branch. It then behooves us to acquaint ourselves with a group of men whom we may select as aides. We are in the position of a broker designating to a client where he shall invest his money to accrue the most gain, and may we not allow our choice to be influenced in any way by mercenary gain to ourselves. We should acquaint ourselves as much as possible with the ways and means of our consultants, each recognizing the fact that the patient is always the first consideration.

SUMMARY

I have attempted to point out with what rapid strides medical research is taking us from our former views, and to indicate some of the handicaps that are being placed upon us all. The aims of this paper have been to sift some of the wheat from the chaff in all that we see and read, to urge simplification and systemization of our methods and to show that success may be attained not single-handed but through the efforts of us all, working in unison.

TREATMENT OF IVY POISONING

By W. H. DIEFFENBACH, M.D., New York

Of the various dermatitis venenatæ, the most common, the *rhus toxicodendron*, or ivy, poisoning, proves an annual source of annoyance to many who spend their vacations in the country and also to the country-folk themselves. A common affection such as this has, in different hands, been treated successfully in many ways and it is surprising to note the many recommendations for its amelioration or cure.

Almost every physician has some pet application which he thinks influences the dermatitis favorably.

Thus the old-fashioned lead wash, or lead and opium wash, grindelia robusta solution, sanguinaria solution, the tincture of jewel-weed, quinin solutions, permanganate solutions, hypsulphite of soda, boric acid, antiphlogistin, zinc oxid, calamin, carbolic solutions, zinc sulphate solution, petrolatum, buttermilk, lime water, and lastly the frequently recommended sal-ammoniac solution.

There are, no doubt, many preparations omitted from this list, but this compilation will convince you of the fact that no specific, *per se*, has been universally accepted for the treatment of this annoying affection.

Accepting the statement that a somewhat volatile substance, "toxicodendric acid," is the cause of the irritation and through penetration of the skin causes the severe dermatitis ascribed to it, it appeals to me strongly that any substance which will neutralize this acid ought to be considered as a palliative measure. This suggests the use of almost any alkalin solution, and the recommendation of Dr. Geo. Leitner of Piermont, N. Y., to use a strong solution of sal-ammoniac has in my hands proven palliative in a more efficient manner than other preparations used previous to this recommendation. However, this local application does not immunize from subsequent attacks, and the

suggestion of many to chew some of the leaves of this ivy or take *rhus tox.* in dilution internally does not meet the condition in every case and is at best empirical.

My own experience with rhus poisoning is herewith briefly recited. Until a few years ago, although visiting a country almost every summer where sumach and ivy-rhus abounds, no special skin irritation was ever noted until a few years ago, when several minor attacks of the fingers were quickly palliated with soda solutions. In the early summer of 1914, a primary attack was aborted with local soda applications, to be followed in quick succession by almost weekly recurrences. The attacks would subside but would recur with violence whenever the country was revisited. A very severe attack involving the face and neck, the fourth during the month, was treated by a colleague, Dr. L. B. Couch of Nyack, N. Y., with carbolic acid and alcohol, as the attack simulated erysipelas. This heroic treatment caused exfoliation of all the skin treated but produced, like all other methods, only temporary relief.

Seeking some method to immunize myself from these recurrences, Dr. Guy B. Stearns of New York City was consulted and he devoted much time to the selection of a remedy fitting my symptoms. This effort was followed by two subsequent attacks, and while reading one of Dr. Charles H. Duncan's articles on "Autotherapy" and "auto-lacto therapy" the thought occurred to me to apply this method in my case. Accordingly one of the cows of the farm was fed on a mixture of grass and poison-ivy plant and the milk of this cow was imbibed the next day. This test occurred in August and was followed by apparent immunity for the rest of the summer and fall. About one pint of milk was taken for two days and no other treatment instituted. This immunizing milk treatment was also tried in the case of a girl of twelve years of age who had had a number of ivy attacks; and immunity was established in this instance also, so that it appears as if Dr. Duncan's theory might find successful application.

During the present summer, I have had three slight attacks involving the fingers only, so that immunity as indicated above is not permanent. In these attacks sal-ammoniac solution (one tablespoonful to the pint of water) was applied by means of compresses for a number of hours or over night and this was followed by the application of hot antiphlogistin poultices to restore the integrity of the skin. In my judgment, the use of antiphlogistin in these cases is of much benefit in improving the local circulation after the rhus poison has been neutralized by the sal-ammonia and its use will tend to prevent recurrences to a great extent. Another point to consider in

order to avoid recurrences is thoroughly to steam, sterilize or rub with some strong alkalin solution all particles of clothing, especially the shoes worn during the attacks, as contact with these articles may be the means of again setting up the dermatitis.

THERAPEUTIC TEACHING IN BOSTON UNIVERSITY SCHOOL OF MEDICINE

By J. HERBERT MOORE, M.D., Brookline, Mass.

One of the most important matters in the history of the school was presented to the Governing Faculty of Boston University School of Medicine, at its last meeting, in a letter received from the Medical Board of the Massachusetts Homœopathic Hospital, relating to the question of establishing a chair of Old-School Therapeutics in the curriculum and of appointing a member of the old school of medicine to occupy the same.

As a result of the earnest and careful consideration and discussion, which its importance required, given to the matter by various members of the Faculty, the proposition resolved itself into two questions: First, Is such action necessary? Second, Is it expedient and for the best interest of the School?

It is the purpose of the writer to consider these two questions of necessity and expediency, but before taking them up, let us understand what is meant by old-school therapeutics.

There are many divisions of therapeutics: Drug, Serum, Vaccin, Electro, Mechanical, Psychotherapy, *et cætera*. Right here let us emphasize the fact that all these divisions, with the exception of the first, are practiced and taught alike by both schools of medicine; consequently it is with Drug Therapeutics alone that we are concerned in discussing this question.

Drug Therapeutics resolves itself clinically into Homœopathic Therapeutics and Physiological Therapeutics.

Homœopathic Therapeutics comprises the use of drugs which are directed upon the same tissues as the disease and are prescribed against the disease because, as a result of having been proved on the human organism, they are found to produce upon these same tissues in health manifestations and symptoms which are similar to those of the disease. Clinical application demonstrates this to be a curative method of specific therapeutics.

Physiological Therapeutics comprises the use of drugs prescribed against disease in accordance with their pharmacological action. If prescribed to act upon the same tissues as the disease, it is for the purpose of producing drug effects of an opposite nature to that of the symptoms of the disease,

hereby constituting the antipathic action of a drug, promulgated by Galen. Clinical application demonstrates this to be a palliative method of drug action.

If, on the other hand, also in accordance with their physiological action, drugs are prescribed against tissues other than those diseased, they comprise those many other drug effects used to influence disease in the many indirect ways which lie outside the realm of specific therapeutics. Clinical application demonstrates this to be a far more palliative than curative method.

This brings us to the question, is it necessary to establish a chair of Physiological Therapeutics and to call into our college an old-school man to teach in the same? This question is not raised in objection to our teaching all that is useful in therapeutics afforded by legitimate medicine, and with which students of all medical schools should be equipped; but it *is* raised because the writer believes it is, and has been, the policy and practice of the various chairs in the Faculty to teach, in addition to the curative method of specific therapeutics afforded by homœopathy, whatever non-homœopathic therapeutic measures have proved themselves reliable and have been adopted by general medicine.

If it is necessary to emphasize and systematize the teaching of physiological therapeutics in our college, the writer believes it to be the best policy to coördinate our own teaching facilities along this line. With this object in view, and this method of achieving it, the writer would not oppose establishing a distinct chair of Physiological Therapeutics in Boston University School of Medicine, but would actively support it. This could be very effectively done by emphasizing the therapeutic teaching scope of the already existing Pharmacological Department of *Materia Medica*, and extending it into a distinct chair of Physiological Therapeutics, and by appointing the present Lecturer on Pharmacology, himself a graduate of Harvard Medical School, to the chair.

On the other hand, if the object in establishing such a chair is presumably to begin to teach what always has been taught, and to call an old-school physician into our college to teach in the chair, — which latter phase of the matter caused the governing Faculty to vote against the whole proposition, — the writer could not support it because, in not the slightest spirit of narrow-mindedness but only that our college may make no mistake, he is of the firm conviction that such action would be most inexpedient, for the following reasons:

First and foremost, in our desire to be broad in our medical teaching, and especially in this matter of non-homœopathic

therapeutics, we must not allow such desire to overshadow in aim or achievement our purpose or ability to teach the curative method of specific therapeutics afforded by homœopathy, for in the first and last analysis ours is a homœopathic medical college, founded to teach homœopathy; and without this mission it would have no *raison d'être*; for it would be unwise to attempt to compete with old-school colleges on the ground of old-school medical teaching alone. In this connection also we should not forget our obligations to our other homœopathic medical schools and organizations, from the American Institute of Homœopathy down through the State societies to the isolated local societies which are the support of isolated homœopathic physicians.

Second, bearing in mind the standing that the homœopathic physician is qualified to maintain in general medicine on account of the broad-gauged instruction of his medical school, we must give no one the opportunity to interpret in this action that our own teachers, who in their practice, in addition to specific therapeutics, make use of whatever other therapeutic measures are necessary in the exigency of a case, are incompetent to teach physiological therapeutics.

Third, from the standpoint of safeguarding the reputation of our college, past and present, which has been a leader in all educational matters pertaining to medical instruction, let no one be able to say, by this contemplated action on our part, that it is an acknowledgment by our college that it has not been its policy to advocate a broad, catholic therapeutic spirit and teaching.

Fourth, and from an ethical point of view, of utmost importance to our honesty and unselfishness as men and women as well as physicians, let us give our old-school colleagues no opportunity of interpreting, in this action, a desire on our part to curry their favor by unnecessarily duplicating our teaching of physiological therapeutics in a chair presided over by one of their number, and in this way attempt to climb into the bandwagon of dominant medicine, to be carried more surely and smoothly into the perquisites of medical territory now occupied by themselves.

I am writing thus frankly because there seems to be a feeling among some of our alumni that their homœopathic affiliations are not affording them an opportunity of "getting there" in the society memberships and affiliations of the old-school, and of obtaining public positions in army, navy, insurance companies, *et cætera*, equal to what would obtain if their homœopathic affiliations did not stand in their way.

It has been stated that some members of Boston University

School of Medicine have even requested others to tread lightly and speak softly of homœopathy when in their neighborhood, in order that their standing among old-school physicians might not be injured.

I understand it has been advocated that the title Homœopathic be omitted from the name of the Massachusetts Homœopathic Hospital, or some other name be substituted unencumbered by the term, in order that the standing of our Hospital, and the staff connected with it, might be enhanced in the eyes of laity and physicians who are advocates of old-school medicine.

The writer also frankly mentions this attitude in no unkind criticism of the opinions of others, rather to show how strong is his belief that it is not the way to accomplish results; for neither the establishing of a chair of old-school therapeutics and the calling of one of their men to fill it, nor the dropping of the word homœopathic from the name of our Hospital, nor the turning of Homœopathy out of the front door of College or Hospital, by minimizing our purpose either to teach or practice it, and then letting it in by the back door as a beggar, none of these steps will command the support or even the respect of the old-school profession, once they realize that non-altruistic motives are prompting any movements made in their direction.

I hold no brief for the attitude of old-school medicine toward our school or its practitioners in the past, because as an addendum to physiological therapeutics in our teaching and practice we have specialized in the curative method of specific therapeutics, which in its very essence and nature makes us homœopathic physicians; but I do know that at the present time their respect and evidences of affiliation go out most freely to those homœopathic physicians whom they believe to be earnest, consistent and sincere workers in their special field of medicine.

In conclusion, What should be the policy of Boston University School of Medicine in its therapeutic teaching from this time on?

Teach first, last and all the time the Principles and Practice of Homœopathy, because the specific therapeutics thereby afforded covers by far the largest territory of curative medicine.

Teach only the essential principles themselves as accepted and practiced by almost our entire homœopathic profession, eliminating all theories or hypotheses which are untenable and cannot pass the censorship of present-day scientific investigations.

Let us see to it that our students are thoroughly grounded and well rounded in the principles and practice of homœopathy,

and that the quality and earnestness of our teaching are such as to compel them to appreciate the efficacy of this method of treatment, and indelibly to impress upon their minds that without a working knowledge of the specific therapeutics thus afforded them, they will fall far short of becoming as successful physicians, so far as the treatment of their patients is concerned, as they would become if they possessed such knowledge.

Let us continue to teach physiological therapeutics in order that we may fulfill our obligation to teach our students all that is valuable in general medicine, but in our own chairs and by our own men. This is the position which all our homœopathic medical colleges should take, in order to fulfil their obligations to their students and to general medical instruction, just as it is the duty of every old-school medical college to teach the curative method of specific therapeutics afforded by the homœopathic application of remedial agents.

In this way we not only fulfill our obligations concerning general medical instruction, but we make better homœopathic physicians of our students; for once a student is well grounded in a working knowledge of homœopathic therapeutics, the better homœopathic prescriber he will become the more he realizes the paucity of curative results obtained by physiological therapeutics.

Let us emphasize in every legitimate way to the general medical profession, to the trustees of Boston University, and to prospective medical students in the annual catalogue of the School, and in our other propaganda for the medical school, that Boston University School of Medicine provides instruction in general medicine, in which all legitimate therapeutic methods and measures are included.

Finally, let us emphasize to the homœopathic profession that in providing such liberal instruction we shall, in this comparative manner, prove the superior efficacy of homœopathic therapeutics, and in common with other homœopathic medical schools, endeavor to demonstrate the scientific status of homœopathy, and to improve our practical working knowledge of this curative method of specific therapeutics, until in time, such instruction shall be included in the curricula of all old-school medical colleges, as we already have incorporated the teaching of physiological therapeutics in our own.

EDITORIAL

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OLD-SCHOOL THERAPEUTICS AND SECTARIANISM

I

“Moved that it is the sentiment of this meeting that there should be a chair of Old-School Therapeutics at Boston University School of Medicine; said chair to be under a competent instructor without homœopathic affiliations.”

Many of our readers will be surprised to learn that such a motion was actually put before a large gathering of leading homœopathic physicians and educators but a short time ago. At first blush it seems, to one familiar with the fight waged by the early founders of our school for liberty in drug therapeutics, a heretical back-sliding. When we recall the ostracism these men underwent fifty years ago at the hands of their confreres of the Massachusetts Medical Society, and the sacrifice and courage they evinced to secure this liberty for themselves and those who were to follow in their faith, there seems disloyalty in such a suggestion. But is this really the case? Let us examine the facts.

When those of the last generation fought for the cause of homœopathy, modern medicine as we know it today was in embryo and had not begun to sift through to even the teachers of medicine. The medical course consisted of two years of lectures given in rotation. There was practically no clinical teaching, there were no laboratories, no microscopes for students'

use. Physical examination was almost a negligible quantity. The stethoscope and the clinical thermometer were yet to come, as was all the myriad of exact methods which we use today. Surgery was in its infancy. Anæsthetics had just been discovered and asepsis was not understood. The abdomen had not been entered and the thorax and brain cavities were, for practical purposes, still closed books. The one and all-important thing which the ordinary physician had to depend upon for his information of the patient's condition was the patient's own description of his symptoms. This was the conspicuous, and often the only, guide.

Truly the physician acquired much skill in the reading of tongue and pulse, and, because of his limited equipment, he had to be a rather more astute observer than the physician of today, but mental states were poorly understood and more credence was therefore put upon the patient's own story.

Again, there was no State Board of Medicine to establish educational fitness, and no standard of ethics save that which was arbitrarily and rather narrowly established by a dominant society; hence charlatanism abounded. Electrotherapy and hydrotherapy were considered outside the pale of legitimate practice, as was hypnotism, or mesmerism, as it was called. Medicines in the form of herbs and the metals were the stand-by of all ethical followers of Æsculapius, and these in material doses and combinations which even the most pronounced follower of the old school would not think of administering today. This, then, was the atmosphere into which Boston University School of Medicine was born. Those men who dared to give a single remedy in the smallest dose which they deemed would be useful and which had already produced a similar condition in a healthy body (a scientific principle accepted by all today under the terms immunization and anaphylaxis) were ridiculed and ostracized, as most advanced thinkers have been in all ages because of the ignorance or blind prejudice of the mass.

We are proud of these men, proud of the fight they made for a principle, but a principle which must have been to them a dogma, since they could not know that ultimately it would receive laboratory proof. We must also be charitable to their opponents, who abhorred any medical dogma and who likewise still lacked the means for scientific verification, and so could not differentiate homœopathy from the many less worthy dogmas which were constantly making claims to be all-powerful. General medicine was still in the stand-pat state and had not had its whole texture shaken to its foundations and reconstructed as is the case today. Pathology was making rapid advances, and Hahnemann's theory of psora and itch were to many thinkers

even then quite untenable. They did not try to sift the wheat from the chaff. Can we blame them for viewing with ridicule the high dilutions which in his later days he carried to such extremes?

But most of all did the old school object to the side-tracking of some of their members under a separate name. Had Hahnemann been content to advance the law of similars as a tentative scientific truth and given it to the profession without attempting to build up a new cult, it doubtless would have taken its place in the medical world as one of the advances, just as Harvey's circulation of the blood and Jenner's vaccination did. His work represented the swing of the pendulum away from the excessive drugging of the day, and, in its enthusiasm, swung perhaps a little too far. But now that it has found its mean, should we not, as sensible physicians, be willing and eager, as were our predecessors, to grasp the new conditions which have come about so rapidly and abandon a name which symbolizes much that is fallacious, holding only to that part which has been proved useful? The pragmatic attitude of mind is essential to progress.

It would seem to the writer that the time has come when the name homœopath should be dropped, as being inadequate to typify the physician who uses everything which the modern physician holds good. No physician worthy of the name limits himself today to the dictates of the *Organon*, much as he may reverence it as a long stride in advance of its time. It was a stimulus, but many stimuli have since appeared. Should we not also embrace these? Most of us do. Then why not say so frankly?

If there is one thing that a homœopathic school should stand for it is the therapeutic side of medicine. This, Boston University School of Medicine has always emphasized, and more so today than ever before. The chair of pharmacology is now taught by a graduate of Harvard Medical School, and this should be a complete answer to those who suggest a special chair of old-school medicine. The writer has spent much time at the Harvard Medical School and in 1900 took Dr. Pfaff's course. He can honestly say that the course given the Harvard men of that time in pharmacology and materia medica was far inferior to that given at Boston University School of Medicine. Other forms of therapy, water, light, heat, electricity and climatology were scarcely heard of. In fact, on the medical side, the recent graduate was ill-prepared to treat disease, though most competent to diagnose it. The points of view of the two schools could then as now be summed up in the words therapy *versus* diagnosis.

Whatever sentiment we may entertain for homœopathy, most of us realize that the day of cults and dogmas in medicine has gone by. We know that our graduates, however well they may do in State examinations, — and we have reason to be proud of them here, — have to meet a considerable degree of prejudice in many communities, and are not eligible for many coveted appointments in Government positions, insurance companies and many hospitals because of the prejudice which exists. Indeed, in some parts of the world they are definitely legislated against. One of our own graduates is now taking a course in this country to get an old-school diploma in order to retain a position as superintendent of a hospital in India of which she has for many years been the head, because of such legislation. Again, many of our students do not come to us because we teach homœopathy, but to get a medical education, and only in the later years of their course learn of the prejudice which they must combat in establishing themselves. On the other hand, many students who would come to us gladly and learn homœopathy among other methods of therapy go to inferior schools to avoid being stigmatized as homœopaths, of being limited to a cult.

These are matters for serious consideration. No one who has had the advantage of knowing about and using drugs according to the homœopathic method would ever advocate giving up its teaching and continued research in its behalf. But has not homœopathy exerted as much modifying effect upon general medicine as we expect it to? Should we go on striving to urge upon the profession a name which symbolizes many obsolete ideas as well as some sound ones? Should we urge it upon younger men whose careers are definitely curtailed by it and who can have little desire to carry on the old fight which is so uninviting to the man who must earn a livelihood for his family and who has much to lose and nothing to gain? Had homœopathy not contained a great germ of truth and been championed by men of rare pugnacity, it would certainly have been submerged long ere this. But it seems to us that the time has come for house-cleaning. Let us retain all of the homœopathy in our curriculum which we now have, let us say honestly that we teach homœopathy, but let it not be a school or a hospital of homœopathy. Rather let us be physicians who in the words of the Institute definition claim "all that pertains to the great field of medical learning," and so dispel criticism, which, however unjust and born of ignorance, certainly operates to curtail our usefulness.

“OLD-SCHOOL” THERAPEUTICS AND SECTARIANISM

II

There has recently been considerable open, and rather concerted, advocacy of the establishment of a chair of old-school therapeutics in Boston University School of Medicine. Although in none of the discussions of this plan has there been any attempt even loosely to define what is meant by old-school therapeutics, we have inferred that the major part of the instruction desired relates closely to pharmacotherapy. The proffered reasons for such advocacy are these: It is claimed that our graduates are not sufficiently well-equipped in this branch of medicine to compete successfully with the graduates of “regular” schools; that the stigma of sectarianism would be removed were such a course established; that student enrollment would then increase; that there would be higher recognition for School and graduates by the public, by various institutions, governmental and other, and by standardizing bodies of medical education.

Furthermore, it is urged that the “competent authority” to be chosen for this proposed chair should be wholly free from homœopathic affiliations (and, inferentially, interests).

The real and fundamental purpose of the advocates of this plan has also been rather definitely voiced and involves a radical change in the policies of the School and Hospital by making a determined effort to become classed as non-sectarian.

It is a question of considerable moment, and the purpose of this discussion is to emphasize the need of thoughtful deliberation concerning its many phases. We assume, of course, that both proponents and opponents have at heart the best interests of the students, graduates, School and Hospital. It is also well to remember that the question is not merely a local one.

I THE COURSE NOW GIVEN

Most of the opinions thus far offered have been entirely irrelevant because they apply to conditions that obtained a number of years ago, — conditions which do not exist at present. One becomes somewhat restive upon listening to recommendations as to what *should be given* when those who make them show no knowledge or recognition of what *is given*.

For the past four years a course in pharmacology has been given in Boston University School of Medicine. In the current catalog it is listed in the Materia Medica Department and is outlined thus:

Pharmacology. A consideration of the action of the most commonly used drugs, with special emphasis laid on recent pharmacological investigations regarding them and the modern conception of their *modus operandi* in disease. *The students are made particularly familiar with what may and what may not be expected of such drugs as are commonly employed by practitioners for other than their homœopathic action.* (These italics ours.—ED.) Second year students.

It is objected that the announcement of this course is too brief and too obscurely placed, and it is urged that it be separated from its present relations and be accorded more prominence in the catalog. We concur in the opinion that the nature of the course be more explicitly detailed, but it seems eminently logical that it retain its present departmental position, although we would consider it more truthful to call this department "Materia Medica and Pharmacotherapy." We fail to see the logic of those who rebel against sectarianism and yet are self-constituted separatists by their insistence on establishing another distinct department of pharmacotherapy.

We believe that the value of the whole department would be greatly enhanced by a considerable reduction of the time given to didactic presentation of little-used and poorly "proved" drugs and this time given to laboratory and clinical investigations and demonstrations of the action and uses, homœopathic and otherwise, of more important drugs. This would increase expenses, but it does not seem inappropriate that there should be a modest financial outlay on a department that lends the distinctive character to the School.

The present course in pharmacology would probably be of greater benefit were it given to the third year class.

This course is given by a graduate of Harvard Medical School; an internist who is thoroughly engrossed in the subject of pharmacology, and who has a background of experience, original inquiry and attainment that will stand comparisons. But, it is argued, he has homœopathic affiliations;—he is sectarian. That anyone, however, who uses and has made a study of both methods of drug application, should be classed as sectarian, seems rather paradoxical. On the contrary, they are sectarian who, without adequate reasons, refuse to concede merit in one or the other form of pharmacotherapy. In other words, the designation "sectarian" has been applied without regard to its true meaning, else students who receive instruction in the best of old-school materia medica as well as in homœotherapeutics certainly would not be branded with this stigma. However, this anomaly is as familiar as it is inexplicable.

II IS THERE NEED OF A NON-HOMŒOPATHIC INSTRUCTOR

It is probably safe to say that all of us, or nearly all, are agreed that our students should receive instruction in everything that is good in all methods of healing, including old-school drug therapy; but is it necessary, or even desirable, to employ outsiders for imparting this knowledge? Some advocates of this seem to forget or, more likely, never knew that a good course in old-school pharmacology is already being given in our School.

One expressed argument in favor of obtaining a purely old-school instructor is the accompanying advertising or "psychologic" value to the school — a sort of *eo nomine* beneficence or titular expediency designed to appease the Council on Medical Education of the A. M. A., to elevate and broaden our standing at least in our own estimation, and to furnish grounds for the following specious statement to prospective students: "We are now offering a course in old-school therapeutics which is given by a certificated old-school authority. Our curriculum is now complete." Those who favor this nominally pure old-school course will, of course, consider it unnecessary to add that the new course is a duplication of the one formerly given, also by an old-school graduate, but which was deemed inadequate because criticism might be made that the instruction might be prejudiced because the instructor had homœopathic affiliations. What stuff is this?

Another argument, not so frequently advanced but more meritorious, is that the students would be better equipped practically, if they had opportunity to learn at first hand how an old-school physician handles a case, particularly in regard to drug treatment. There can be no weighty objection to giving students such clinical instruction. Certainly no student will become an abler homœopathic therapist because the actual therapeutic use of old-school drugs is neglected or minimized. But if separate *clinical* teaching of old-school pharmacotherapy is desirable, then there is even more insistent necessity of establishing a chair for the *clinical* teaching of homœopathic pharmacotherapy. Such division of pharmacotherapeutic instruction finds its justification in the opportunity which thereby arises for the obtaining of comparable statistics regarding the respective values of homœopathic, old-school and expectant treatment. In view of the highly unsettled state of our actually demonstrable and scientifically verifiable knowledge of therapeutic values, the establishment of such chairs and the definition of their purpose is superlatively desirable and has been frequently advocated but never started. The difficulty will be to find men who are both willing and competent; it is a difficulty not lightly to be estimated.

III CAN WE BE CLASSIFIED AS NON-SECTARIAN?

Subject to correction, the uncertain belief has been expressed that the establishment of a chair of old-school therapeutics would be the only thing necessary to have Boston University School of Medicine classed as non-sectarian by the Council on Medical Education of the A. M. A. In the absence of official documentary proof of this statement and in the absence of indications of radically changed tactics on the part of old-school organizations, we venture to express the opinion that as long as homœopathic instruction is obligatory the School will be classed as sectarian. Were conditions modified, so as to correspond with the situation in the University of California (where a student may elect both homœopathic and old-school pharmacology and therapeutics but must take one or the other), if homœopathic instruction were made optional the coveted non-sectarian classification would probably be realized. Such modifications would necessitate a tremendous reduction in the number of hours of homœopathic instruction, which might or might not be advantageous. Two hours a week during the sophomore year, as given last year at California, would appear *a priori* to be inadequate, and conversation with individuals who took the course tended to confirm such opinion.

Discontinuance of homœopathic teaching would undoubtedly extract the classificatory thorn.

Our School and Hospital were founded in a time of necessity by men who judged that the possession of these institutions was imperative if their principle of giving drugs was to be kept alive, adequately studied and developed. Excellent educational and hospital facilities have gradually been acquired and the principle has been kept alive. All credit to the workers who have accomplished so much! But the rest of the purpose, to demonstrate the truth in homœopathy and to improve its methods, has not been fulfilled. It has not been for lack of opportunity. Too many have "cackled on comfortable homœopathic nests and haven't yet laid an egg." How many have made any effort at all scientifically to test the efficacy of homœopathic therapeutics? An absurdly small number.

Now the kernel of this sectarian question seems to be this: Schools that teach serotherapy and physicians who use serotherapy *are not* classed as sectarian. Why? Because it has been clearly demonstrated under the conditions that modern science imposes, that serotherapy applied to certain diseases, notably diphtheria, has brought about a marked reduction in mortality, in duration of illness and in number of emergency operations. Hence, the value of serotherapy is widely recog-

nized. On the other hand, schools that teach homœotherapy and physicians who use homœotherapy *are* classed as sectarian. Why? We discount the "ignorant prejudice" answer and offer the opinion that it is *because homœotherapy has not been clearly demonstrated, under the conditions that modern science imposes, to bring about any such marked beneficial changes.* Hence, the value of homœopathy is not *widely* recognized.

We are virtually committed to apply modern scientific methods to a study of the value of homœopathy. In our position it is the only honorable and sportsmanlike choice. When we present universally verifiable data, obtained by *the* scientific method, either in proof or disproof of the claims of homœopathy, then will sectarianism automatically disappear.

S. B. H.

H. U.

CORRESPONDENCE

OLD-SCHOOL THERAPEUTICS *VERSUS* MORE IMPORTANT QUESTIONS

To the Editor:

At a general meeting of the staff of the Massachusetts Homœopathic Hospital, April 30th, much enthusiasm was displayed over the proposal to establish at the Medical School a department for the teaching of what was termed "Old-School Therapeutics." An earnest body of conscientious doctors, all having the best interests of School and Hospital at heart, discussed the question, yet there was quite a substantial division of opinion as to the wisdom of taking the step. The chief argument of the proponents seemed to be how much we should gain by the step, since then we could no longer be identified as "sectarian." The chief argument of the opponents seemed to be that there is really no such entity as "old-school therapeutics" anyhow; no one knows what it is, and in any event we teach it; but more vital than all, should we now appear to relinquish our principles?

Now it seems to me that the whole question, as threshed out in the meeting referred to, was teacup tempestuousness and that in the hot discussion of a minor point we lose sight of the larger issues of the case.

In the first place, is there any reason on earth why our School should not establish a chair of "old-school therapeutics" if it wishes to, provided it can find out what "old-school therapeutics" is and can raise the several thousands of dollars *per annum* necessary for the purpose? There can be only one answer. Any school has a right to establish in its

curriculum any course it chooses. But the question is, couldn't the money which would be expended on a chair of old-school therapeutics be utilized to better advantage in another way? Aren't we placing undue emphasis on a subordinate matter? If we had unlimited funds to draw on, that would be another thing. It seems to be pretty generally conceded today that drug therapy is really the least important branch of the science of medicine. The tendency of medical science is more and more to expand into human and into research fields. By expanding into human fields I mean the tendency to trace disease in individuals back to its starting point in nutritive, hygienic, occupational, or other environmental condition and to deal with origins rather than results. This, of course, is one with the much talked "preventive medicine." By expanding into research fields I mean, self-evidently, the tendency to institute scientific investigation into the problems which relate to disease, its causation and eradication. If, then, as seems evident, the larger development of medical science is taking the directions noted, is it not a bit obsolete for our School to be agitated over one of the less important phases and to plan to spend thought and money in its development while disregarding more promising departments?

It is natural and right that as a school we should wish to have full recognition for our work and that we should partake of the public and official privileges granted to any medical body. We should not be subjected to certain coercive and unreasoned discriminations which we have to admit do still operate against us in certain prejudiced quarters. We have an excellent school conducted in accordance with best scientific standards. We train efficient and scholarly physicians who are entitled to all the privileges of any physician, and it is not to be wondered at that we resent discriminations when they occur and that we should seek a means of ridding ourselves of them once for all.

If the best means of so ridding ourselves is to establish a chair of old-school therapeutics, well and good, let us do it! The sooner the better. But I very much question whether this is the best means, or perhaps a means at all of attaining what we desire, because there are ways in which, it seems to me, we are weaker than in the lack of a chair of old-school therapeutics. I may be wrong, but in all sincerity and loyalty I give my opinion for what it is worth.

In the first place, let me explain, I am speaking here as if the School and Hospital were one, which in fact, as was pointed out in the meeting the other night, the general public regards them and which in larger essentials they are.

If I am right in saying that medical science is tending pre-

ponderatingly to develop its sociological or human side, let us see what is our record in that regard! Alliance of social with medical interests means that we must have an active, trained department which brings the two interests together. If every medical problem is also a social problem, where do we come in when we have at the present time not one social worker to bridge the chasm between the Hospital and the community? Frankly and seriously, I think we deserve criticism on this count. Not a good hospital in any city of size today but has its staff of social workers. The hospital in this city to which in respect to size and range of activity we are most comparable has twenty-two social workers. Now the community is not blind to this deficiency on our part. It takes notice and sets us down as behind the times. A case in point: the Associated Charities, for example, a large and useful and influential organization, finds it impracticable since the closure of our one-officered social service department to send its patients to our clinics. There is now a gap between our clinical performance and their philanthropic one which they find defeating to best interests, and so they send their patients to other hospitals. This may seem a small matter and we may complacently say, "Let them go"; but I think we are blind to our larger interests to disregard one of the biggest influences now at work in medicine. This is the kind of work the community understands, appreciates, advertises and, indirectly at least, rewards. This is the kind of work which the homœopathic school, from its beginning characterized by attention to individual needs and variations, ought to be strongest in.

The research aspect of medicine, — where do we stand on that? Our Out-patient Department is one of the most interesting places in the world. It is literally thronging with unsolved medical problems. Are we working on them as research problems? I think not. We are treating cases: ~~R~~ying them. Indeed, we can do little else in view of the large numbers which each clinic must handle daily. If, however, we had a research department whose function it was to confer with the various clinics, to hear their problems, and to formulate with them methods of investigation, the dispensary would have such a scientific rejuvenation that we should soon contribute something worth while. I would not in this connection be understood to overlook the research activities of the Evans Memorial. That is an important and fine enterprise, but the Evans is not organized to take on the daily, heterogeneous problems of the Out-patient Department. It has other functions. Our need is for a department on the spot with a generous spirit of scientific camaraderie but with scholarly standards which

would coördinate our work and direct it towards scientific conclusions. In connection with this subject I urge anyone who reads this communication to read also an article in the *Journal of the American Medical Association* of April 14th, "Medical Research in its Relation to Medical Schools," by W. B. Cannon and others. It fits our case remarkably well. Do we belong to the "static" or the "dynamic" class? To which do we wish to belong?

Finally, it seems to me that after the two points which I have tried to bring out, perhaps even before them, the most necessary move towards hastening the result we desire and deserve, is to put into effect the very wise suggestion which Dr. Packard made at the meeting, namely, that the name Massachusetts Homœopathic Hospital be abandoned and that the School and Hospital stand under the combined name of Boston University Medical School and Hospital. No name could be more dignified and appropriate, and in the association with the word University there would be much to gain and nothing to lose for all parties concerned.

Any one of the three steps mentioned would contribute to the progress we are advocating. If all of them could be instituted, the chair of Old-School Therapeutics could rest awhile, but whether it is established now or never, the other steps should be taken as soon as possible.

ALBERTA S. B. GUIBORD.

THE PRESIDENCY OF THE A. I. H.

The attention of the patrons of the GAZETTE has already been directed to the annual June meeting of The American Institute of Homœopathy to be held in Rochester, N. Y. Our school is represented in this city by two hospitals, in which respect it is a match for the old school; it goes without saying that the practitioners of the latter very greatly outnumber those of our own, although the sentiment of the city is very strongly homœopathic.

As for everything else, there is a very good reason for this fortunate situation, which becomes readily apparent on a retrospective survey of the responsible factors. Homœopathy was first planted in this community over forty years ago by the small group of men who founded the Homœopathic Hospital. Conspicuous among them was Dr. John M. Lee, who was surgeon-in-chief of the institution and who has distinguished himself in various ways since that time. After fifteen years in the Homœopathic Hospital, Dr. Lee decided to found a hospital of his own. This he was able to accomplish, and the institution

has grown to one with a capacity of fifty-five beds and is one of the best of its kind in the country.

His organizing ability was by no means limited to this work as he also had a large share in making the Hahnemann Hospital of this city a factor in its medical life. He holds the honor of being consulting surgeon to this hospital at the present time. He is also consulting surgeon to the Gowanda State Homœopathic Hospital for the Insane, the funds for the erection of which were secured while he was Chairman of the Legislative Committee of the New York State Homœopathic Society. These instances, although showing but one phase of this man's activities in the interests of his school, go far toward explaining the esteem in which homœopathic practice and institutions are held in the community.

His achievements as a surgeon are so well known that it would be superfluous to go into them here. He has also been one of the most constructive citizens of Rochester and his regularity as a contributor of new students to his Alma Mater may be aptly compared to the famous geyser in Yellowstone Park whose rhythmical performances have earned for it the title of "Old Faithful." He will go down to posterity as one of the pioneers of radium-therapy in this country, inasmuch as he devotes much of his energies in the application of this promising element to disease processes.

This may justly be said to be one of the critical times in the history of The American Institute. When one considers its policy of federation of all the state and country societies and the formulation and execution of a comprehensive plan for the scientific defense of its most vital tenets, it would seem that a pilot is required whose value as an organizer and whose experience and vision have already been demonstrated.

So, in the selection of a President of the Institute for the coming year who is possessed by nature and training of the qualities of a medical statesman, it is our opinion that no more auspicious choice could be forthcoming than that of Dr. John M. Lee; furthermore his selection in the field of his labors would be a coincidence at once as happy as it is rare.

CLINICAL DEPARTMENT

A case of *Morphinism?* — The patient is a married man, forty years of age. His father died at seventy-five of cancer of the face; the mother died suddenly of apoplexy at fifty-two. The grandparents seem to have been long-lived.

The patient has always been free from illness even in childhood and has been an unusually conscientious, hard-working man, in early life doing much manual labor and later combining this with executive work. Denies lues. Had one child who died of empyema at twenty-four; no accident, injury, nor operation. Eight years ago he began to have sciatica, which was very persistent and painful, and later the pain settled down in the left iliac fossa, where it has since remained. Three years ago the pain was so intolerable that he was given morphin for it and has since used it most of the time. It has always been given by a physician, so that he does not know the amount he has taken. He had attended to his business, which required much driving and walking, up to last winter, when he was too weak to go on and so went to bed. He bought a baking machine and used it without relief. Tub baths, because of the muscular relaxation produced, only increased the pain, which was now giving him many sleepless nights. He became much emaciated. In the spring he came to Boston to a private hospital, where an excellent internist took a number of bismuth radiographs which revealed nothing of importance. Four different belts were fitted and shortly abandoned, and an orthopædist said that he had flat feet, fitted arches and strapped his insteps, with some benefit.

Finally he was told that the real cause of all his misery was the morphin, and he determined to rid himself of this, though he did not believe it had anything to do with his condition.

Examination, May 10, reveals a man of medium height, dark complexion and black hair. The skin is sallow, and he is emaciated, weighing 135 pounds (former weight in health 168 pounds). His posture is bad. There is almost no movement of the vertebræ below the fifth thoracic, the spine being rigid below this point both for lateral and forward and backward flexion. If urged to persist in bending motions, he complains of much pain in the sacro-iliac joint, especially on the left, and says this pain extends through to the left iliac fossa. The spine bows backward (kyphosis). He says he thinks this is a congenital deformity, since he had it as a boy. The erector spinæ muscles are in spasm. The heart is slightly hypertrophied and has a peculiar reduplication of the first sound at the apex but no valvular murmurs. The aortic second sound is loud and

snappy. Radial, femoral and popliteal arteries are very hard, the femoral being large and tortuous. Blood pressure: systolic, 140, diastolic, 90. Lungs clear. Abdomen soft, and negative except that gas and fluid collect in the left iliac fossa with much splashing and gurgling. Bowels do not usually move without enema, though fæces are soft. He says he has urging but no power of expulsion. There is atrophy of the left leg, the thigh being one inch, and the calf one half inch, smaller than the right. He says that for several months there has been increasing numbness in both lower limbs, especially the left. His gait is slow and feeble. Reflexes are all slightly exaggerated. There is no disturbance of sensation to pain, heat, cold, pressure or joint position.

The blood: Hæmoglobin, 80; some leukocytosis.

The urine: Sp. gr. 1010; pale; acid; albumen, slight trace; urea, 1 per cent.; sediment, some uric acid, mucus and pus, a few casts.

The reason for reporting this case is that it presents an interesting question with perhaps a medicolegal bearing in view of the Harrison Law. How much of this man's pain is due to the continued use of morphin? How far are we justified in continuing to give him morphin?

Intellectually, he presents none of the mental stigmata of the opium habitué. He is logical, amiable and anxious to give it up. He coöperates well in its withdrawal, yet, physically, he presents the sallow skin and emaciation so common to the addict.

It is evident, on the other hand, that he has a progressing sclerosis of his arteries, especially of the lower limbs, which probably extends back from femorals to abdominal aorta (the result in part of heredity and in part of long rigidity of the lower spine) and involves some of the mesenteries, thus producing the torpidity and pain in the lower bowel as well as the atrophy of the left leg from malnutrition.

From the medical standpoint, we should have no hesitancy in saying that this man should be given all the relief possible from whatever source, but we must also determine to what extent his tolerance to pain has been lowered psychically by the continued numbing of the higher centers by the morphin. If we keep on writing this man's prescriptions for morphin and are summoned into court, can we satisfy the judge that we were not aiding in the continuance of the habit? It seems to me that any fair-minded opinion would be that the doctor is justified in continuing his prescription, if a fair attempt at withdrawal has been made, say for a month or six weeks, and it is then evident that the pain persists.

As to treatment, I will only quote one which appeals to

me as being practical and sensible. It appeared in the *Boston Medical and Surgical Journal* of February 8, 1907, from the pen of Dr. Frank H. Carlisle of the Norfolk State Hospital. In brief, his method is one of rapid withdrawal and is divided in two periods:—1, Withdrawal; 2, Convalescence.

He says: "Our routine is as follows: A mixture containing scopolamin hydrobromid gr. 1-150 and morphin hydrobromid gr. 1-6 is given hypodermically on the evening of the day of arrival, and repeated at intervals of six hours during the first twenty-four. The early effects of scopolamin usually make their appearance during this period and are manifested by marked dryness of the throat, with difficulty in swallowing, dilated pupils with blurred vision, and speech becomes difficult and rather jerky. The patient may now, or perhaps not until the following day, become mildly hallucinated (visual and auditory). In conversation his sentences are apt to be short, sharp and often incomplete, due no doubt to flight of ideas and hallucinatory control.

"On the second day the intervals for injection are increased to eight, and on the third day, to twelve hours. In typical cases the depressant effect of the drug (scopolamin) presents itself at about this time, continuing as a rule to some degree through the third and fourth days. This stage is characterized by a sensation of great fatigue and drowsiness; the excitement is greatly reduced and the patient seeks his bed and should obtain sleep of from four to eight hours' duration.

"Active purgation is obtained during the withdrawal period, through the liberal use of compound cathartic pills, cascara sagrada and salines. It is of vital importance that the bowels should be made to act thoroughly each day in order to rid the system of morphin and its by-products, but the drastic catharsis recommended by some authorities does not in our experience appear necessary."

HOMŒOPATHIC PERIODICAL LITERATURE

The Chironian. April, 1917

1. *Compulsory health insurance — a criticism of some of the features of the Mills bill.* 353. Jenks, E. B.

2. *An interesting anomaly of uterus and vagina complicated by pregnancy.* 360. Williams, F. F.

Report of a case of double uterus, with vaginal septum.

3. *Nephritic toxæmia of pregnancy.* 363. Benedict, A. K.
A case of eclampsia, with delivery by vaginal hysterotomy; recovery.

4. *Some recent phases of cardio-vascular renal disease.* 366. Jewett, D. B.

A review of some important features, among them heart-block, auricular fibrillation, syphilitic aortitis, focal infections, blood pressure, the phenolsulphonephthalein kidney-function test, non-protein nitrogen content of the blood, and acidosis. Digitalis or strophanthin, diuretin, Karell's milk diet, and rest in the treatment of decompensation, are recommended.

5. *Department of chemistry.* 377. Wright, F. M.

A description of the way in which this department is conducted at the New York Homœopathic Medical College.

W. O.

University Homœopathic Recorder, April, 1917

6. *Roentgenological examination of the gastrointestinal tract.* 63. Thomas, C. C.

A report of the technic practiced at the University Homœopathic Hospital, Ann Arbor, with observations on the results of the writer's experience. Thomas points out the error of taking morphology, rather than physiology, as the criterion of normality. His practice is to report a stomach as normal if it functions properly, even though its lower border reaches below the level of the umbilicus. The possibility of apparent filling defects being produced by non-pathological conditions is pointed out. Hence the attitude adopted seems eminently rational: "We are convinced that we should have all the facts of the case before us, including the history and other laboratory and clinical reports, before we are justified in attempting a diagnosis, even when the condition appears to be quite evident." The article might be read with profit by some of our extreme radiographophils.

7. *Focal infections in relation to general surgical conditions.* 70. Beebe, H. M.

A few remarks on the importance of focal infection in the ætiology of various conditions.

8. *Acute exophthalmos.* 73. Ideson, R.

Report of a case caused by suppurative posterior ethmoiditis. Recovery ensued when the ethmoid cells were curetted.

The Polycrest. April, 1917

This issue is devoted chiefly to an account of the formal opening of the University Hospital at Columbus, Ohio, on January 12.

9. *Homœopathy in Ohio.* 26. Wood, J. C.

After-dinner address delivered at the dedication.

The Clinique. April, 1917

10. *Treatment of streptococcus infection of the throat.* (ed.) 151.

Iodin, silver nitrate, alcohol, and hydrogen peroxid aggravate the condition. The best results are obtained from painting the tonsil every hour with a simple syrup, followed by the application of a solution of Bulgarian bacilli. The use of this method does not exclude that of the indicated remedy, which should not be neglected.

11. *Diet in obesity.* (ed.) 157.

Nearly all cases are due to gluttony; inheritance, although a predisposing factor, can be largely overcome by careful eating. Proteins should not be much decreased, but fats and carbohydrates should be cut down. Too rapid and too extreme reduction of weight should be avoided, as myocardial weakness may result. Each case should be individualized and carefully observed.

12. *Pituitrin in intestinal paralysis.* (ed.) 160

Quotes Colton, writing in the Buffalo Medical Journal, as obtaining excellent and prompt results in an obstinate case after the intravenous injection of 0.5 cc. of pituitrin.

13. *The busy man and high blood pressure.* 164. Halbert, H. V.

A man leading a sedentary life may develop arteriosclerosis without its causing symptoms until some sudden and unusual exertion provokes cardiac dilatation or some other serious condition.

The importance of rest, rational diet, and avoidance of mental strain is emphasized. The author's recommendation of the interrupted use of vaso-dilators is possibly open to criticism; the trend of modern practice seems to be toward the avoidance of the nitrites.

14. *Care of the mother during pregnancy.* 168. Wood, L.

15. *Care during pregnancy.* 169. Greene, C. F.

A consideration of the technic of obstetrical procedure.

16. *Care during the puerperium, and care of the child.* 173. Cobb, E. W.

A liberal diet, with a generous quantity of fluid, is urged.

17. *The complications of pregnancy, delivery, and puerperium.* 176. Adsit, J. S.

Considers especially pernicious vomiting, eclampsia, and polyhydramnion. A few cases are cited.

18. *Some studies in impotence.* 184. Wieland, F.

The importance of an enlarged prostate in the causation of impotence (i.e., loss of erectile power, as opposed to sterility, lack of vitality of the spermatozoa) is pointed out, as is the

role played by emotion. The common idea that varicocele causes sterility is decried; it is possible, however, that a varicocele may cause absorption of the testis of the side involved.

Homœopathic Recorder. April, 1917

19. *Homœopathy*. 147. Glover, H. G.

The author speaks especially of the question of potency. He mentions in this connection the infinitesimal doses of tuberculin recommended by the old school, and the effects demonstrable from exceedingly minute doses of adrenin. In the light of such facts we should hesitate to condemn high potencies. It is best in this matter, as in many, not to be an exclusionist.

20. *Plea for a more scientific presentation of case reports*. 155. Rabe, R. F.

This article represents a very laudable tendency, visible especially among the younger men, to report cases in such a way as to command the respect of all, no matter of what bias. That is, in addition to giving the history symptoms, the writer should report physical findings and the results of laboratory and Roentgenologic examinations, and make a diagnosis on the basis of these data. The criticism made by Dr. Rabe is all too true: "In the homœopathic school of medicine, case reports commonly take on one of two forms: either they assume the character of dogmatic assertion unsupported by convincing proof, or they lay stress, intentionally or not, upon symptom verifications." A case cured by *malaria officinalis* is reported. (See editorial, GAZETTE, May, 1917, p. 274.)

21. *The Natrums*. 160. Schwartz, E.

A review of some of the more important symptoms of certain members of this group.

22. *Some interesting facts*. 167. Jones, E. G.

Rambling remarks on various remedies. The author speaks of the valuable results obtained from the indicated remedy, and decries "shot-gun" practice. In the same article, however, he recommends *ferrum* 3x in alternation with *digitalis* 3x for anæmia with palpitation. (Query: if two remedies have to be alternated, is either truly the indicated remedy?) Again, he prescribes a mixture of fld. ext. of *berberis*, and tr. *corydalis* in syphilis. Consistency, thou art a jewel!

23. *Single symptoms*. 171. Bell, J. B.

This article has special interest for us in New England as having been written by our beloved and lamented colleague while he was engaged in general practice in Augusta, Me. It deals with the importance of more or less striking single symptoms as characteristics upon which a prescription may safely be based.

24. *Shall we discard the forceps?* 174. Cuthbert, E. P.

Advocates forceps instead of Cæsarean section whenever possible.

25. *Cyanid of mercury.* 178. Boger, C. M.

Summary of an account of the pathogenesis of this drug published in 1837 in the Real Lexicon.

26. *Morphin and opium habit.* 179. Sells, E. H. M.

Recommends tr. *avena sativa* in 10–30 drop doses to quiet the nervous disturbance while the opiate is being withdrawn.

27. "*Acidosis*" in nose, throat, and chest affections. 183. Mitchell, C.

The author reports that a high urinary acidity or a minute excess of sugar may produce a cough or dryness of the throat. We doubt the correctness of the implication in the following sentence: "By a specially careful sugar test we may find reduction after thorough boiling of test liquid and urine." The reagent is not named. It is well to remember, however, that many sugar reagents, notably the well-known Haine's and Fehling's solutions, will be reduced if "thoroughly boiled" with a normal urine.

W. O.

The British Homœopathic Journal. April, 1917.

28. *On a case of chorion-epithelioma of the uterus following gestation without menstrual abeyance: with negative pathological finding concurrent with positive clinical indications in the early stages of the case.* 89–106. Burford, G., and Ross, W.

In the introduction is quoted this significant paragraph from Sir James Mackenzie: "The life of a general practitioner is not considered one that can help much in the advance of medicine; it is indeed regarded so lightly that no steps are ever taken to train one who intends to become a general practitioner in any branch that would enable him to undertake research work. You know well that if a man aspires to research work it is to the laboratories or to the hospital wards he is sent. As a result of my experience, I take a very different view, and assert with confidence that medicine will make but halting progress while whole fields essential to the progress of medicine remain unexplored, until the general practitioner takes his place as an investigator."

The Homoœopathic World. May, 1917.

29. *Unusual phases of familiar remedies.* 221. Greene, J. M.

30. *Clinical aspects of ferrum phosphoricum.* 225. Farrington, H.

The Journal of the American Institute of Homœopathy.
April, 1917.

31. *The problem of medical cults.* 1127. Strickler, D.
 32. *The surgical treatment of gastric ulcer.* 1134. Van Lennep, W.
 33. *Diagnosis of gastric and duodenal ulcer.* 1140. Eberhard, H.
 34. *Acute perforation of duodenal ulcer.* 1148. Elliott, J.
 35. *Dextrocardia: liver on left side: vermiform appendix on left side: appendectomy: recovery.* 1154. Foster, W. D.
 36. *Therapeutics of hæmorrhage.* 1157. Schulze, C. A. Fourteen remedies and their indications are presented.
 37. *Palliation — its uses and abuses by homœopaths.* 1162. Royal, G.
 Royal prefaces his remarks by saying: "We are going to use or discard palliative treatment because we believe that we can cure our patients more quickly, more safely, and more permanently by using or refusing to use palliation." Three cases are presented which illustrate the author's views and methods of using palliation.
 38. *Parental responsibility.* 1170. Hooker, E. B.
 39. *Education of the fathers and mothers of tomorrow.* 1178. Fuller, A.
 40. *Water in nephritis.* 83. Mitchell, C.

BOOK REVIEWS

The Neurotic Constitution. By Dr. Alfred Adler (Vienna). Authorized translation by Bernard Gluecke, M.D., Director of Psychiatric Clinic, Sing Sing Prison, and John E. Lind, M.D., Instructor in Psychiatry, Georgetown, Medical College, with introduction by William A. White. Published by Moffat Yard Company, New York. Price \$3.00.

The author approaches his problem from the standpoint of organ inferiority, which he has worked out in a previous monograph, and so gives to his highly scientific and psychological discussion a structural basis which is very satisfying. He believes that by determining the weaknesses in the patient's mental fabric and pointing out corrective methods the weak ideastems may be developed not only to normal but may actually become superior, because of the attention given them, just as muscles may be developed.

The author objects to Freud's idea that the libido is the motive force behind the phenomena of the neuroses; also to Freud's fundamental view of the sexual ætiology of the neuroses. With these exceptions he accepts the Freudian analysis as a valuable advance.

The book throws a new and interesting light upon the neurotic patient and will well repay reading by the general practitioner as well as by those especially interested in neurological and psychiatric problems.

A. H. R.

Zone Therapy. By Wm. H. Fitzgerald and Edwin F. Bowers. 1917, pp. 191. I. W. Long, Columbus, Ohio, \$1.50.

This book is a collection of special articles that have appeared in "Associated Sunday Magazines" and "Every Week," and is largely given over to

a rehearsal of cases in which zone therapy is said to have caused disappearance of pain and other troublesome conditions such as deafness, goitre, cough, *etc.*

The theories of zone therapy are purposely advanced only superficially, and stress is laid on the clinical facts. It is suggested that control-centers in the medulla are stimulated or shocked, that the pituitary may be stimulated to exert inhibitive functions "through the multiple nerve paths from it," that the lymph is "stimulated to flow normally in its channels," and "that inasmuch as there are ultramicroscopic bacteria—it is more than likely that in the light of this work there are ultramicroscopic connections analogous to those we call nerves."

Cataract, Senile, Traumatic and Congenital. By W. A. Fisher, M.D., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Published by Chicago Eye, Ear, Nose and Throat College, Chicago, 1917, pp. 119. \$1.50

The author's own summary of the book is as follows:

First: A new method of acquiring technic upon the eye with the aid of four-week-old kittens.

Second: Discarding all kinds of eye specula and holding the lids away from the eye ball when operating the eye after injuries.

Third: Dressing and treatment after cataract operations.

Fourth: A modification of the Smith Indian operation for cataract, making the removal of the lens in capsule safe and necessarily the operation of choice. If I have accomplished this it will be a tremendous step forward, because the profession has been seeking a half-century for a safe method of removing a lens in capsule that is applicable as soon as the reduction in vision prevents the patient from attending to his ordinary duties.

The waiting for maturity with its coincident blindness as usually done at present naturally undermines the health and results in general depression. If a cataract operation can be safely performed, and it can, before the patient becomes a burden to himself and friends, the economic value is inestimable not only to those who are able to pay but for those who must be cared for by the State, which latter are in majority.

Fifth: A method of treating injuries of the lens other than watchful waiting.

Sixth: A systematic procedure for determining the treatment of congenital cataract."

The extraction of the lens in capsule is not very popular in our Eastern cities, and the majority of ophthalmic surgeons who practice the capsulotomy method do not hesitate to extract the immature cataract, when the patient is unable to read with the better eye.

Whatever the method one uses, he will find many useful suggestions and will be well repaid for a careful perusal of this important contribution to Ophthalmology.

D. W. W.

Suggestive Therapeutics. By Henry S. Munro. 1917, fourth edition, pp. 481. C. V. Mosby Co., St. Louis. \$5.00.

In these days, when drug-treatment is giving way largely to suggestive methods, numerous cults, like Christian Science, osteopathy, and Freudianism, which emphasize one aspect of suggestion at the expense of other equally important factors, are being exploited. It is, therefore, refreshing to find a presentation of suggestive therapeutics, or psychotherapy, which, while paying due attention to the value of suggestion, does not advocate it as a panacea for "all the ills that flesh is heir to." Such a presentation is found in Munro's book, now in its fourth edition.

In the past, most reputable physicians have avoided the frank use of this sort of treatment for one of two reasons, — either because they thought of it as quackery or because they labored under the delusion that its use involved the deliberate deception of their patients. The result has been the neglect of a valuable therapeutic agent. It is an unfortunate fact that the most prominent and harmful employment of psychotherapy has been in the hands of ignorant quacks, whose conduct has brought much discredit on

them and on their methods. Nevertheless, it has a sound scientific basis, which is carefully elucidated by Dr. Munro. That deception is not only unnecessary, but positively inadvisable, is strongly pointed out. The physician "can make no greater mistake than to deviate the least from the path of sincerity. It is not necessary to make false or unreasonable promises."

Having shown that the employment of psychotherapy is not inconsistent with either the reputable physician's dignity or sense of justice to his patient, Dr. Munro proceeds to deal with its practical phases. The employment of hypnotism, the use of suggestion in anæsthesia, surgery, psychoneuroses, and dentistry is considered, for instance. Although the author is an enthusiast, however, he never deviates from the principle of *tolle causam*; psychotherapy is to him but an addition to his armamentarium, not his sole weapon. He does not deny the existence of illness, nor does he attribute all disease-states to a suppressed sexual complex or a dislocated vertebra; he recognizes and uses the profound influence exerted by mind over body as a valuable adjunct to surgery and drugs.

The book is somewhat unnecessarily bulky, and contains almost too much of speculation and polemics to be attractive or very valuable to the busy practitioner. It is to be regretted that such is the case, for if one can extract the kernel, he will find much of profit and encouragement.

W. O.

Rational Sex Ethics. By W. F. Robie, A.B., M.D. 1916, pp. 356. R. G. Badger, Boston. \$3.50.

This book is a physiological and psychological study of the sex lives of normal men and women, with suggestions for a rational sex hygiene, and is based chiefly on "knowledge obtained from the complete sex histories of several hundred normal, educated, successful, moral and altruistic men and women."

The statistics obtained by personal inquiry are given in considerable detail and their interpretation is supplemented by a discussion of the views of various authorities on sex matters. Much of the teaching is sound and has the advantage of being based on something more solid than a writer's imagination.

SOCIETIES

Maine Homœopathic Medical Society

The fifty-first annual meeting of the Maine Homœopathic Medical Society was on May 17, at Augusta, Dr. Luther A. Brown of Portland, President; Dr. John A. Hayward, also of Portland, Secretary.

The following named officers were elected for the ensuing year:

President, Dr. L. A. Brown (re-elected)

First Vice-President, Dr. F. A. Ferguson, Portland.

Second Vice-President, Dr. W. A. Walters, Fairfield.

Recording Secretary, Dr. John A. Hayward, Portland.

Corresponding Secretary, Dr. Carrie E. Newton, Brewer.

Treasurer, Dr. W. S. Thompson, Augusta.

Board of Censors, Drs. H. F. Morin, Bath; E. S. Abbott, Bridgton; Geo. H. Rand, Livermore Falls; A. I. Harvey, Bangor; M. S. Holmes, Oakland.

An interesting program was presented, Drs. Sutherland, W. A. Dewey of Ann Arbor, C. E. Sawyer of Marion, Ohio, contributing much to the occasion. Dean Sutherland's subject was "Homœopathy — Does it Need an Apology?" Dr. Dewey, Secretary of the Council on Medical Education, American Institute of Homœopathy, showed a group of lantern slides describing "The Physical Properties of the Homœopathic School of Medicine at Home and Abroad."

Dr. C. E. Sawyer, Chairman of the Executive Committee of the American Institute, presented a plan for organization and coöperation of the State Society in federation with the American Institute, and this plan was discussed at the afternoon and evening sessions and its adoption voted.

A banquet was held at the Augusta House, Dr. Dewey speaking again, this time upon the subject "How Homœopathy Is to Be Perpetuated," and Dr. Sawyer on the topic, "When to Act, and How."

The Society voted to adopt and to wire to President Wilson the following resolution:

"Be it Resolved, that the Maine Homœopathic Medical Society, in annual session at Augusta, Maine, May 17, 1917, hereby tenders its services to the United States Government in any capacity in which it may be useful."

The next annual meeting of the Society is to be held at Pittsfield, Maine, the date to be determined later.

AMERICAN COLLEGE OF PHYSICIANS

The second convocation of the American College of Physicians will be held at Hotel Nassau, Long Beach, Long Island, New York, on June 5, 1917. It is expected that about ninety per cent. of members who have not entered upon duties connected with the war will be in attendance. Some fifty physicians of national repute are to be admitted to Fellowship.

Heinrich Stern, M.D.,
Secretary General,
250 West 73rd St., N. Y. City.

CHANGES IN PERSONNEL OF FACULTY OF BOSTON UNIVERSITY SCHOOL OF MEDICINE

Dr. Wesley T. Lee (1899) has been elected to succeed Dr. John L. Coffin as Professor of Dermatology, Dr. Coffin having resigned from the Faculty. For the past two years Dr. Lee has been Lecturer on Dermatology, and previous to that, Lecturer on Theory and Practice (1908 to 1914) and Lecturer on Surgical Pathology (1903 to 1908). He was succeeded in the last named by Dr. Thomas E. Chandler (1901).

Dr. Percy G. Browne has been advanced from Associate Professor to full professorship in Diseases of the Chest.

Dr. Wilson F. Phillips (1896) becomes Lecturer in Theory and Practice.

Dr. Orville R. Chadwell (1903) has been made Lecturer in Clinical Medicine, under Dr. Charles H. Thomas as head of the department.

Dr. Samuel A. Clement (1914), House Physician at the John C. Haynes Memorial Hospital (Contagious Department of the Massachusetts Homœopathic Hospital), has been elected Clinical Instructor in Contagious Diseases.

Dr. Joseph E. Sternberg (1909) has been appointed Instructor in the Department of Ophthalmology, of which Dr. David W. Wells is Professor.

Dr. John P. Rand of Worcester has resigned from the position of Lecturer on The History of Medicine.

Dr. Henry M. Pollock, Superintendent of the Massachusetts Homœopathic Hospital, has been asked to give a course of lectures to the Senior class (1918) on Hospital Organization and Administration and has been given the title of Lecturer in that subject.

CHANGES IN THE FACULTY OF NEW YORK HOMŒOPATHIC MEDICAL COLLEGE FOR 1916-17

Prof. R. A. Stewart, '00, transferred from the Department of Surgery to the Department of Gynæcology, becoming professor in place of Prof. Tuttle, retired; Prof. E. W. Kellogg, '03, of the Department of Surgery, assigned to the subject of Fractures and Dislocations, taking the place made vacant by the promotion of Prof. Stewart; Dr. G. F. Brewster, '00, Pro-

fessor of Mental Diseases, in place of Prof. Butler, retired; Dr. P. L. DeNyse, '09, Professor of Pathology, in place of Prof. Heitzman, retired; Dr. F. M. Wright, '10, appointed Professor of Chemistry, succeeding Prof. Jouard, now Professor of Urology; Prof. H. R. Barrows, made Professor of Micro-Anatomy; Prof. S. A. Hill, made Professor of Clinical Medicine; Dr. E. W. MacAdam, '07, appointed Instructor in Medicine; Dr. C. Scudder appointed Instructor in Pathology; Dr. H. E. Ayers, '09, has been made Assistant Professor of Gynecology. The following have been appointed Instructors: Dr. W. L. Williamson, '16, in Anatomy; Dr. C. E. Williams, '12, in Anatomy; Dr. E. G. McCollum, '15, in Micro-Anatomy; Dr. J. J. Dunnigan, '16, in Micro-Anatomy, and Mr. O. W. Cromwell, M. S., in Biology.

ANNOUNCEMENT OF THE CHICAGO POST-GRADUATE SCHOOL OF HOMŒOPATHICS

A comprehensive course in Homœopathy, including Homœopathic Philosophy, Homœopathic Materia Medica and the use of the repertory, will be given by trained men in the several departments. Special attention is given to taking the case and finding the indicated remedy.

This school will be held at — 427 East 31st Street, — and at least four hours daily, five days in the week, will be given to didactic and clinical instruction. Graduate physicians may take a partial or complete course, according to arrangements with the Registrar, and may enter at any time. A full course covers one year of didactic and clinical instruction, on completion of which and passing a satisfactory examination the physician will be entitled to the degree of Master of Homœopathy.

G. E. DIENST, M.D., Aurora, Ill., *President*.

E. B. BECKWITH, M.D., 25 E. Washington Street, Chicago, *Secretary*.

This, as far as we know, is the first attempt to establish an actual Post-Graduate School of pure Homœopathy since the days of the Kent School in Philadelphia. It has been discussed many times by physicians in different cities in the country, but heretofore has not taken shape in an actual outline of courses as is now being done in Chicago. Chicago is a center where Homœopathy has commanded an unusual following, and it would seem as though if the plan can succeed anywhere it should do so here.

We hope it will attract not only a goodly number of those already familiar with the tenets of Homœopathy but also that it may include investigators from other schools of practice as well.

THIRD SESSION OF THE TRUDEAU SCHOOL OF TUBERCULOSIS

The Trudeau School of Tuberculosis, Saranac Lake, New York, will hold its third session from June 15 to July 27, 1917. The course is to cover six weeks and will be especially adapted for recent graduates and clinical instructors who may desire to take an advanced course in this specialty. Fee, one hundred dollars for the course. A limited number of scholarships, providing for the expenses of tuition, will be available.

For further information application should be made to the office of the Secretary, Saranac Lake, New York.

ARMY MEDICAL SERVICE

Those of our readers not familiar with the care of sick and wounded soldiers in time of war will be interested to know that the army medical service is organized into three zones, as follows:

Zone 1. — First Aid Service, located immediately back of the trenches, from which the wounded are sent to the field dressing stations, a little further back. Next come the evacuation hospitals, where cases are classified for transfer to hospitals in the rear,

Zone 2. — Red Cross base hospitals, equipped to give the same service to sick and wounded as that given in any large first-class civic hospital.

Zone 3. — The army general and civil hospitals, for sick and wounded, who are transferred from overcrowded base hospitals, and convalescents who are sufficiently recovered to be able to travel but who still need medical treatment.

Base hospitals are military units, organized at the request of the medical departments of the army and the navy, but too cumbersome in organization and equipment for civilian relief work.

AUTOMOBILE TRIP TO ROCHESTER

Several of the New England members are planning to go to the Rochester meeting of the American Institute of Homœopathy in their automobiles. It is suggested that the company leave Boston on Friday afternoon, June 15th. A stop for the night will be made at Greenfield. The following morning the Mohawk trail will be crossed and the day spent in traveling. On the third day, Sunday, the 17th, Rochester should be reached at a comparatively early hour. This will allow one to make the trip in relatively easy stages. The return is planned by Jacob's Ladder. The roads are in excellent condition over the entire route. Those desirous of making the trip may communicate with Dr. W. H. Watters, 80 E. Concord Street, Boston.

PERSONAL AND GENERAL ITEMS

Dr. Winfred Overholser, Class of 1916 B.U.S.M., has been appointed Junior Assistant Physician at Westborough State Hospital, and entered upon his service on June first. He will be succeeded by Dr. John W. Harvey (B.U.S.M., 1917) as House Physician in the Evans Memorial.

Dr. Louis R. Daniels, B.U.S.M., 1914, who removed in 1916 from Central Falls, Rhode Island, to Watertown, Massachusetts, is in charge of the Hood Rubber Company's industrial hospital in East Watertown. He was married recently to Miss Cora L. Colburn of Providence, Rhode Island.

Dr. Frank W. Mathewson, B.U.S.M., 1914, is one of the city physicians of New Bedford, Massachusetts.

Historic Boston Common is soon to contain one of the Red Cross Base Hospitals.

FOR SALE: A \$6,000 cash practice for sale in a thriving manufacturing community of 5,000 people, practically all Americans, within eighty miles of Boston. Good homœopathic location for the past thirty (30) years. Residence has private hospital facilities. Terms reasonable to the right party. Address "X.Y.Z.," care *New England Medical Gazette*, 80 East Concord Street, Boston, Mass.

DESK AND CHAIR FOR SALE: A flat-top office desk and chair are for sale at a low price and can be seen by applying to the *New England Medical Gazette*, 80 East Concord Street, Boston.

Dr. Walter Boothby, of Boston, son of the late Dr. Alonzo Boothby, has gone with the recently mobilized Harvard Base Hospital Unit for service with the Allies, presumably "somewhere in France."

Dr. Leroy M. S. Miner (B.U.S.M., 1907) is on the surgical staff (dental) of the Massachusetts General Hospital Base Hospital Unit No. 6, mobilized for early service with the Allies.

Drs. J. P. Sutherland, W. H. Watters and Francis H. MacCarthy spoke before the Amalgamated Women's Clubs at Melrose (Massachusetts) City Hall in May in the "Better Babies" campaign. Dr. Sutherland's subject was "Maternal Diet in Relation to the Baby," Dr. Watters spoke on the "Bacteriology of Milk," and Dr. MacCarthy on "Children's Hygiene."

Dr. F. E. Harpel (Hahnemann Medical College, 1871) of Danville, Pa., died on April 3rd, after an illness of several months. He was a brother of the late Dr. M. H. Harpel.

Dr. Laurence R. Clapp, Class of 1908 Boston University School of Medicine, who for several years has been Resident Physician in Melbourne Homœopathic Hospital, has accepted a two-year appointment as Company and Government Surgeon on the Island of Nauru, Central Pacific Ocean. He left Australia in March, and writes that the island of Nauru lies almost on the equator, just west of the Gilbert Islands. It is worked by the Pacific Phosphate Company for its deposits of rock phosphate. The island has a small white population, about three hundred Chinese coolie workers, and a thousand natives. It has three hospitals, one for each class of its inhabitants. Dr. Clapp writes that he and his family anticipate an interesting experience with life in the tropics.

Dr. Reuel A. Pierce (B.U.S.M., 1912) is Chairman of the Board of Health of the town of Canton, Massachusetts.

Dr. Adeline E. Francis-Neal, class of 1895 B.U.S. of M., has removed to 862 Main St., Waltham, Massachusetts.

Dr. Harriet E. Kenney, (B.U.S.M., 1896), of Cohoes, New York, has accepted the position of House Physician at Talitha Cumi Home, Jamaica Plain, Boston, and entered upon the appointment on June first.

Dr. Arthur A. Struthers (B.U.S.M., 1915) writes from Australia that he is well, happy and "busy from 9 a.m. to 12.30 p.m.; hospital (Melbourne Homœopathic) full all the time." He is lecturing to nurses on Hygiene, and he finds "varied and wonderful chances to improve from both experience and study." Dr. Hart (B.U.S.M., 1907) relieves Dr. Struthers a few hours each week.

Dr. Walter A. Jillson (Class of 1905, B.U.S.M.) has resigned from his position at Westborough State Hospital and entered upon service in the Medical Corps of the United States Army. He is at present stationed at Fort Logan, Colorado, with the rank of First Lieutenant.

Dr. Helen B. Todd, B.U.S.M., 1914, has removed from Meriden, Connecticut, to 2215 Western Avenue, Minneapolis, Minn.

Dr. Sumner B. Annis (B.U.S.M., 1911) has removed from South Natick, Massachusetts, to 17 West Central St., Natick.

After June 7th Dr. Horace Packard will be found at his summer camp in the Blue Hills (45 minutes by motor from Boston). Appointments for consultation or operation can be made by letter as usual, or more directly by telephone (Stoughton 265).

Dr. Max M. Braff, of the 1917 graduating class of Boston University School of Medicine, who was enrolled in the Medical Corps of the United States Navy in April and allowed special advance examinations by the School in order to free him for service, has been appointed to the Naval Hospital at Portsmouth, New Hampshire, and is now serving in the isolation camp for contagious diseases. He writes that he is in complete charge of about seventy-five cases, from the time they enter until they are discharged, and he finds the work very interesting.

FOR SALE. — Complete electrical outfit, homœopathic remedies, and medical library of the late Dr. Russell Bingham of Fitchburg, Massachusetts. Location if desired. Write to Mrs. Russell Bingham, 130 Day St., Fitchburg, Mass.

FOR RENT. — An attractive bungalow, completely furnished, including piano. Situated in Hooksett, New Hampshire, overlooking Boulevard; three minutes to Manchester and Concord electric car line. Quiet, country place. Chance for garden and hens. Will rent the place to four adults for one hundred dollars, to November first. Apply to *New England Medical Gazette*, 80 East Concord St., Boston.

Dr. James A. Bryer of North Attleboro, Massachusetts, was married on April 10 to Miss Julia Agnes Eyer of the same city. Dr. Bryer is first assistant to Dr. N. W. Emerson in the Emerson Hospital of Boston, and graduated from Boston University School of Medicine in the class of 1899.

HOSPITAL NOTES

Massachusetts Homœopathic Base Hospital

The staff and friends of the Massachusetts Homœopathic Hospital have within a few days successfully completed a campaign for raising funds for a base hospital for service somewhere in the warring countries of Europe. The minimum amount needed was thirty thousand dollars, but this has been considerably over-subscribed, so that the project is an assured success.

It is expected that physicians who are enrolled for service in this hospital unit will not be chosen for other service, but if so conscripted they will be returned to the base hospital prior to its departure for active service. The unit will probably not be sent out before autumn of the present year. Some of the best men of the homœopathic profession in Greater Boston have offered their services in the unit.

LOAN OF A HOSPITAL TO THE GOVERNMENT

Through the agency of Albert C. Burrage, a well-known lawyer and citizen of Boston, the Burrage Hospital Association has offered to the Secretary of the Navy the free use of the beautifully situated Burrage Hospital on Bumpkin Island, Boston Harbor, together with the use of the steam yacht "Aztec" for a hospital transport for wounded sailors. The "Aztec" is one of the largest steam yachts on the Atlantic Coast, and the Hospital has accommodations for two hundred beds, with quarters for staff and help.

The Hospital has been used for the care of sick and crippled children and entirely supported by Mr. Burrage and his family. Mr. Burrage now offers to pay the support of the hospital and the yacht, within a certain specified amount for each, for a period of at least four months.

This is a munificent gift and should stimulate giving in others.

A reconstruction hospital, designed especially for the benefit of crippled soldiers, to fit them for useful and self-supporting lives after the war, is planned to be built on Parker Hill, Roxbury, a near suburb of Boston. Dr. Joel E. Goldthwait of Boston, with the title of Major, has been sent to England and France on a tour of inspection of orthopædic hospitals in those countries, for study of the methods used there.

It is expected that similar hospitals will be established in the leading cities of the United States.

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ORIGINAL COMMUNICATIONS

THE YEAR'S PROGRESS IN MEDICINE *

By W. H. WATTERS, M.D., Ph.D., Professor of Pathology, Boston University

In reviewing the past year in medicine some entirely new topics appear. Some older ones are seen in a new or altered light; some, formerly thought to be important, are vanishing or have entirely disappeared, and the importance of others is even more clearly recognized than ever before.

The medical profession as a whole shows a strong and not always flattering tendency to search for something new and presumably better than the old. This inclination is so strong that it often discards the tried older method for the untried new one. Hence one may trace wave after wave of enthusiasm for this or that procedure as it passes over the country carrying with it all except the few who are sufficiently strong to resist. These waves, like others, are bound in time to recede; enthusiasm wanes, optimism gives way to pessimism, and the new idea is thrown into the discard even though it does possess a modicum of value. Witness, for instance, the great enthusiasm for tuberculin in tuberculosis about 1892-96, followed by some years of almost entire oblivion; the widely heralded value of the Roentgen ray as a therapeutic measure, with the resultant disappointment, the world-wide interest in the opsonic index and the alternation of extreme optimism with deep pessimism; and numerous similar instances.

The profession is too prone to desert the tried and moderately successful method for the untried but highly endorsed one. The story is told of a patient who consulted his physician concerning a certain trouble and after a prescription had been given, said: "I remember you cured me of this same trouble ten years ago. Why don't you use the same treatment now?" "Ten years ago?" said the doctor. "My dear sir, the medical pro-

* Oration in Medicine delivered at the annual meeting of the New York Homœopathic Medical Society, April 10, 1917.

fession has made wonderful strides since then, and I couldn't think of such a thing."

Epidemic poliomyelitis. In looking backward over the year, one of the most prominent features of the view is the widespread and serious epidemic of infantile paralysis that occurred in the East last summer. During the prevalence of this malady an opportunity better than ever before was offered for its careful and exhaustive study. In many places the opportunity was grasped with avidity, and as a result there has been a decided increase in our knowledge of its true nature and progress.

From the standpoint of ætiology, it now seems quite safe to classify it among those diseases caused by a filterable virus. It has been possible to prepare emulsions from parts of the nervous system and from the lymph nodes of infected individuals which, when injected into susceptible animals, will produce the disease. The same result will follow the injection of the fluid if it is first passed through a Berkefeld filter impermeable to bacteria and thus rendered free from any microscopically visible forms of life. In an occasional instance it has probably been possible to obtain cultures of this virus and to demonstrate, by ultra-microscopic methods, minute bodies in rapid motion that is apparently not Brownian motion. Where these minute invaders come from and the manner of their transportation still remains a mystery. Many forms of carriers have been suggested. Following some very suggestive experiments of Rosenau the most probable seemed at one time to be the stable fly. In more recent attempts to duplicate these experiments the results have been negative even when conducted by the same observer. In view of the seasonal incidence of the disease, some insect carrier is strongly suggested, although occasional epidemics occurring or persisting during winter are somewhat contradictory factors. The question is still an open one and awaits definite answer.

Concerning diagnosis no very definite advance has been made. Endeavors have been directed toward recognition of the disease in the preparalytic stage in order that possible therapeutic measures may be earlier instituted. One of the important factors here is found in the study of the cerebro-spinal fluid. Lumbar puncture is advised as an early procedure in most cases where anterior poliomyelitis is suspected or even considered. It is a relatively safe and simple procedure for any physician with a little experience, and while seldom if ever gives in itself a definite diagnosis, yet it often provides confirmatory or contradictory evidence that is of much value. The most suggestive feature is the moderately high cell-count ranging from fifteen to several hundred per cubic millimeter. The cells early in the

disease are of the neutrophilic or polymorphonuclear type, but as it progresses the mononuclears become more numerous. Even with all of our best endeavors to establish a diagnosis there is no doubt but that in many instances the disease is entirely unrecognized at any time during its course. Indeed, upon this very fact is based one of the most interesting theories explaining these peculiar occurrences where the disease attacks one child in a family and leaves all the others unscathed. This theory is that the disease is much more common than we even suspect, so common that it affects the great majority of all children, particularly those living in cities. The attacks are so light that in most instances they are entirely overlooked. Occasionally an evanescent paralysis or "numbness" of some muscle or group of muscles may be observed, or possibly some other non-diagnostic symptom as nausea and vomiting, unexplained fever, headache, dizziness, *etc.*, may be the only indication of abnormality. All such cases, nevertheless, obtain immunity equal to those where the disease is frankly present. If a personality may be pardoned, I may say that during the course of the epidemic in Boston last summer both of my young children manifested symptoms that might be interpreted according to this theory. One complained of an inability to use the arm freely for two or three days, due to what he called "numbness"; the other showed some soreness and weakness of the muscles of the back of the neck for a similar length of time. It seems possible that where careful observation is maintained, more such instances might be reported than is now the case. The theory at least is interesting and will explain many otherwise apparently contradictory phenomena. Of its validity, the future only can tell. If uncertainty marks our study of the disease itself as a pathological problem, it is no less a prominent feature of the problem of treatment. Experimentally in animals it has proven possible to immunize against the disease both prior to actual infection and even shortly after infection had taken place. This has been brought about by the intraspinal injection of serum from a convalescent or immune case. When applied to human beings the results have been less gratifying. Some observers report very optimistically, others have some favorable results, while still others are decidedly pessimistic. As the result of a series of control experiments it seems to be an open question whether the benefit comes from the intraspinal injection of the so-called immune serum, from the irritant action of the foreign substance producing an increased cellular activity in the spinal canal, or from the mere drainage of the spinal canal, which is an essential part of the process. Treatment of the developed disease with its various paralysees has to do with the

orthopædist and the electrical therapist and is outside the scope of the present paper. It may be stated incidentally, however, that in several Boston institutions the sinusoidal current is giving almost unhopèd-for results in certain cases. After all is said, therefore, one of the most prominent features evident all through our study of infantile paralysis is the interrogation point.

So many topics must be touched that I fear too much time has already been given to this one disease, vitally important though it may be. We must therefore pass on.

Nose and throat infections. In Boston, the winter just past has been rather remarkable for the great prevalence of that form of infection to which the names of "influenza" and "grip," "cold" and "sore throat" are variously given. Associated with a large proportion of these cases has been found a hæmolytic streptococcus rather different in morphology from the ordinary forms. Some of us have thought this organism to be the cause of the various forms of nasal, pharyngeal and laryngeal inflammation so frequently seen. Certain it is that the influenza bacillus of Cannon and Pfeiffer, so common in the great pandemic of the early '90's, has very seldom been encountered. Another series of experiments has tended to suggest that entirely different organisms are the causative factors. Several observers have collected nasal secretions from patients suffering from acute "colds" and have passed them through filters impermeable to bacteria. The filtered fluid has then been placed on the nasal mucous membrane of healthy individuals. In a varying period of from two to five days the majority of the persons thus treated developed a typical cold, thus strongly suggesting an ætiological relation of the one to the other.

Scarlet fever. Sometimes, somewhat allied to these infections, is that disease of still uncertain ætiology, scarlet fever. Some work has been done along the line of causation, that which has been productive of most results having been that of Mallory and Medlar. They have described a small bacillus present in the mucous membranes of some fatal cases but are very conservative about drawing any conclusions. More suggestive work has been done along experimental therapeutic lines. Following the technic of Zingher, several series of cases have been reported where intra-muscular injections of from 100 to 250 c.c. of blood from a convalescent patient have been made, with hopeful results. Fresh normal blood has also been used as well as normal serum and serum from an immune person. To the medical public at large the results from any of these methods seem to be not particularly encouraging.

Diphtheria. Another somewhat allied disease is diphtheria.

Several notes may here be made. There is a steadily increasing degree of recognition of varying degrees of virulence of the diphtheria bacillus and a consequent minimizing of the vital importance of morphology alone as an indication of the presence of active disease. As this comes we shall see less of the prolonged and often inexcusable periods of quarantine for convalescent patients who long continue to harbor diphtheria-like bacilli which when inoculated into susceptible animals often prove to be entirely non-virulent.

The year has witnessed a further acceptance of the value of the Schick test whereby the condition of immunity or susceptibility of a given individual to diphtheria may be ascertained with reasonable accuracy. To this in part may be due the lessened tendency to give antitoxin promiscuously to every one coming into possible contact with a case of diphtheria.

While the results of antitoxin administration are seldom serious, yet there are occasional unfortunate sequelæ. With our increased knowledge of anaphylaxis and sensitization of an individual to a foreign protein we are becoming much more cautious concerning the introduction of such foreign proteins into the bodies of our patients. The great disadvantage of unnecessary prophylactic antitoxin administration lies in the fact that we may thus sensitize the individual so that when he has an actual attack of the disease and accordingly has acute need of the antitoxin, the unpleasant anaphylactic results may prove to be serious. As the reaction is a highly specific one, the serum of one animal not sensitizing against that of another species, it has been suggested that antitoxin be made from both the horse and some other animal such as the cow. Then if one serum has been used at an earlier date the other can be more safely used the second time. It must be borne in mind that a period of about ten days is required to produce this anaphylactic condition, but once present it may persist for the lifetime of the individual.

In order to combine the advantages of the rapid but short-lived immunity from antitoxin with the slower but much more prolonged resistance from toxin or bacterin, a combination of toxin-antitoxin or bacterin-antitoxin has been advocated for immunization purposes. Theoretically, at least, this has much to recommend it.

Hodgkin's disease. Transition in thought from diphtheria bacilli to diphtheroid bacilli is easy and logical. Much study has been devoted to these diphtheria-like organisms, but only one phase will be here considered. This is their relation to Hodgkin's disease.

At present there are two entirely divergent opinions con-

cerning the exact nature of this condition. In a way this might almost be spoken of as East versus West in this country. We in the East tend toward the opinion that Hodgkin's disease (so called) is a true tumor formation of the nature of a sarcoma, a steadily progressive one terminating fatally. In the West, on the contrary, following the lead of Rosenow and Yates there is manifest a strong tendency to consider it an infection. This belief is due to the fact that it has been possible to isolate a diphtheroid organism from the glands in certain cases. From such tissue, cultures have been obtained, and vaccins made and used with what seems to have been beneficial results. Where the truth lies is at present indeterminate, it being possible to say much on both sides. If the reported cures stand the test of time, the validity of the infectious theory will be substantiated. So frequently have we in the past, however, followed similar ætiologic theories concerning other neoplasms that we should be very cautious in our acceptance.

Pyorrhæa alveolaris. The year has seen the steady subsidence of the emetin treatment for pyorrhæa alveolaris, only recently acclaimed a specific, also the introduction of the succinimid of mercury as a certain remedy for the same malady. The latter will probably go the way of the former.

Chorea. The ætiology of chorea has received some study, one result being to disprove its causative association with syphilis. It has also thus far been impossible to corroborate the infectious theory by demonstration of those bacteria early reported to be present as a possible cause.

Cancer. The Roentgen ray in the diagnosis of gastro-intestinal disturbance has shown steady progress. It is now asserted by some that it is thus possible to make a definite diagnosis of gastric or intestinal cancer in practically every case. It should be borne in mind that a number of serious cases of bismuth poisoning have followed the ingestion of the test meal and that while but seldom menacing, there is always the possibility of some trouble. As a means of treating superficial cancer the Roentgen ray occupies attention shared by radium, but in more deep-seated tumors the results have proven disappointing.

Concerning other ways of recognizing cancer especially by laboratory methods, the results of the year have been but little productive. One of the most promising of these, the Abderhalden reaction, while often very instructive, is so often fallacious as practically to vitiate entirely the value of the findings. No startling discovery of another "cure" for cancer has been brought forth by any budding genius or by any one who for publicity or financial or other reasons has allowed his enthusiasm to get the better of his judgment.

When we review these "cures" for tuberculosis, for cancer, and for many other diseases repeatedly foisted upon a medical profession apparently eagerly awaiting just such a deception, we feel like asking with all reverence "How long, Oh, Lord, how long?" Accordingly the apparent barrenness of the past year in this regard may be a hopeful sign.

Acidosis as a symptom rather than a clinical entity has received its due share of study, with the result that our knowledge of it has steadily increased.

Focal infection. Recognition of the importance of cryptic foci of infection as a site of entry for the bacteria producing arthritis, endocarditis and other more or less general systemic infections has also increased. As a result in such conditions careful search is made for possible unrecognized foci. Not infrequently the elimination of a pus pocket at the root of a tooth, an enlarged tonsil, etc., has been followed by rapid disappearance of what had otherwise been a pathological condition most obstinate to treatment.

Nephritis. Renal function tests, particularly the phenolsulphonphthalein test, have justified their introduction and their sphere of usefulness. The influence of infections, particularly the pneumococcus and streptococcus, in the ætiology of chronic glomerular nephritis has also been emphasized in a way not hitherto noted, and as a result efforts have been directed toward removal of such possible causes. An excellent article by Janeway on the treatment of renal diseases has appeared. Its length precludes any particular description at the present time.

A new disease, "trench nephritis," has been described as occurring particularly among the English and French soldiers. This consists of a rapid œdema of the face, feet, and the entire body, a mild fever, an increased blood pressure, and albumin, casts and blood in the urine. It persists for from three to ten days and is followed in almost all cases by recovery. The cause is not definitely known although the streptococcus has been suggested as of some exciting influence.

Diabetes. The so-called starvation treatment of diabetes continues to justify its use more and more abundantly as time goes on. It is not recognized as a universal cure-all, but without question has a markedly beneficial effect upon a great proportion of cases of diabetes mellitus that would otherwise have progressed to a fatal termination. It is based upon the theory of insufficient secretory activity of the pancreas whereby a given individual may take care of a limited amount of carbohydrate, but if this limit is exceeded decidedly serious symptoms ensue.

Tetanus. The benefits following the use of anti-tetanic

serum when used as a prophylactic are being amply demonstrated by statistics coming from the European war fronts. As a curative measure, once the disease has appeared, its usefulness is somewhat dubious. It is, however, probably generally indicated in such, particularly in intravenous administration.

Asthma and hay fever. A steadily increasing recognition of the influence of foreign proteins, vegetable or otherwise, as a cause of hay fever and asthma has occurred. Vaccins, so-called, made from various forms of pollen, have been extensively used in the treatment of hay fever and with apparently good results upon the whole. But possibilities of anaphylaxis must be carefully borne in mind, as at times some decidedly alarming reactions have occurred. Determination of the particular form of protein causing certain types of asthma is frequently successful by the use of the skin reactions. In this way it is not infrequently easy to determine the exact product causing the trouble. Having once been determined, endeavors can be directed toward artificial immunization of the patient against that particular type. Such endeavors have been followed by a very good degree of success.

Vaccins. The subject of vaccins as a whole is yearly becoming more and more definite. The earlier tendency to use these products promiscuously, in any or every disease, is subsiding, and the recognition of those conditions where vaccins are decidedly beneficial is becoming more sharply defined. The use of the autogenous preparation rather than the stock is both scientifically and clinically preferable, although not infrequently stock preparations give very satisfactory results. It seems probable that more physicians are today using vaccins than there were twelve months ago.

Public health. A notable feature of the year has been the increased degree of attention devoted to general public health problems in various parts of the country and to the establishment or amplification of laboratories in which more satisfactory work can be performed. Many States now provide, as routine, for the free examination of blood for typhoid, for malaria, for syphilis; also examine cultures and other pathological products that might have to do with the general well-being of the community at large. The scope of these laboratories will, as it should, undoubtedly increase as our recognition of the value of prophylaxis over treatment becomes more extensive. Much more along these and similar lines might be said did time and your patience permit. In reviewing this review of a twelvemonth it will be noted that some advances have been made in our knowledge of ætiology, of diagnosis, and of treatment, but no very momentous ones.

As a homœopathic society the subject of treatment is, or should be, the one of vital interest. In this line what has been the salient feature of the year? One word can answer the question and that word is immunity or immunization, the use of drugs for their antipathic, allœopathic, and formerly much vaunted, effects has shown a continuation of the steady decline beginning at the time of the popularization of the homœopathic ideas. Stimulants, alcoholic or otherwise, have dropped almost to the vanishing point. The old medicine is entirely dead.

In the new medicine that has replaced the old, the keynotes are prophylaxis and the recognition and study of the individual and his normal recuperative powers; in other words again, immunity and immunization. I have already presented to the New York Homœopathic Medical Society in a previous address the arguments and reasons for my belief that "homœopathic" is but the name of the road toward the goal toward which we all direct our endeavors to produce immunity. It is not suitable here to repeat them at the end of this already long paper. I may say, however, that the principle promulgated by Samuel Hahnemann, *similia similibus curentur*, still lives, not only in the limited sphere of drug activity as seen by him, but in the vastly broader and more extensive field to which we give the more modern name of immunity. Its truth is today being demonstrated in the laboratories and in the clinics the world over by physicians of all shades of belief. It is not called homœopathy and probably never will be, but its validity is everywhere recognized by those who are competent fully to comprehend certain of the phenomena of nature.

Let us not fall into the error, however, that all is done that needs to be done, because we have just made a beginning in our knowledge of the action of Nature's laws, and every one can "do his bit" toward increasing this understanding if he will carefully observe and as carefully record the results of such observation.

My closing word is in accordance with the military spirit almost universally obtaining, for each to recognize that be he private in the ranks, corporal, colonel, or general, he has his place in line and that there is certain definite work which all depend upon him to do, and which if he does not do it, will remain undone. Let us each go forward, then, with a full realization that our individual portion of the task must be faithfully performed if we wish to see the completed whole of our ideal for medicine appear in the near, or even in the distant, future.

A STUDY OF MORTALITY AND VITALITY OF INFANTS OF DIFFERENT RACIAL GROUPS*

By FRANCIS H. MACCARTHY, M.D., Boston, Mass.

In studying the ætiology of disease in children the observer is constantly impressed by certain tendencies and traditions characteristic of the different races. Except to mention the susceptibility of negro children to diseases like rachitis and tuberculosis, there has been very little written concerning the incidence of certain diseases in infants of the various nationalities. Of late years, however, the widespread interest in all that pertains to infancy and childhood has stimulated investigation of the more fundamental causes of infantile diseases, and some rather interesting facts have come to light. From these investigations it is apparent that infants of the different races vary a great deal in their vitality at birth, and in their power to resist disease.

As reports of infantile deaths in several of the largest cities are examined year after year, it becomes increasingly apparent that infants of mothers born and reared in the United States have a higher death-rate than infants of mothers born and reared in Great Britain, Ireland, Canada, Italy or Russia and Poland. In the Report of our Department of Health for the year 1915, we find that infants having mothers born in the United States had the highest death-rate, 112 per thousand births, while children of Italian, Russian and Polish mothers had a rate of 92.

Congenital debility or weakness at birth is the chief cause of infantile deaths. Of the five racial groups just mentioned, infants of mothers born in the United States have the highest death rate due to weakness at birth, Italy the lowest, and Russia and Poland the next lowest. These facts are shown more clearly in the accompanying table.

Table showing death-rates of infants under one year per 1,000 births, from the three principal causes of infantile mortality, grouped according to nationality of mothers.

Causes of death.	UNITED STATES	CANADA	IRELAND	ITALY	RUSSIA AND POLAND
Congenital debility	36.37	30.	26.08	13.	20.
Gastro-enteritis	20.60	14.63	16.56	19.58	15.78
Pneumonia	* 13.09	15.29	12.83	29.53	19.62

* Read before the Boston District Homœopathic Medical Society, May 3, 1917.

A block in New York City, inhabited mostly by Americans, gave the highest death-rate from congenital debility. Concerning this fact the Report of the Department of Health comments as follows: "The conclusion may be drawn that to abortion or lack of vitality may be attributed this phenomenon." An investigation by Dr. Herman Schwarz, a pædiatrist of New York City, is interesting in this connection. Comparing the mortality rates of infants of American and foreign mothers, he found that the death-rate of infants of 225 American born mothers was 210 per thousand born, while the rate of 553 foreign mothers was 117 per thousand born.

From a medico-sociological viewpoint no record is more interesting than that in regard to still-births. In the city of Boston fully three-fifths of live births are of foreign-born mothers. The lowest percentage of still-births occurs among foreign-born mothers, while the highest percentage occurs among native-born mothers, despite the fact that they have by far the lowest live birth-rate.

Next to weakness at birth and prematurity, of all the fatal diseases of infancy, the bowel disorders are most destructive to infant life. Of the total number dying from these disorders during the year 1915 in the city of Boston, the highest mortality occurred among infants of mothers born in the United States. Thus it is apparent that the highest death-rate due to the two principal causes of infant deaths is among infants of mothers born in the United States.

The pneumonias come next in destructiveness to infant life. From these diseases, infants of Italian parentage suffer the heaviest losses. Reports for several years of Boston and New York show this very plainly.

These facts naturally lead to some consideration of racial habits and traditions, all of which have their bearing on infant mortality and vitality.

Large families are customary among the Irish, Italian and Russian peoples. Large families are the exception among the peoples of America and Great Britain. In the last Register's report it appeared that from 65 to 67 per cent. of all the children born in New York City and Boston had foreign-born mothers. In ten suburban wards of Boston having a population nearly two thirds of which is native-born, the foreign races produced more than half the total number of children born. It was stated in this same report that the births of Russian mothers have increased 90 per cent. or more in the last decade, and the births by Italian mothers increased even more. These two races have the largest families and the lowest infant mortality. Therefore, it is evident that large families do not

necessarily make for high infant mortality or for weakness at birth. On the contrary, all the facts point to the conclusion that not only are the infants of mothers born in the United States and Great Britain weaker at birth, but they have the heaviest infant death-rate, although their mothers have the smallest families and live under more favorable surroundings.

A racial custom especially common to the Italian and Russian people is the employment of midwives during confinement. It has been estimated that over 80 per cent. of Italian births, and nearly the same proportion of Russian births, are attended by midwives. Notwithstanding this fact, these mothers have the smallest number of still-births, their children are the strongest at birth, and they have the smallest death-rate due to congenital malformations.

In regard to breast feeding, you may remember the report on an investigation made a few years ago by Dr. W. H. Davis, then member of our Department of Health, as to the feeding of the infants of 736 mothers of various nationalities. It was found that 51 per cent. of infants of Canadian parentage were breast-fed, as were 59 per cent. of infants of mothers born in the United States, 73 per cent. of infants of Irish mothers, 79 per cent. of infants of Russian and Polish mothers, and 83 per cent. of infants of Italian mothers. It was also found that of 652 native-born infants two weeks to one year of age, who died in Boston that year, 546, or 84 per cent., were bottle-fed. While the general infantile mortality has decreased during the last five years, the above proportions have changed but little. In the last report of the Board of Health it is recorded that of 485 deaths of infants of mothers born in the United States, 382 infants were bottle-fed. The largest proportion of breast-fed infants was of Italian parentage, infants of Irish and Russian parentage coming next.

Careful consideration of the above facts naturally leads to the conclusion that there must be certain influences intercurrent among the people which tend to unfit mothers native to this country for the bearing of vigorous offspring and for rearing their infants at the breast.

Certain factors may be eliminated. Excessive child-bearing cannot be regarded as a cause of lack of vitality, since native-born mothers have the smallest families. Nor can alcoholism be considered an important cause of low vitality in native mothers and infants, recent investigations indicating that Americans in general come very near having the best record in regard to abstinence from alcoholic beverages, being only slightly surpassed by the Jewish race in this respect.

In considering possible reasons for this condition of affairs

the conclusion is reasonable that heredity, environment and early training of the mothers must have considerable bearing on the vitality of both mothers and children. It is safe to say that Italian and Russian mothers, and their grandmothers before them, have lived and worked much in the open. They come from hardy native stocks; for generations they have nursed their infants at the breast. Outdoor life, muscular work, much sleep, home teaching of daughters by mothers, simple and crude though the training may be; all these factors combined have resulted in mothers strong and hardy, able to bear healthy infants and to supply food for their nourishment. The training of these mothers has been more along elemental lines. On the contrary, mothers born and reared in the United States have acquired their training more in school than in the home. They have been subjected to the superficialities and complexities of life, while home training in the fundamentals of real living have been lacking.

Gynæcologists, obstetricians and nerve specialists have reiterated again and again what I am about to say, but at this time when we are making every effort to discover and remedy the causes of lack of infantile vitality, I think it will bear repeating. I cannot believe that the modern method of education of growing girls tends to develop women who can bear and rear robust children. During the most critical years of their lives, from twelve to sixteen years of age, when the body needs its energies to supply blood for a tremendously rapid growth, and when the menstrual function is becoming established, these girls are struggling with mediæval history, Latin, algebra and geometry, five hours in school, and two to four hours home study. Where, if you please, does the time come in for healthy, outdoor exercise, a fair amount of home training and recreation, and long hours of sleep? Such overuse of the mental powers must certainly divert blood which should go to the building up of the body during this period of rapid development. While some girls living under the most favorable conditions and inheriting a strong constitution may pass through the educational grind unscathed, it seems not unreasonable to believe that many more who make up the great mass of potential mothers must inevitably suffer a devitalization of the physical powers resulting in weak vitality of future children and deficient nursing function of mothers.

By no means unimportant as an underlying factor back of the excessive still-birth-rate, prematurity, and lack of vitality at birth, is the widespread prevalence of syphilis. We are only just commencing to recognize the tremendous social significance of this disease. Evidence is rapidly accumulating that it

is much more widely prevalent than is shown by ordinary hospital and medical records. From two or three conservative and authoritative sources comes an estimate of 17 to 18 per cent. of luetic cases in the United States. Gerrish, in his book "Social Diseases," says that 80 per cent. of it is acquired between the ages of 19 and 35 years, — the reproductive age.

Of considerable interest in this connection is the result of an investigation conducted by Dr. Richard Cabot at the Massachusetts General Hospital. Of 7,644 males over 18 years of age, eleven to fourteen per cent. admitted they had had syphilis. The prevalence of this disease in the five racial groups was studied, with the following results:

	<i>Per cent.</i>
Americans,	12.6
English,	10.9
Irish,	10.
Italian,	9.7
Russian,	3.9

Men were regarded as Americans who were born in the United States, and who had names not suggesting foreign origin. These figures suggest the fact that syphilis is most prevalent among American men, and it seems reasonable to regard the disease as one important factor in causing the excessive number of still-births, and the heavy mortality due to prematurity, congenital weakness and malformations among infants of American parentage. Particularly striking is the marked excess of this disease among the people of the first four races compared with its rarity among the people of the Russian and Polish group. It seems justifiable to believe that this fact, together with their freedom from alcoholism, is largely accountable for the low infantile death-rates, the small number of still-births, and the superior vitality of infants of Russian parentage.

Regarding the histories of over 8,000 patients at this same hospital, it appears that alcoholism is most prevalent among the Irish people, while they are third in the list in regard to syphilis. On the other hand, Irish mothers stand well in the list of racial groups in regard to the nursing function, being exceeded in this respect only by Italian and Russian mothers, but their infant death-rate is undoubtedly higher and infant vitality lower owing to the prevalence of alcoholism.

Regarding the fact that the heaviest death-rate from the pneumonias is among infants of Italian parentage, may this not be due to the fact that the Italian people, accustomed to an outdoor life in the warm climate of Southern Italy, suffer from the rigors of our severe winters, and huddle together in window-

closed, wretchedly ventilated apartments in the congested districts of our large cities?

While general infant mortality has been greatly reduced since the widespread advance of the infant welfare movement, it has been very largely accomplished by reducing the death-rate from gastro-enteric diseases. What is to be done to reduce the enormous wastage of infant life due to the chief cause, prematurity and weakness at birth, and to prevent the tremendous number of still-births? The underlying conditions are more elusive, more subtle, and more difficult to treat. It is certainly a matter for most thoughtful consideration that of the five racial groups, the mothers born in this country are most deficient in the nursing function, their infants are weaker at birth, and they have the highest infantile death-rate. It is also significant that of the five races, lues and gonorrhœa are most prevalent in American men.

In closing, let me say, that this paper represents but a preliminary investigation of a large subject. General statements have appeared from time to time, representing the opinions of different men, in regard to the vitality of infants of American parentage, and the deficiency of the nursing function in native mothers. I have been interested to the extent of endeavoring to get at the fundamental reasons, and am but one seeker after the truth.

FACULTY ADDRESS DELIVERED TO THE GRADUATING CLASS OF 1917, BOSTON UNIVERSITY SCHOOL OF MEDICINE

By CHARLES T. HOWARD, M.D., Boston

Custom dictates that at this time some member of the faculty shall address the graduating class.

To those about to enter the ranks of the profession, he is expected to offer advice and counsel, to instruct in the principles of medical ethics and to narrate the traditions which have been handed down to us through the centuries.

As a father to his son upon attaining majority, so am I supposed to address you.

There are three sides to the practice of medicine, the materialistic, the altruistic, and the scientific, each of importance in its way and each of which must be present in its proper degree if full success is to be obtained.

Each and every one of you has chosen his life's work, I presume, with the primary expectation of making a living. None of you, I think, is so well endowed with worldly goods

as to be able to ignore the economic demands of self-support. Such expectations are fairly sure of realization. Each and every one of you may feel fairly sure of sufficient income to acquire the necessities of life. If, however, any of you have entered our ranks with the idea of attaining riches, you are doomed to disappointment. The same amount of preliminary education and preparation for any business career would yield infinitely larger financial returns than will the practice of medicine. A good honest livelihood, however, you may consider your just due, and such I am sure you will attain.

Throughout your professional career you will be called upon to do a large amount of charity work, an amount which, in comparison with the other professions, seems unjust and onerous. Remember, however, that the sick, even though unable to pay for professional services, must be cared for, and that it is not only the duty but the privilege of the profession to do its best for the poor unfortunates who cry for a restoration to health.

In the early years of your practice the number of charity to pay patients will seem disproportionate. Be not discouraged, however, for it is oftentimes upon the work you do for a poor patient that your reputation as a skilful physician is founded.

So much for the materialistic side, and I beg every one of you that you will never let this phase of the practice of medicine overshadow that other and nobler side, the altruistic.

Go back with me, if you will, to the time when you were children, or even to the more recent years before you studied medicine, and recall when you yourselves or some of your immediate family were sick. Do you recall your feelings at such a time towards your family physician? Do you not remember how you waited impatiently for the daily visit of your doctor? Did you not feel when he entered the home that all was well? Was there not about his head a halo of godliness which instilled into your mind and the minds of all your family a feeling of the utmost confidence and repose?

Now I ask you to fix that memory firmly in your mind and to realize that your advent into the sick room is of the same import to the suffering as was the coming of your family physician to you in the years past.

To all of us who see the profession from the professional side it is hard to realize that some poor sick body racked on a bed of pain idealizes us and our profession. We see and recognize our own deficiencies and limitations. *They* idealize and have faith in our omnipotence. If you will ever bear this picture firmly in mind I believe you will never fall far short of

the kind of a physician you should be. Would you succeed and fulfill in the fullest measure the demands of medical practice, you must cultivate and employ those deeply human qualities of sympathy, charity, and cheerfulness:—sympathy for the sick and suffering, charity for the weak and erring, cheerfulness towards all.

By sympathy I do not mean the blatant kind which constantly proclaims its pity for the suffering. I do mean the quiet, unobtrusive sympathy which places you in harmony with your patients and which makes them understand that you feel for them. The human organism is very sensitive and understands and feels without being told when sympathy is present. None, I believe, are insusceptible to this sort of fellow-feeling, and it makes their burden of suffering less if they but realize that their doctor feels for them. Even the old martyrs, though upheld by religious fervor, as they burned at the stake, felt the flame less hot, I am sure, if they knew that even one or two in the watching crowd were sorry for them.

In your intimate relations with your families you are sure to see all sides of life, — the ignoble, the base, the vicious, as well as the noble and generous. Unless you keep your hearts open, the baser sides of human nature will unduly impress themselves upon your mind, and you are liable to become cynical and unjust in your estimate of your fellowmen.

Such an attitude reacts upon your personality, warps your vision and decreases your efficiency in ministering to the sick. Cultivate, therefore, charity towards the meaner qualities, and endeavor to see the nobler side of human life.

Cheerfulness. I once heard Dr. Roblin say when speaking to a graduating class of nurses, that if he were sick he wanted a nurse who would sing, even though he was sick unto death; he wanted his nurse to enter the room with a smile on her face and a song on her lips. The meaning, of course, is clear and applies to the doctor equally well. Nobody cares to see the undertaker reflected in the face and manner of his doctor.

A cheerful mental attitude inspires faith in the physician's power and hope of recovery, and the very presence of this faith and hope helps to bring about the desired recovery. No one today denies that many people whom we doctors have failed to cure have found benefit from Christian Science, and the cures of Christian Science rest upon these two factors of faith and hope. Then let us not fail to make use of these basic principles, as we should of any other measure which can be of help to our patients.

This brings us to the question of the advisability of absolute truthfulness with our patients. Our most versatile and blatant

medical oracle insists that the truth, the whole truth and nothing but the truth should ever be told to our patients. When we are unable to reach a diagnosis we should frankly acknowledge that we do not know what is the matter; or if the diagnosis is clear and the disease is one that tends to a fatal termination, then we should bluntly tell the naked truth and give our estimate of life remaining to them. Is this course wise or merciful? Just as faith and hope aid in recovery, so do discouragement and the sense of impending death hasten the end. None of us is so constituted that such knowledge of the future would fail to react upon us. Take away hope, and the hold on life is weak.

Then, again, suppose you were mistaken and your patient gets well in spite of your gloomy forebodings? What a black eye for the profession! Oh, no, my advice to you is to tell your patient just as much of the truth as you feel it is for his best interests to know, and not one word more. Let the rest of the truth remain concealed within you.

You have heard it said, doubtless, that the day of the general practitioner is past, that specialism has gained so much prominence that all one has to do in general practice is to sort out the cases and determine to which hospital or specialist to refer them. To those of you who plan to do general work this sounds like a discouraging story, and so it would be were it true. There is still, however, ample opportunity for the family physician, and I am confident that the time will never come when he whose responsibilities are so broad, when he who acts as physician, friend, confidant, counsellor, yea, even at times as priest, shall be relegated to oblivion. These close relations between physician and families, these evidences of esteem and confidence reposed in moments of discouragement are a source of satisfaction and happiness in moments of reflection.

In your chosen profession no man can attain his widest field of usefulness without the fullest development of both the human and the scientific side. The purely scientific man, however well he may diagnose and treat disease, falls far short of the ideal if the human qualities are lacking. He is sure to be merely a cold-blooded machine. On the other hand, the kindest physician lacking in scientific attainments is a good friend but a poor doctor. It is therefore incumbent upon you to keep abreast of the best medical thought, to be conversant with medical progress, to follow the work of the medical leaders, and to remember that while tonight you cease to be pupils you should begin to be students, that here your instruction ceases but your real education begins.

Perusal of medical journals, attendance at medical meetings and association with your fellow-physicians are means to this end.

In all departments of human knowledge wonderful progress has been made in the last hundred years, and medicine has not lagged behind. A century ago all was theory and impression. Gradually the barriers of ignorance have been pushed further and further back and the horizon of knowledge has been broadened from year to year. Prior to Jenner's discovery of vaccination in 1796, small-pox claimed as its death-toll about one in every 250 of the population of London annually, and in less civilized countries whole peoples were wiped out, as in Mexico, where one epidemic claimed three and a half million victims. Today where vaccination is practiced the death rate is practically nil.

It is only about twenty years ago that the cause of Bubonic Plague was discovered, that loathsome disease which from time immemorial had been the scourge of mankind and which in 1666 decimated the population of Europe. Traced to the rat-flea, its total elimination is made possible by sanitary measures.

It was only in 1880 that Laveran demonstrated the ætiology of malaria. Before his day it had been considered as due to poisons arising from damp ground at night, and the Riviera was the worst-known area in the world for acquiring the disease. By sleeping in this district night after night in a mosquito-proof tent, he demonstrated the harmlessness of the night air and pointed the way to the later discovery of the malarial parasite within the mosquito itself.

It was in 1899 that Dr. Carter, of the United States Marine Hospital Service, and Dr. Reed proved that yellow fever was transmitted by the sting of an infected mosquito and thereby made possible the building of the Panama Canal.

As you doubtless remember, Reed sacrificed his life in this work, a victim of the disease he was investigating.

The discovery of anæsthesia in 1846 and the works of Lister and Pasteur in the late '60's opened up the whole field of modern surgery and have resulted in the saving of innumerable lives and the restoration to health of millions of sufferers.

These are a few of the big victories over disease. In all lines of medicine gains have been made and a clearer conception of ætiology has been obtained. It was not many years ago, for instance, that dropsy was considered to be a sufficiently good diagnosis. Then it was learned that it was really a symptom of heart or kidney disease; then later came the understanding that these were usually only the manifestation of arterio-

sclerosis, and there we are today, not fully understanding the ætiology of arteriosclerosis, but having theories advanced and gaining a little real knowledge of it from day to day.

As it has been with dropsy so has it been with many other diseases; and as the knowledge of causation has increased, so have measures of prevention increased, until at the present time preventive medicine holds the foremost place in medical thought, and the prevention of disease has come to be recognized as a duty of every physician on a par with, if not of greater importance than the curing of disease.

What is being accomplished along this line was well outlined by Dr. Haven Emerson, Health Commissioner of New York, in his Ether Day address at the Massachusetts General Hospital last October.

In New York, taking the tables for the last fifty years, he says, the death rate has fallen from 29 to 14 per 1,000 of population.

Deaths from cholera, small-pox, yellow fever, typhus fever and malaria have all but disappeared. In the first ten years of this period there were 6,260 deaths from small-pox; in the last ten years, seven. Deaths from tuberculosis, typhoid, infantile diarrhœa, diphtheria and scarlet fever have shown a reduction of from 50 to 90 per cent.

As an indication of the work done in the last five years, moreover, he shows that the infant mortality for the first year of life has been dropped from 170 to 98, per 1,000 births.

This then is the drift of modern medicine, the prevention and elimination of disease, and is the line of work along which your strongest efforts must be directed. You must serve as leaders and educators of the people. You must disseminate knowledge of sanitation and hygiene. You must instruct in right living.

All medical problems are not solved. Much has been accomplished in the last hundred years, tremendous strides have been taken, but an infinite number of questions are still pressing for solution. Our ignorance of the fundamental causes of disease is still profound. Cancer, poliomyelitis, gastric ulcer, gallstones, fibroids, and numerous other pathological conditions are but imperfectly understood.

All progress in medical knowledge has been made by men with less knowledge than you, by men whose powers of observation were keen. You of the graduating class tonight stand as the "heir of all the ages in the foremost files of time." All the accumulated knowledge which Jenner and Lister possessed at the time of their magnificent discoveries was small as compared with what has been given you. Still, they brought out facts

and developed theories which have been of inestimable value to mankind.

Watch, observe and theorize upon the cases coming under your care, and when you have formulated a theory, do not hesitate to try it out and endeavor to prove it. "Be bold, be bold, but not too bold, but rather the excess than the defect." With imagination and boldness instilled into you, who knows but that at the present time I may be addressing a Jenner, a Lister or a Reed? Such are the glorious opportunities to win the undying gratitude of the human race that are open to you and to you alone. May the love of the almighty dollar never lead you astray from the enthusiasm of healing the sick or from scientific research!

When you are at last called upon to surrender the life which has been loaned to you, may you as you lie down to quiet slumber possess the consciousness of having done your best for your fellowmen and of having added something, however small, to the sum total of human knowledge.

In behalf of the Faculty of Boston University School of Medicine, I wish you Godspeed in your life's work. May you never fall short of the ideals and traditions of the past.

THE FRAMINGHAM HEALTH AND TUBERCULOSIS DEMONSTRATION.*

By D. B. ARMSTRONG, M.D., Assistant Secretary of the National Association for the Study and Prevention of Tuberculosis, and Executive Officer of the Framingham Health and Tuberculosis Demonstration.

Is it possible to discover and to place under adequate medical, nursing and relief supervision all of the cases of tuberculosis, incipient and advanced, in a normal industrial community?

Is it possible to ascertain with some degree of definiteness the responsible social and economic factors in disease causation, including all types of morbidity, not only tuberculosis?

What is the most efficient utilization of the existing means available for the discovery and treatment of disease? What percentage of theoretically preventable disease is practically preventable with the use of known but unused or at least uncoordinated instruments? What is the best possible adjustment of social forces, existing or to be created, with the objects of the prevention of unnecessary disease and death?

Such, in brief, are the fairly ambitious questions which Framingham is attempting to solve. If the community is the

* Read before the Boston District of the Massachusetts Homœopathic Medical Society, April 5, 1917. Printed also in the *Am. Jour. Pub. Health*, 1917, vii, No. 3.

logical social unit for disease prevention and control, and if the time is right for the application of a complete program for disease prevention and health creation, there is every reason to hope that, in some degree at least, answers to the above questions may be demonstrated. Obviously, the problem is not only one of tuberculosis and not only a health problem; fundamentally it is a problem of social and economic organization.

As announced in the papers and elsewhere, the Framingham Health and Tuberculosis Demonstration is being conducted under the supervision of a committee organized by the National Association for the Study and Prevention of Tuberculosis. On this committee are represented the National Tuberculosis Association, the Massachusetts State Department of Health, The United States Public Health Service, private anti-tuberculosis organizations in Massachusetts, Connecticut, New York and Pennsylvania, and the Metropolitan Life Insurance Company, the donors of the \$100,000 to be devoted to the work.

The selection of Framingham was made after several months' study of numerous communities of similar size in various parts of the United States, but particularly in Massachusetts and New York State. Framingham recommended itself to the committee because it possessed certain average qualities, being an industrial community, with mixed industries, varied racial groups, a good local health organization backed up by an excellent State Department of Health, a normal amount of disease, particularly tuberculosis, well-trained physicians and good hospitals, and sufficient promise of coöperation from medical, industrial, commercial and social organizations to give reasonable assurances of success.

As indicated above, the objects of the investigation are to demonstrate what may be possible with united community action in the problem of prevention and control of tuberculosis. Inevitably the experiment, if it goes forward as planned, will broaden out into a general health demonstration concerning itself with the various disease-preventive problems as they affect the several age groups, and utilizing in its effort at control all potential agencies, social, industrial, educational, medical, etc.

Briefly stated, the essentials of the demonstration, as viewed by the committee, are as follows:

1. The sympathetic coöperation of all individuals and organizations, public and private, in Framingham.
2. The execution of the program on an educational, persuasive, and democratic basis, social machinery being devised to carry the various elements in the community organization along with the work as it progresses.
3. The utilization of expert advisory service whenever feasi-

ble. This principle applies of course to general sanitary, medical, nursing, educational, school or industrial problems.

Before this audience, in presenting in the time allowed for this discussion the important phases of the program, special attention must be paid to the medical and health aspects of the plan. Consequently, only the briefest mention can be made of other significant steps.

It is, of course, essential that for the work a sound statistical basis be laid, involving the acquisition of data, making possible a comparison of existing conditions with conditions during the subsequent years of the demonstration, as well as a comparison between the existing conditions in Framingham, now and later, with similar conditions in other communities of similar make-up, thereby furnishing what in a sense should prove to be a control for the experiment.

The initial steps contemplated include the following:

1. The carrying out of a thorough and intensive campaign to acquaint the citizens of Framingham with the objects and methods of the demonstration, laying special emphasis on those phases of the program which depend for their success upon the coöperation of the individual citizen. This educational work would naturally lead to efforts to present the main facts on hygienic living, prevention of disease, particularly tuberculosis, etc., the educational campaign culminating eventually in a general propaganda for thorough, universal, medical examinations for the detection of incipient and preventable or controllable cases of disease.

2. The organization of local committees of a medical and lay character, to coöperate in and advise regarding the work as it proceeds. The plan contemplates not only the organization in this way of leading influential citizens, but also the general selection, possibly on a block basis, of community leaders who will act as agents of interchange between the people themselves and the central committee.

3. An effort to encourage the Framingham health authorities to meet, through their own appropriations, the logical and legitimate routine health needs of the community, such as public health nursing, medical school-inspection and nursing, general health administration, etc.

4. The efficient coördination of public and private health and charitable work.

5. A thorough study of community conditions, covering the general sanitary, rural, industrial, school, commercial and office factors, thus assisting the committee in its effort to make a diagnosis of the community health problem, and supplementing the intensive canvass to be made subsequently.

For a complete and successful use of available community agencies, it is obvious that certain mutually beneficial and coöperative relations must be established with the health and medical representatives in Framingham. On the side of health and nursing, the problem in Framingham presents no unusual difficulty. The board of health, with the assistance of private agencies, can, with minor adjustments, meet the routine nursing needs. Any extraordinary or experimental nursing or health needs essential to the working out of the program in Framingham will of course be met from the demonstration fund.

Incidentally, it may be mentioned that the demonstration budget includes funds appropriated for extra nursing service, for payments to physicians when making thorough medical examinations, for assisting town and private agencies in the provision of adequate medical nursing and relief care for both home and institution cases, etc.

In Framingham, as probably would be the case anywhere, the problems of medical organization are most fundamental and at the same time perhaps most difficult. The success of many phases of the program, including thorough medical examinations, the detection of early cases of disease, etc., depends upon the sympathy and help of the members of the medical profession. Their criticism and approval of numerous steps must be had. Uniform diagnostic standards and methods for the examination and classification of disease are essential to the scientific value of the demonstration. Not only early cases of disease, but suspected and undiagnosed cases must be gotten in touch with and classified, with the assistance of outside expert medical service. The medical work must always be done through the practicing physician, in such a way as not to interfere with the normal medical procedure, except in so far as innovations would give assurances of a higher degree of medical efficiency, and greater uniformity in methods of diagnosis and treatment.

A local organized medical agency is necessary to meet these ends. Such a medical group, or club, including in its membership all of the practicing physicians on a common basis of coöperation and service, will prove to be a useful piece of community machinery in the adoption of standards, confidential reporting of suspected cases, the use of expert diagnostic service, the approval of popular educational material on hygiene and preventive medicine, etc. Perhaps the chief function of such a medical club will be the development of a course of lectures and clinics, given by the country's first authorities, on tuberculosis and other problems of interest to the Framingham medical profession, placing special emphasis on the detection of incipient disease.

If the campaign to urge the people to go to their doctors for thorough medical examinations is a success, here again the intelligent coöperation of the Framingham physicians will be needed. Such a step of course is not contemplated in the immediate future, but would follow an initial effort to give complete care to known cases of tuberculosis, as well as any other obvious cases readily discovered through the examination of individuals in contact with known cases. In a thorough medical survey of the community, however, certain other problems will arise, if the work is to be done on a uniform basis and if it is not to be an excessive burden upon the practicing physician. The citizens of Framingham will of course be urged to pay what is determined to be a satisfactory fee for the thorough examination. If, however, any members of the community are willing to be examined, but will not meet the expense themselves, this would undoubtedly be considered a legitimate expenditure for the demonstration fund.

A thorough medical survey would necessitate the expansion of existing laboratory facilities. The health department laboratory, now doing, with the assistance of the State Laboratory, routine epidemiological work, could perhaps provide facilities for the more ordinary types of clinical laboratory work as well. Many individuals would also be discovered who would fall strictly in the dispensary class, and to meet that need, the existing tuberculosis dispensary might perhaps be expanded to include a general medical service, with an open alternating medical attendance, not only for adults but possibly for school children and factory groups. Such a service might even be placed on a pay, self-supporting basis and if such a clinic could be developed along the lines indicated, including not only tuberculosis, general medical, school medical and perhaps dental, but also infant welfare service, there would be created in the community a *health center* truly worthy of the name.

A final criterion of the success of the experiment will be, of course, the condition existing in health and medical circles, subsequent to the withdrawal of the demonstration staff. It is hoped, of course, that there may be established eventually an ideal and adequate health machinery. As a demonstration to other communities this would seem to be an essential.

Obviously, the immediate results of such a program as is briefly outlined above, if successfully carried out, would include not only a direct benefit to Framingham, but ought to involve a demonstration of the economy and social value of united community organization to meet the problems of preventable disease. It ought indeed to throw considerable light upon the most efficient methods for meeting health questions in school,

factory and elsewhere. It ought also to be significant, perhaps, in its bearing upon the future of medical service in general.

The Framingham Health and Tuberculosis Demonstration welcomes your inquiries, suggestions and criticisms, standing as it does as a unique and unprecedented effort in democratic health creation. It is hoped that the work may point the way to the establishment of a hygienic basis for social organization, a physical foundation without which social, economic, and, indeed, spiritual evolution is bound to be abortive.

THE PHYSICIAN AS A SOCIAL AND AN ECONOMIC FACTOR.*

By S. E. FLETCHER, M.D., Chicopee, Mass.

The preservation of health and the prolongation of human life, by increasing the productive power of the individual, augment in no less degree the economic welfare of the community of which he forms a part. It is therefore obvious that any factor in our social life which attains, or helps to attain, that end, becomes in itself a producer on a large scale, by increasing the productiveness of others.

The prosperity of a community, or state, or nation depends largely upon its power to produce, and in a lesser degree, to consume, wealth. Increased earning capacity allows an increased power of consumption, which in turn calls for still greater production.

The lowering of production, through the premature death of the worker from preventable causes, or his enforced withdrawal by reason of temporary or permanent disablement from illness, and the loss of infant lives, potential workers of the future, all total large on the profit and loss ledger of the community which allows disease-causing conditions needlessly to exist.

Health means ability to work and to earn good wages, and a healthy community means more business, more money and more comforts. As health conditions are improved, so also are all social conditions bettered, from a mental, moral and economic standpoint.

Every true physician soon finds that the respect and affection of his patients and associates are far more valuable to him than mere mercenary gain, and that their appreciation of his efforts in their behalf to prevent disease brings to him a satisfaction which a more selfish attitude would fail to give.

* An address given at the Boston University Convocation held on Wednesday, June 6, 1917, at Jacob Sleeper Hall, College of Liberal Arts of Boston University.

It is a well-known fact that a large proportion of the illnesses from which we suffer is unnecessary and results either from ignorance or carelessness on the part of individuals or the civil authorities.

To combat these ills with medicine alone is futile; it is dealing with effects rather than causes and leads nowhere. By a study of causes, by striving to place preventive medicine on the same high plane as curative medicine, by proper instruction given to our patients in the laws of right living, and by encouragement and support given to our municipal and state health boards, the physician rises to his full responsibility and becomes a strong factor in the social, moral and economic development of the community.

This is indeed an age when the physician who can prevent disease ranks far above the one who only possesses the ability or the purpose to cure disease. A well-ordered community is not merely the one which possesses an efficient fire department, but the one whose building regulations also are so ordered that the outbreak of fire is rendered improbable.

It is conservatively estimated that the annual cost of sickness to the workers of this country, through the loss of wages, is in excess of \$500 000 000, and that the average annual medical expenses of those upon whom this loss falls is more than \$180 000 000. In addition to this vast loss, when it is considered that from 30 to 40 per cent. of all cases requiring the aid of charity are due to illness, it becomes obvious that disease is the cause of huge economic loss, a drain upon social efficiency and the basis of much of the poverty which exists.

Without detracting from the fame of the inventor, the scientist and the scholar, nor withholding from them the credit which is justly their due in their marvelous achievements which the world has witnessed in the past few generations, it must still be admitted that progress toward a higher civilization has been most largely due to the advancement of medical science, which has made possible all other development.

Can you picture the world as it is today, were it periodically swept by the terrible pestilences which ravaged it in ages past? Through the centuries of medical darkness was there ever an Edison, a Tekla, a Marconi? Was it not coincident with the advancement of medical knowledge that the real era of science and invention began? What would have been the history of mankind in the past one hundred years had not Jenner, or some other medical mind, discovered a means of controlling the ravages of small-pox, which destroyed 50 000 000 lives in Europe, in the 18th century?

How great a sum-total of human misery and physical suffer-

ing might still be ours if Lister had not opened the way to scientific surgery by his great studies in antiseptics? How much does the world owe to Samuel Hahnemann for his discoveries which revolutionized the practice of medicine by instituting a system which cured, and relegated to the past a method whose crude efforts brought destruction?

Who can estimate the economic value to the world of Reed and Lazear, who made Cuba a nation and who released our Southern States from the ever dreaded menace of yellow fever?

To what an extent the physician, as an individual and as a class, becomes a conservator of human energy and productiveness and thus becomes himself a producer of wealth, not to himself, but to the state, may be easily demonstrated by a comparison of conditions of the past and of the present and by a brief review of the results of medical research and its application.

From the time when Hippocrates wrote upon Air, Water and Places, there was little advancement in hygienic knowledge or preventive medicine until 1617, when Woodhul discovered that lemon-juice prevented scurvy. For nearly one hundred and eighty years more, progress was slow and halting, until the great discovery by Jenner in 1796, that inoculation with the virus of cow-pox would prevent or greatly modify the ravages of small-pox, awakened the world to a new hope and stimulated research along other lines.

Of what inestimable value to the world the discovery of Jenner has proved, and his stupendous contribution to the industrial efficiency of every nation by the prevention of that one disease, may be appreciated by a comparison of our present immunity with the appalling losses of but one hundred and fifty years ago.

Gay, in the *Boston Medical and Surgical Journal*, records that prior to the discovery of vaccination by Jenner, small-pox caused one-tenth of all deaths in ordinary times, one-half in epidemics, and destroyed, maimed or disfigured one-fourth of mankind.

A thorough vaccination by United States physicians in six provinces in the Philippines, having a population of one million, reduced the small-pox death rate from six thousand a year to not one death in five years in those districts.

A comparison in the city of Prague, of vaccinated and unvaccinated persons, over a period of twenty years, showed that of 10,000 vaccinated persons, there were 27 cases and 1 death, while among the same number of the unvaccinated there were 830 cases and 247 deaths. Need more be said to prove the vast saving of human life and productiveness to the world through the preventive effects of vaccination?

Yet in spite of the great stimulus given to medical research by Jenner, preventive medicine made but slow progress until the late nineteenth century, and particularly in the last twenty-five years, in which period it has advanced with giant strides.

The great cataclysm which has shaken the world, and which is now going on across the water, has demonstrated that whereas in the past, disease has been more fatal to the armies in war than have the bullets of the enemy, preventive medicine has gained one of its greatest victories in reversing that condition by a wide margin.

Typhoid fever was pronounced by Kean as the "most formidable infectious disease with which we have to contend in military life." It has always been a scourge in camp and came to be considered as almost a necessary evil.

When Wright discovered that a vaccin prepared from typhoid bacilli, killed by heat, and injected into the tissues of healthy persons rendered those persons practically immune to typhoid fever, he established a new era in military efficiency in every army which made application of his discovery. Its worth first demonstrated in the English army, it has become a part of the regimen of every civilized military establishment.

Since 1911, when vaccination against typhoid was made compulsory in the United States Army, the disease has practically ceased to exist in field and camp life.

In that year when 20 000 men were in camp along the Mexican border, but two cases of typhoid developed among satisfactorily vaccinated men. In 1914, with a great army on the Mexican border and in concentration camps, not one case of typhoid fever was known to exist.

Contrast this with the humiliating records of the Spanish War, when among 55 829 regulars assembled and in the field, there were 7 745 cases, while among the 250 000 volunteers assembled in camps soon after the declaration of war, there were 20 000 cases of typhoid, or about 80 cases to every 1 000 men.

The experience of the English army during the Boer War was no more satisfactory, for in the three years of the war one-sixth of all hospital admissions were from typhoid fever and dysentery, and one-half of the total death losses of the war were from these two diseases. Has not war indeed been robbed of one of its horrors by the work of the physician and by preventive medicine?

Two fearful agencies of destruction, war and pestilence, have ever travelled in company, and conquest has often been purchased at frightful cost, for with the home-coming armies have also been carried the germs of death-dealing plague.

Particularly has this been the case with typhus fever, known

also as camp fever, jail fever and ship fever, which has attended almost every great European war from the time of Charles the Fifth, in the 16th century, even to the present time.

The campaigns of Napoleon saw thousands of France's soldiers perish from this dread disease, and more than 10 000 of Russia's soldiers in the Turko-Russian war of 1876 contracted typhus, one-half of whom died. Among physicians and nurses the morbidity and the mortality were particularly high, for over 60 per cent. of physicians attacked died, and about 75 per cent. of all nurses and attendants in the Turko-Russian and the Crimean wars were affected.

Even in times of peace, Ireland and Russia in particular have suffered frightfully from epidemics of typhus, and no part of the world has altogether escaped.

In recent years, improved knowledge of sanitation and personal hygiene have wrought much improvement, yet in 1914-15, an outbreak of the disease in Serbia, where almost every house, prison, camp-hospital and barracks was invaded, destroyed 135 000 lives, including those of 30 000 Austrian prisoners.

With the recent discovery that the disease, once thought to be highly contagious, was actually transmitted through the medium of body and head lice, successful preventive measures could be undertaken. Through the work of the American Red Cross physicians and nurses and sanitary experts, under the leadership of Dr. R. P. Strong of Harvard Medical School, a system of camps and hospitals with proper sanitary regulations has been established in Servia and the epidemic has been practically blotted out. Thus again has medicine conquered in the war against disease, and her fruits of conquest are the betterment of humanity, a reward infinitely greater than conquered territory or vast money indemnity.

Since the discovery in 1894 by Kitasato and Yersin, that plague was due to a specific microorganism which is spread by lice, fleas and other insects, but particularly by the fleas which infest rats, that dread disease with its terrible mortality, and which has been almost continuously present in the world since the dark ages, has become practically extinct in every country where sanitary precautions have been instituted and enforced.

That one of the greatest, if not the greatest, engineering feats of all times has been successfully accomplished, has been due no less to the physician than to the engineer, for the building of the Panama Canal was made possible only by the application of discoveries in preventive medicine. The appalling death-rate among the workers under the French Company made further progress seem impossible because of the lack of available

human material. It was not until the discovery of the mosquito-borne infection of yellow fever and malaria by Finlay, and later demonstrated and proven by the labors of Reed, Carroll, Agramonte and of Lazear (who gave his life in experiments and who died from the bite of an infected mosquito), that effective work became a possibility. Experiences of the past made it evident that the first step must be a campaign to guard the health of the workers, especially in regard to yellow fever, plague and malaria. With a knowledge of the causes of these diseases, it became simply a problem of eliminating the mosquito and the rat. By making all houses and docks rat-proof, and by an active campaign of extermination, the rats were done away with, and by disinfection of houses, proper disposal of sewage and the filling, draining and oiling of all swamps and low places where mosquitoes might breed, together with the screening of all houses as a protection against insect bites, the canal zone became, instead of a region of pestilence and death, a model community whose death-rate compared favorably with that of our American cities.

In 1881, the first year of French work, 63 per cent. of all employees were infected with yellow fever, with many deaths. In 1904, the first year of United States work, the death rate was, in comparison, but one-twelfth of the French record, and since 1906 there have been no cases of yellow fever in the Canal Zone.

Until 1898, the first year of American occupancy of Cuba, yellow fever was never absent from the island, but with the application of modern sanitary methods it became practically extinct so long as the Cubans continued those precautions.

Thus has the work of the physician, through preventive medicine, contributed to the world's progress.

I might cite also the great work in increasing human efficiency through studies and discoveries in relation to the hookworm disease, which has undermined the physical and mental health of the population of India, China and Egypt, destroying economic efficiency and preventing social development, and which has come to be a problem of great importance in certain portions of the United States. This whole subject is now under careful observation of skilled sanitary commissions, and the expectation is well founded that its eventual control will be accomplished with great material gain to the infected districts and to the world at large.

When von Behring in 1890 announced the discovery of a serum which would prevent and cure diphtheria in a large percentage of cases, he preserved to the world annually thousands of child lives which would come in time to take their places as producers of wealth. The diphtheria mortality in the South

Department in Boston in the period from 1889 to 1895 was 43 per cent. of all cases. From 1895, when antitoxin was first generally used, to 1904 inclusive, it fell to 11.48 per cent., while in 1912 it was but 7.6 per cent., including laryngeal and moribund cases. And the statistics of late years have been no less favorable.

When Wright in 1900 gave to the world his opsonic theory and thus opened the way for vaccin therapy, he placed at our command a means for the preventive as well as the cure of disease which has proven of untold value. On this is based the treatment of the infections by bacterial vaccins with vastly more favorable results than by the old methods, and preventive inoculations, particularly in the case of tetanus and of typhoid fever, which have proved so successful a means of prophylaxis in those diseases.

The Roentgen ray, although not a medical discovery, has been applied practically to human needs by medical research and experiments, and its wonderful diagnostic possibilities thereby developed.

Lightning existed before Benjamin Franklin, but it remained for him to demonstrate that electricity was a force which could be utilized for man's needs.

So also have the therapeutic uses of the various light-rays and of radium been applied and developed by the medical scientists of the last few years.

I could not close this paper without paying tribute to the brilliant minds and to the clever human mechanics whose painstaking work has done so much to develop surgery in these past twenty-five years. What myriads of lives have been saved and how many maimed and crippled bodies have been restored to usefulness by the modern surgeon by methods which but a few generations ago were deemed impossible!

The advances in surgery have been largely due to an increased knowledge of asepsis and of sterilization. Robbed of the dangers of infection, operations which were formerly done only as a last resort are now undertaken with confidence. Improved methods of sterilizing and toughening catgut enable the surgeon now to use sutures and ligatures of degrees of resistance suitable for each need and to discard those which have given so much trouble and uneasiness in the past.

In local anæsthesia the surgeon has found a method of nerve-blocking which allows the performing of many operations with a minimum of shock to the patient.

The wonderful experiments and performances of Carrel at the Rockefeller Institute have opened to the surgeon new possibilities in nerve- and bone-grafting and in the suturing of

severed blood-vessels, with consequent control of hæmorrhage and preserved circulation.

Perhaps one of the most radical advances in surgery in the last generation has been in the treatment of bone fractures. The Lane plates and the bone plate as devised by Albee have made it possible to repair fractures, without resulting deformity, of types which were formerly impossible of coaptation and permanent alignment. So also has the nailing of hip fractures become a successful method of treatment of those unfortunate conditions which, in the past, so often resulted in permanent deformity. Of no less importance has been the progress in bone transplantation and in the repair of diseased and crippled spines.

Even as preventive medicine has saved to the world thousands of lives annually, so also has the surgeon contributed his part to the economic welfare of the nation in the lives which his improved methods have preserved and in the cripples whom he has restored to usefulness.

As I look back upon the status of our medical knowledge at the time I graduated, twenty-six years ago, and, comparing it with the standards of today, I realize that in this wonderful age of invention, of vast industrial development and standardization, of the great social cataclysms that are taking place in the world, medicine has been no less progressive nor has failed to mark her footprints on the paths which lead onward and upward.

And as I contemplate the marvellous accomplishments of medical research and experiment, and appreciate more fully how much of the world's progress and enlightenment has been due to the physician's work, what tremendous additions he has made to human efficiency and productiveness, my heart thrills with pride that I also may be numbered, even as an humble armor-bearer, in the ranks of that noble army whose battle field is the world, whose enemy is disease, whose conflicts bring not death, but life, and whose victory brings no tears, but only peace and prosperity.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the *GAZETTE* only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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ACCESSIBILITY OF HOMŒOPATHIC PERIODICAL LITERATURE

Recently we received from one of our subscribers, Dr. Edwin L. Nesbit of Greensburg, Pa., an important suggestion in regard to increasing the practical usefulness of the *Gazette*. Dr. Nesbit brought out the point that the value of the department of reviews of homœopathic literature is reduced because of the inaccessibility of most of the journals reviewed to that majority of practitioners residing outside the large medical centers.

Dr. Nesbit said, further: "Bibliographies are utterly devoid of working value to the average man or woman away 'out' on the firing line' of actual practice, unless — their publication is supplemented by some practical scheme for effecting a ready and inexpensive interchange of data between center and circumference of the profession. A useful journal might well establish a Bureau of Technical Information in which would be kept on file not only a complete bibliography of (1) experimental and (2) clinical data of this distinctive (homœopathic) significance; but, with this might well be filed reprints and excerpts from such publications, for mailing to and from the fellow in Sque-dunk, who would gladly pay the cost of transmission; and, could be further interested thereby to send in reports of his practical observations as to the actual utility of the stuff under catch-as-catch-can conditions. Such work might be done most advantageously by every homœopathic college and relative to each of its several departments of instruction; a sort of post-graduate correspondence system, if you please, which would tie up the alumnus to his alma mater through necessity rather than mere sentiment. The clinical verifications thus collected

in our hospitals and out on 'the firing line' might likewise be catalogued and made practically useful to any responsible subscriber or alumnus for the asking. Till our 'titular leaders' in the colleges wake up to the practical possibilities of such measures for producing substantial support and enthusiasm for homœopathic medical education, our journals might use the idea for increasing their subscription list and extending their range of professional influence."

The *Gazette* now receives about a score of homœopathic journals, foreign and domestic, and is very willing to coöperate with its subscribers in the United States by lending any of them for a period not to exceed five days. Not more than two journals may be borrowed at one time. Borrowers should send their requests to the *Gazette* office and should enclose six cents in stamps which covers the average expense of mailing one journal.

S. B. H.

ACIDOSIS

During the last few years, a great deal of interest has been shown by physicians, as well as by the daily press, in the condition to which the hybrid term "acidosis" has been given. In spite of the frequency with which this cognomen is applied, the average physician has only the faintest glimmering of its true significance. Whitney's summary¹ of the recent knowledge of acidosis is, therefore, timely and valuable.

Acidosis is defined as "an increase above normal of any of the acid elements of the blood." There is normally a definite level of hydrogen ion concentration in the blood, the carbon dioxide content representing the most readily mobile factor by means of which this level is maintained. The blood plasma is practically a solution of the various phosphates and carbonates of sodium and free carbonic acid; the dissociation of the salts is such that considerable quantities of acid or alkali may be added without causing a marked change in the total ionic concentration. Nevertheless, the balance is so fine that any change, especially the addition of an acid radical, brings about demonstrable physiological responses. When the concentration is raised (*i.e.*, more acid radicals are introduced), the amount of free CO₂ is increased. This in time stimulates the respiratory centre, causing hyperpnœa, so that the excess of CO₂ is exhaled and the normal level is regained. The lungs are aided by the kidneys, whose function it is to keep the non-volatile ions at the proper level. In other words, when the CO₂ output cannot

¹ Whitney, L. Acidosis: a summary of recent knowledge. *Boston Medical & Surgical Journal*, 1917, clxxvi, 225

keep pace with the increase in hydrogen ion concentration, acid radicals, especially in the form of acid phosphates, are excreted into the urine.

The alkali radicals in the blood are derived mostly from the food, in the form chiefly of carbonates and organic salts of the alkalies. Protein katabolism can, under conditions of acid excess, provide a certain amount of ammonia at the expense of urea (ammonium carbonate or carbamate being found instead of urea).

The acid radicals, too, come chiefly from the food under normal conditions. Bodily katabolism may, however, produce a very considerable amount if deficient oxidation exists, as for instance after vigorous exercise or in high altitudes. Carbohydrate starvation gives rise to β -hydroxybutyric acid and acetoacetic acid from fat katabolism; this phase is familiar in diabetes and starvation. That acidosis may be a favorable condition in high altitudes is an interesting point; its value exists in the resultant hyperpnœa.

Acidosis may arise from an over-production of acid, with which the kidney cannot keep pace, or by failure of the kidney to excrete the normal amount of acid. This fact suggests an explanation of the apparent discrepancy sometimes found between blood and alveolar air analyses on the one hand and urinary examination on the other, since it is readily evident that in an acidosis of the second type the urine may appear normal.

Hyperpnœa is the most important clinical symptom of acidosis and may be mild or severe; the latter is followed by coma, respiratory paralysis, and death. Urinalysis is of value in cases presenting increased acid excretion, especially if the excreted acids belong to the β -hydroxybutyric group. The increased ammonia quotient is significant only if present. Determination of alveolar CO_2 tension is serviceable, a result below 40 mm. being suggestive of acidosis. Haldane and Priestly's method is recommended. Van Slyke's method of estimating the total carbonates of the blood is the easiest and most accurate means of establishing the existence of acidosis, a finding below 50 being suspicious.

The conditions in which acidosis may occur are as follows:

1. Those with over-production of acid, due to deficient oxygenation, as severe exercise, mountain sickness, gas poisoning, and probably acute anæmias;
2. Those where a primary lack of oxygen causes a raising of the normal threshold in compensation, as in high altitudes, and probably pregnancy;

3. Metabolic conditions in which abnormal acids are produced in large amounts, as diabetes, starvation, post-operative toxæmia, and the diarrhœa and cyclic vomiting of children;

4. Conditions of renal insufficiency, such as interstitial nephritis, pyonephrosis, and possibly the active hyperæmia found in pneumonia and some other infections.

In pneumonia the cause of death is very frequently acidosis, and the value of the fresh-air treatment of this disease may be partly in the improved oxygenation and prevention of rebreathing, these factors tending to decrease the acidosis.

If excretions of salts is good, alkali therapy will probably be of value in treatment; efficient diuresis must be maintained by a copious intake of water. In cases of acidosis due to renal insufficiency, however, as for instance nephritis and pneumonia, alkalies are better not given, unless we use substances largely excreted in the fæces, like chalk or bismuth subcarbonate. Purgation aids the elimination of acids by the intestinal route. Meat should be avoided in the diet. Fresh air in motion is valuable, as may be also oxygen at high altitudes. Finally, a word of caution as to the use of morphin in acidosis is given, inasmuch as this drug depresses the respiratory center, thereby counteracting the hyperpnœa, Nature's effort to eliminate the volatile acid, carbon dioxid.

(When the long-awaited revision of our materia medica takes place the inclusion of data concerning the power of drugs to produce acidosis will be of distinct value.)

W. O.

A NEW HOMŒOPATHIC JOURNAL

This issue of the *Gazette* contains reviews of the first two numbers of a new medical periodical—the *Tijdschrift Van De "Vereeniging Van Homœopathische Geneesheeren In Nederland."* It appears tri-monthly and is, as its name implies, the official organ of the Association of Homœopathic Physicians of Netherlands. Its editors are Dr. D. K. Munting of Amsterdam and Dr. J. N. Voorhoeve of Oudenrijn.

In the editorial foreword of the first number it is stated that the reason for the appearance of the journal is the desire of the members of the society to publish papers read at its meeting, with two main objects in view: first, to have a permanent record of these papers; second, to afford those colleagues who have thus far taken little or no notice of homœopathic therapeutic methods (*die van de Homœopathische geneeswijze nog weinig of geen kennis genomen hebben*) an opportunity to inform

themselves about the inception and progress of homœopathy and about the work and efforts of its practitioners.

Each issue is to be made up of several original articles, a clinical department, a review department for homœopathic literature, and reports of society meetings. The numbers received contain exceedingly interesting and instructive material, and the sane and scientific spirit pervading them would seem to indicate that the new publication will prove one of the strongest links in the chain of homœopathic periodicals. The *Gazette* extends greetings to the new comrade and trusts that its efforts may be crowned with complete success.

H. U.

CLINICAL DEPARTMENT

Case of Heart Block with Suicidal Obsession.—The patient is a woman 24 years of age, born in Massachusetts, of American parents. Her father is a large, over-stout man, mild and of good-natured temperament. Her mother is a thin, angular woman of a worrying, apprehensive temperament. There is a healthy brother and sister. Patient was an average, normal child until she had diphtheria complicated by scarlet fever. It is not known that this sickness involved the heart, but from this time she is said to have been somewhat changed in temperament and a little odd and headstrong. There seems to have been nothing else that might have been a causative factor.

She went through high school and at the same time worked very hard at her violin, which she intended to use for her support. A year ago, while giving many violin lessons and at the same time taking them, she discovered that she began to tire more easily than usual, and that it was fatiguing for her to hold her violin. At this time she was rather over-fat and of soft texture. She consulted a medical friend, who found that her pulse was varying little from about 50, and he undertook to increase its rate to normal by the administration of thyroid extract. Small doses did not accomplish this, so he continued to increase the amount until she was taking 30 grains a day, and still the pulse was not accelerated.

The patient was then sent to a leading hospital, where a careful study of her heart was made and electrocardiographs were taken; as the result of this study, it was decided that the patient had a complete heart block. So complete was it that she was considered a classical case, and many of the students were permitted to examine her, and her case was freely discussed in her presence. She was sent home with the instruction

to do much resting in bed for a few weeks and gradually to get up and about, but she made the deduction from all she observed and heard that it would be quite impossible for her ever to be any better. This idea took a firm root in her mind and undoubtedly was the groundwork of her later obsession. At home, shortly after leaving the hospital, she began to have occasional swooning attacks, and one of these was extremely severe, so that she appeared to be moribund. As consciousness returned, she says that she knew only that she should have died in the attack, and was very cross with the physician for bringing her to, and since then this has been one of her fixed ideas. From this time on she showed marked suicidal tendency, refused to eat, in fact refused to do anything that she was asked to do, such as to be bathed, to dress, to permit physical examination and the like. Because she did not eat and was so antagonistic, it was thought better to remove her to an institution.

On admission the patient was extremely weak, and had to be almost carried into the house. She insisted that she was crazy, and that she knew all about herself because the doctors had told her that there was no use in trying to do anything for her, so she must be let alone. Although she improved physically so that she was able to be dressed, and to walk about somewhat, her obsessions grew stronger until she could talk of nothing else. While out walking on one occasion, she picked up a stone the size of a large marble and jammed it well into her throat, and was only prevented from strangling by the presence of mind of the nurse, who hooked it out with her finger. At another time she swallowed a large brooch, but this passed through the bowel without any serious disturbance. At another time she attempted to strangle herself with handkerchiefs.

Here then is a patient who is definitely obsessed, who is suffering from psychasthenia as the result of an unquestioned organic condition of the heart. Although she has been known to be odd for some time, probably as the result of cardiac involvement, her obsessions date definitely from the period of severe swooning, since which time it is fair to presume that the cerebral circulation has not been thoroughly reëstablished. Some years ago I advanced the idea that psychasthenia was probably due to cerebral anæmia, or something akin to it. That is, psychasthenia has a definite pathology. Here seems to be a case that points very strongly to the probability that this theory may be correct. The other interesting question is how far the administration of thyroid may have favored or accentuated the condition. This would not have occurred to

me had I not very lately learned of another case of marked cardiac fibrillation in which thyroid was administered similarly to excess.

The second case which Dr. Ring refers to in the foregoing report and which he has asked me to comment on briefly is that of a woman forty years old, a doctor of medicine, who has, however, never engaged in practice. For a few years past she has had a cardiac abnormality which has recently been diagnosed by dependable authority as auricular fibrillation. The abnormality appears to have been initiated by the use of thyroid extract tablets, at least the ingestion of thyroid was so quickly and definitely followed by irregular and rapid heart action that it would seem to be more than an accidental sequence and to suggest at least a probable causal connection.

Briefly, the main facts of the case are as follows: About five years ago, with the object of reducing her weight, the subject took thyroid tablets grs. V three times a day for two ten-day periods, separated by a few days during which none was taken. At the end of the second ten days her heart was, as she expresses it, "racing so," it was so rapid, tumultuous, and irregular that she realized she was indulging in dangerous therapeutics and discontinued it. From that time to the present the heart has never resumed normal rate or rhythm. She has been troubled with shortness of breath and fatigue on even light exercise. She has been obliged to restrict her activities and has kept only moderately comfortable by observing rigid hygienic and dietetic rules of life and by constant judicious use of digitalis. The case is mentioned here with her permission and at the request of Dr. Ring to call attention to a possible correlation between excessive and wrong use of thyroid and the heart abnormality under discussion.

ALBERTA S. B. GUIBORD.

HOMŒOPATHIC PERIODICAL LITERATURE

Tijdschrift van de Vereeniging van Homœopathische Geneesheeren in Nederland. January, 1917

1. *Morbus Basedowi.* 3. Voorhoeve, N. A. J.
2. *Ammoniakvergiftiging.* (Ammonia poisoning.) 5. Van Roijen, H.

Rather prolonged exposure to ammonia vapor caused severe headache, vomiting, cough, pain on urination and hæmaturia; severe pains in the right kidney region, later general pains and great restlessness. An evening temperature of 38.5 degrees was

registered. On the second day the urine became free from blood but still showed 2 per cent. albumin. There was complete sleeplessness because of the extreme pain, dyspnoea, at first constipation and later watery diarrhoea, loss of appetite but great thirst. The pains lasted day and night, with few intervals of only slight diminution. Recovery took place; treatment is not given.

3. *Trigeminusneuralgie*. 7. Samson, P., and Voorhoeve, J. N.

Remedies for trigeminal neuralgia may be classified, according to the side affected, as follows:

Right: bismuth, calcarea carbonica, causticum, chelidonium, magnesia phosphorica, sanguinaria.

Left: kali bichromicum, lachesis, magnesia carbonica, rhus toxicodendron, spigelia.

Chiefly right, rarely left: belladonna.

Chiefly left, rarely right: arsenicum album, cimicifuga, colocynth, ignatia.

Several case reports are appended.

4. *Een geval van Hamamelis-intoxicatie*. (A case of hamamelis poisoning.) 12. Voorhoeve, J. N.

April, 1917

5. *Enkele opmerkingen over genitaal-en peritoneaaltuberculose bij vrouwen*. (Remarks concerning genital and peritoneal tuberculosis in women.) 33. Voorhoeve, J. N.

6. *De therapie van polyarthritis rheumatica acuta*. 43. DeLeeuw, A. D.

DeLeeuw reports four cases of acute rheumatic polyarthritis, and mentions several others of the same disease, in all of which the administration of apparently indicated and well studied homœopathic remedies brought no relief, or relief seemingly brought about by these remedies was followed by relapse that was uninfluenced by further homœopathic medication. After giving the homœopathic remedies what he considers a fair trial he prescribed sodium salicylate with excellent results.

[Statistics collected by J. L. Miller (Jour. A. M. A., lxiii, 1107) show that patients receiving salicylate are free from pain much earlier than those not treated, but this same author found that high degree of heat (sweats) and alkalies are equally efficacious in this respect. Patients treated with salicylate are much more liable to relapse even during the administration of the drug than the untreated, so that the average duration of the disease is not shortened. Heart complications are, statistically at least, a little more frequent after salicylate therapy. Experi-

mental rheumatic arthritis in rabbits was not influenced either prophylactically or therapeutically by sodium salicylate. The disappearance of pain was DeLeeuw's chief criterion of improvement, and the results obtained by him are, perhaps, explained by Miller's findings and also, possibly, by the fact that the salicylate was given after homœopathic remedies had been tried, e.g., late in the disease, when it was, perhaps, time for natural subsidence of the symptoms. Better comparison would be afforded by parallel series of cases carried through to their conclusion, one series treated homœopathically, the other with sodium salicylate. *Rev.*]

7. *Een geval van Aneurysma aortae.* (A case of aortic aneurysm.) Voorhoeve, J. N.

The aneurysm was apparently of syphilitic origin, because the patient admitted having had untreated lues eight years previously. No Wassermann was done. The treatment consisted of iodine in the 6th decimal, later of kali iodatum, and then again iodine, with ipecac and tartar emetic in the meantime for cough. The physical signs did not completely disappear, but the symptoms of pain and cough were entirely relieved in eight months.

H. U.

Iowa Homœopathic Journal. March, 1917

8. *Homœopathy.* 14. Dr. Cowperthwaite.

A historical and philosophical review of the subject.

The Chironian. March, 1917

9. *Departments of the college and hospital. No. 1. The anatomical department.* 319. Eaton, E. R.

Exposition of the manner of conducting this important department at the New York Homœopathic Medical College.

The Clinique. March, 1917

10. *Treatment of Nephritis.* 114. Mitchell, C.

Mitchell summarizes his rules as follows:

1. Keep the titration acidity of the urine down below 30 degrees, or a total of 1.5 gm. equivalent of HCl. French Vichy water is best for this purpose.

2. Keep the chlorid excretion down to 5 gm. per 24 hours all the time, unless it impairs digestion.

3. Prefer cereals, breads, fruits, and vegetables to milk, except when the patient likes milk or buttermilk and can digest it without raising the titration acidity of the urine and increasing indicanuria.

4. Allow slightly salted boiled meats and eggs in chronic cases which (a) do badly without meat; (b) do not have headaches; and (c) do not show marked increase in titration acidity, albumin, and indican when on meat.

Sweats are valuable, especially if urine is suppressed. Mitchell also recommends diuretics as apocynum, theobromin, hydragogen, and anasarcin in cases in which the urine is scanty. It may, perhaps, be questioned whether it is always advisable to drive an already laboring organ by such means.

Three illustrative cases are cited.

11. *Splenomyelogenous leukæmia*. 121. Westover, H. W.

Two cases are given. The author concludes that benzol and the Roentgen ray, when used in conjunction with homœopathic remedies, are of greater benefit than when the indicated remedy is not employed. *Chininum* was used in both cases, occasionally giving place to *mercurius corrosivus* or *chelidonium*.

12. *Role of focal infections in diseases calling for constitutional treatment and their relation to the specialist's work*. 126. Tenney, A. C.

Emphasizes the importance of a routine examination of the eye, ear, nose, throat and accessory sinuses as possible seats of infection. The writer thinks that the tonsils are culpable much less often than is thought, the reason for their abnormal state being frequently an infectious process in their vicinity. Dental infection is also mentioned in its relation to systemic disease.

13. *Choice of operation in tonsillectomy*. 131. Guy, J. E.

Sluder method is preferred in such cases as are adapted to its employment. If this is not practicable, dissection and removal by the snare constitute the better manner of removal. As little sharp dissection as possible is to be used.

W. O.

Pacific Coast Journal of Homœopathy. April, 1917

14. *Report of a case of ileus following abdominal operation*. 158. Salisbury, C. S.

15. *Two cases of exophoria*. 161. Kellogg, F. B.

16. *The eyes of school children*. 164. Brandt, M. A.

17. *Hydrotherapy in the treatment of pneumonia — with case reports*. 168. Evans, T. J.

Evans recommends "a hot hip and leg pack" to induce relaxation and dilation of the vessels of the lower extremities, thus lessening the congestion of the lungs. To administer the pack, place lengthwise on the bed two dry blankets. Over these is spread another blanket previously dipped in boiling water and wrung dry. This is covered by another dry blanket, and

upon this the patient is placed and wrapped snugly from soles to hips. Hot water bottles placed beside the hips, between the knees, and at the feet will help to maintain the heat. Avoid burning the patient, and do not let the pack get too cool while the patient is in it. Cold compresses on the chest, face and neck should be applied, and cold water may be given to drink. The patient may remain in the pack from twenty to sixty minutes. This measure lowers the temperature, and the respiration becomes slower and deeper.

18. *Placenta prævia — a case.* 172. Low, T. C.

19. *Wounds of the cornea.* 174. Newberry, F. J.

20. *The value of functional kidney tests.* 187. Wright, H. J.

21. *Tonsillectomy under local anæsthesia.* 190. Smith, J. J.

The North American Journal of Homoeopathy. April, 1917

22. *An epitome of comparisons in homœopathic materia medica and therapeutics.* 201. McMichael. A. R.

In this installment of his epitome McMichael considers *arsenicum album*, *apis*, *mercurius cor.*, *phosphorus*, *plumbum*, and *terebinth* in "Bright's disease"; *bryonia*, *nux vomica*, and *pulsatilla* for "sensation of stone in stomach"; *cactus*, *cratægus*, *digitalis*, *phosphorus* and *strophanthus* in diseases of the heart; *opium* and *arnica* in apoplexy; and *pulsatilla*, *drosera* and *sticta* for "cough worse lying down."

23. *Action of the homœopathic force.* 208. Baylies, B. L. B.

(The reviewer humbly confesses his inability to grasp the subtleties of this flight in metaphysics.)

24. *The sphere of the remedy in obstetrics.* 210. Green, J. M.

25. *A symposium of the metals — foreword.* 212. Dienst, G. E.

In this introduction to the symposium, Dienst recites indications for *alumina*, *aurum*, *argentum*, *argentum nitricum*, *cuprum*, *ferrum*, *palladium*, *platinum*, *plumbum*, *radium*, *stannum*, *uranium*, and *zincum*.

26. *Mental symptoms of the metals.* 216. Stearns, G. B.

According to the mental symptoms produced by them, the metals may be divided into three groups. To the first group belong *aluminum*, *argentum*, *argentum nitricum*, and *aurum*. These cause structural tissue changes resulting in profound mental depression, even to the point of suicide. The second group, in addition to its action on the motor nervous system giving rise to cramps, spasms, convulsions, and jerkings, causes

violent delirium, mania and general excitement, with a tendency to repression of all functions, and coma. This group includes *cuprum*, *plumbum*, and *zincum*. The third group is made up of *platinum* and *stannum*, and presents more general mental symptoms, "beginning with irritability and going on to sadness." *Ferrum*, *palladium*, *radium*, and *uranium* do not give rise to unusual mental symptoms.

27. *Gall-stones considered from the standpoint of the homœopathic physician, together with the indications for surgical interference.* 219. Rabe, R. F.

28. *What shall we do with the formation of pus?* 222. Hutchison, J.

29. *Infected wounds.* 224. Case, E. E.

30. *The resurrection of a child — an incident of Hahnemann's practice.* 226. Legouve, E.

This is a translation of a sketch of Hahnemann by Ernest Legouve. The original appeared in the *Paris Figaro*, March 19th, 1887, as "an extract from a volume of memoirs, then in process of publication."

May, 1917

31. *Rectal disease as a cause of inefficiency and ill health.* 265. v. Bonnewitz, O. R.

32. *Prostatic cancer.* 272. Turner, M. W.

33. *Publicity for the purpose of educating the intelligent public including the homœopathic profession.* 275. Copeland, R. S.

Of forty cases of infantile paralysis admitted to the Flower Hospital of New York, five died within a few hours of admission. Of the remaining thirty-five, only one died — a result which challenges statistics from other institutions. The cause of this excellent showing would seem to have something to do with the form of treatment employed, namely, the intraspinal administration of such drugs as *cicuta*, *curare*, *belladonna*, *gelsemium* and *hydrocyanic acid*, for their homœopathic action.

"Until the dominant school makes a serious effort to investigate homœopathy and to give its study place in the curriculum, we must continue our separate existence."

Copeland suggests that Friday, October 19th, 1917, be set apart as Rally Day or Hahnemann Day, when all homœopathic colleges shall invite all of its graduates for a great nation-wide convocation, for the purpose of acquainting them with the work done in their own institutions and thereby strengthening their loyalty.

34. *An epitome of comparisons in homœopathic materia medica and therapeutics.* - 279. McMichael, A. R.

Important and comparative symptoms are given for the following drugs used in chronic articular rheumatism: *actæa spicata*, *caulophyllum*, *causticum*, *colchicum*, *guaiacum*, *ledum*, *pulsatilla* and *rhus toxicodendron*; in muscular rheumatism: *actæa racemosa*, *phytolacca* and *sanguinaria*; for vomiting coffee-ground material: *lycopodium*, *phosphorus* and *argentum nitricum*; in gallstone colic: *berberis* and *belladonna*.

35. *The metals in relation to vascular and tissue changes.*
284. MacAdam, E. W.

Metals become active only after dissociation into ions. The metals considered in this article are: *alumina*, *aurum*, *argentum*, *argentum nitricum*, *cuprum*, *ferrum*, *palladium*, *platinum*, *plumbum*, *radium*, *stannum*, *uranium* and *zinc*. Their actions upon the blood and cardio-vascular system are summarized thus: "The blood is altered by *ferrum*, *alumina*, *argentum nitricum*, *zinc*. The heart is acted upon by *aurum*, *plumbum*, *zinc*; the arteries by *aurum*, *ferrum*, *plumbum*; the veins by *ferrum*, *plumbum*."

36. *The metals in their relation to diseases of the skin.*
287. Stevens, G.

37. *Potencies in obstetrics.* 291. Sloan, T. G.

38. *The prospective mother.* 292. Dienst, G. R.

39. *Cure of phagedenic ulceration over enormous, complete ventral hernia.* 294. Guernsey, W. J.

40. *A case of cholecystitis.* 297. Baker, H. B.

41. *Forward.* 298. Roberts, H. A.

H. U.

The Hahnemannian Monthly. March, 1917

42. *Medical inspection of schools from the viewpoint of the ophthalmologist.* 129. Metzger, J. D.

43. *Medical inspection of schools from the viewpoint of the rhinolaryngologist.* 135. Bierman, H.

44. *Some criticisms of our present system of medical inspection of schools.* 139. Stitzel, J. W.

45. *The pathological histology of the thyroid gland and its relation to the clinical manifestation of goiter.* 145. Barthmaier, O. F.

46. *Weather influences in rheumatism.* 148. Raymer, W. B.

47. *Pachymeningitis cervicalis — acute ascending hæmorrhagic myelitis.* 153. Reitz, C. B.

48. *Remedies in pneumonia.* 164. MacFarlan, D.

Aconite, *belladonna*, *lycopodium*, *mercurius cyanatus*, *lachesis*, *phosphorus*, *antimonium tartaricum*, and *tuberculinum* are considered.

49. *The Cæsarean section in its relation to general obstetrical practice.* 169. Gramm, T. J.

April, 1917

50. *Are you prepared for the overt act?* 193. Rennie, W. H.

51. *Erysipelas — its differentiation from dermatitis venenata and eczema erythematosum.* 202. Bernstein, R.

52. *Filariasis.* 207. Sappington, S. W.

53. *The economic position of the tuberculous patient.* 211. Turnbull, W. G.

54. *Digitalis.* 221. Swartz, I. R.

Digitalis is indicated for cardiac insufficiency (ventricular weakness), but contra-indicated in balanced compensation, aneurysm, advanced scleratherosis and fatty degeneration.

H. U.

DIAGNOSIS AND THERAPEUTICS

The neurological aspects of food poisoning. Fairbanks, A. W. Bost. Med. and Surg. Jour., 1917, clxxvi, 413

An excellent review, with bibliography, of this neglected phase of food poisoning. Among the less common forms of poisoning mentioned is solanism, a condition marked by acute gastro-intestinal disturbance, headache, weakness, and apathy, and due to eating diseased or sprouting potatoes, whose solanin content is much higher than normally. The author reports a small epidemic (6 cases) of food poisoning of obscure ætiology, in which paræsthesia, decreased sensation, and more or less marked weakness of the extremities made their appearance on the twenty-first day after the infected swordfish (to which the epidemic is attributed) was eaten. The author finds no reference in the literature to this particular clinical picture.

W. O.

Extreme prolongation of conduction time in the bundle of His — an example resulting from digitalis therapy. Barker, L. F., and Bridgeman, E. W. Jour. A. M. A., 1916, lxxviii, 903

It is not safe to administer digitalis to unselected cases, because of the danger of producing complete heart block. Cases in whom digitalis may be really dangerous are those suffering from sclerosis of the coronary arteries. General arterio-sclerosis usually accompanies this. In such cases digitalis therapy, if used at all, "should be controlled by tracings, either polygraphic or, preferably, electro-cardiographic."

H. U.

BOOK REVIEW

Case Histories in Obstetrics. By Robert L. DeNormandie, A.B., M.D., F.A.C.S.; Assistant in obstetrics, Harvard Medical School; Assistant Physician, Boston Lying-In Hospital; Surgeon to Gynæcological Department of the Boston Dispensary. Second edition, 1917. W. M. Leonard, Boston.

The value of clinical teaching has received more and more recognition until now the fourth year in medical studies has become really a clinical year. Post-graduate courses in clinical medicine are rapidly becoming more popular. Considering this trend of medical thought, it is not strange that various series of clinics should be presented in book form. Among these books, "Case Histories in Obstetrics" stands as a work of exceptional value.

Beginning with the diagnosis of pregnancy and continuing through the various topics of pregnancy, parturition and puerperium, various groups of cases are presented to illustrate each topic. The real value of the book, however, lies not merely in the presentation of groups of cases, but in the author's discussion at the conclusion of each group. These discussions are as full of personality as a real clinic might be, and bear the stamp of an individual who observes closely, records carefully and who has developed a well-balanced obstetrical judgment during his many years of experience.

There are but two somewhat disappointing features in the book. First, the subject of scopolamin-morphin anæsthesia might better be omitted until the commercial aspects become dimmed and until further investigations have been made. Kronig and Gauss are recognized as authorities in this subject, but the book deviates widely from their methods. Second, the chapter on the baby, while containing much that is good, degenerates into a rather poor lecture and certainly is not on a par with the rest of the book.

This book is worthy of careful reading and study by medical students, general practitioners and obstetricians alike.

W. A. H.

 SOCIETIES

Massachusetts Homœopathic Medical Society

The Massachusetts Homœopathic Medical Society held its seventy-seventh annual meeting at the Massachusetts Homœopathic Hospital, Boston, on Wednesday, May 16th, with surgical clinics in the amphitheatre, throughout the morning, luncheon at the Medical School at one o'clock, a business session and annual meeting in the Auditorium of the Evans Memorial in the afternoon, and the annual dinner at Young's Hotel in the evening. The meeting this year was held as a conjoint meeting with the Massachusetts Surgical and Gynæcological Society.

The business session at the Evans Memorial opened at 2.15 and was followed by the reports of the various committees of the Society, after which the meeting was given over to the delegates from the American Institute of Homœopathy, Dr. F. M. Dearborn of New York City, Dr. W. A. Dewey of Ann Arbor, Michigan, Secretary of Council on Medical Education, A. I. H. and Dr. C. E. Sawyer of Marion, Ohio, Chairman of the Executive Committee, A. I. H., all of whom spoke on Homœopathy and the activities of the Institute. A resolution, presented by Dr. Sawyer, for the entrance of the Massachusetts Homœopathic Medical Society into the Federation plan was unanimously adopted. The afternoon session adjourned at 4.30.

The annual dinner at Young's Hotel was well attended by members and their guests. The speakers were Dr. J. Emmons Briggs, President of the Society, who read a paper on medical legislation and medical education; Joseph Conry, Russian Consul, who spoke on the present political situation in Russia; Dr. Lemuel H. Murlin, President of Boston University; Dr. C. E. Sawyer, and Dr. Alonzo G. Howard, incoming president of the Society. During the evening Dr. Briggs announced that in three days twenty-six

thousand of the thirty thousand dollars required for equipment for the Base Hospital which is to be organized from the staff of the Massachusetts Homœopathic Hospital had been raised, and that in all probability the rest would be pledged by the end of the week.

EDWARD S. CALDERWOOD, M.D.

The officers elected for the ensuing year were:

President, Alonzo G. Howard, M.D., West Roxbury.

First Vice-President, Elmer H. Copeland, M.D., Northampton.

Second Vice-President, Wesley T. Lee, M.D., Boston.

Recording Secretary, Edward S. Calderwood, M.D., Roxbury (re-elected).

Corresponding Secretary, Benjamin T. Loring, M.D., Watertown (re-elected).

Treasurer, Thomas M. Strong, M.D., Boston (re-elected).

Chairman of the Board of Censors, J. Emmons Briggs, M.D., Boston.

HOMŒOPATHIC MEDICAL EXAMINING BOARD OF CONNECTICUT

(Representing Connecticut Homœopathic Medical Society)

E. H. Linnell, M.D., Norwich, President; Edwin C. M. Hall, M.D., New Haven, Secretary; Wm. Pitt Baldwin, M.D., New Haven; Frederick E. Wilcox, M.D., Willimantic; Herbert A. Roberts, M. D., Derby.

Rules for Examination

1. Examinations will be held on the second Tuesday of March, July and November, at Grace Hospital, New Haven, beginning at 9.30 A.M., and lasting two days, closing at 4.30 P.M. of the second day.

2. Examinations will be conducted in the English language.

3. Examinations for general practice consist of ten questions in each of the following branches:

1. Anatomy. 2. Physiology. 3. Medical chemistry and hygiene. 4. Materia Medica, including therapeutics. 5. Practice, including pathology and diagnosis. 6. Obstetrics, including gynecology. 7. Surgery.

4. In order to obtain a certificate of qualification the applicant must obtain a general average of 75 per cent. In no branch shall his percentage be less than 60, and in Practice, Materia Medica, Obstetrics and Surgery the minimum requirement will be 65 per cent.

5. Examination fee, \$15.00, payable in advance on the first day of examination. Candidates once rejected may be re-examined at any subsequent meeting of the Board but must pay full fee for each trial.

6. All candidates must be graduates of some reputable Medical College and must present their diplomas (or a certificate from the Dean of the Medical College) for inspection, to the Secretary of the Board at the opening of the session. As evidence of the required preliminary education, he must also present a diploma from an accepted high or preparatory school or documentary proof that this preliminary education is equivalent thereto. From and after January 1, 1914, no person can be admitted to the examinations until, in addition to the foregoing, he shall present evidence of his having completed a satisfactory course of study of at least nine months in Chemistry, Physics and General Biology.

7. Each candidate must present his photograph as a means of identification. This will be retained and kept on file by the Secretary.

8. Formal application (blank enclosed) must be made to the Secretary at least five days before the date of examination. This must be accompanied by a certificate of good moral character signed by two reputable citizens of this state.

9. The Board is unable to supply copies of questions used at former examinations.

10. It is unlawful to practice in this state before examination and license. No temporary or provisional certificate can be given.

Digest of the Laws of 1907

a. No person shall, for compensation, gain or reward, received or expected, treat, operate or prescribe, for any injury, deformity, ailment or disease, actual or imaginary, of another person, nor practice surgery or midwifery, until he has obtained a certificate of registration, and then only in the kind of branch of practice stated in said certificate.

b. No person shall obtain a certificate of registration until he has passed a satisfactory examination before one of the examining boards appointed for the purpose, nor until he has filed duplicate certificates signed by a majority of said examining board, stating that they have found him qualified to practice either medicine, surgery or midwifery, nor until he has filed duplicate statements subscribed and sworn to by him upon blanks furnished, giving his name, age, place of birth and present residence, stating of what medical college he is a graduate, and the date of said graduation, together with such other information as shall be required. No person shall be eligible to said examination until he presents to the board, by whom he shall be examined, satisfactory evidence that he has received a diploma from some legally incorporated and reputable medical college and complied with the requirements of law concerning preliminary education. Any person passing such examination and filing said certificates and statement shall receive from the State Board of Health, upon payment of two dollars, a certificate of registration, which shall state that the person named has been found qualified so to practice. He shall be registered in the town wherein he resides or the town nearest thereto — but shall be entitled to practice anywhere in this State without further registration. Certificates from other states based on an examination equal to that of Connecticut may be accepted in lieu of an examination, but this board will not accept such Certificates from graduates of less than 10 years standing.

See Chapter 130, of Public Acts of 1907.

Rules for Conducting Examinations

First, Help of every kind must be removed from the reach and sight of the candidate. Any candidate detected trying to give or obtain aid may be instantly dismissed from the room, and his or her paper for the entire work cancelled.

Second, Questions must be given out and answers collected punctually at the time specified for that section.

Third, If the candidate withdraws himself or herself without permission from the sight of the examiner, his or her examination shall be closed.

Fourth, All examinations shall be in writing. Pens, blotters, paper or blank books and ink will be supplied by the Secretary.

Fifth, The examination shall continue two days, the sessions of the first day being from nine-thirty to eleven, eleven to one, two to four, four to six, respectively; the sessions of the second day being the same, but closing at four-thirty instead of six o'clock.

Examinations in Midwifery

1. Examinations in Midwifery will be held at the same time and place as for General Practice, and under the same rules and requirements.

2. Applicants to practice Midwifery will be examined in Midwifery only and must obtain a marking of 75 per cent.

3. Examinations will be in writing; but may be taken in the language of the applicant, the applicant to furnish and pay an interpreter acceptable to the Board.

4. The examination fee will be \$10.00 and is payable at the time of taking the examination.

5. All applicants must be graduates of some reputable college or school of Midwifery and must present her diploma for inspection at the opening of the session. A photograph is also required.

MORTALITY FROM CANCER AND OTHER MALIGNANT TUMORS IN THE REGISTRATION AREA OF THE UNITED STATES. 1914.

U. S. Department of Commerce. Bureau of the Census.

This publication contains 212 pages of detailed tabulated statistical material concerning cancer mortality. There are five general tables with the following headings:

1. Deaths from cancer and other malignant tumors, with statement of diagnosis, at specified ages, by sex and color, for the registration area, registration states, and for each registration unit in which there were 50 or more such deaths.

2. Deaths from cancer and other malignant tumors classified according to the part of the body affected, with statement of diagnosis, by sex and color, for the registration area, registration states, and for each registration unit in which there were 50 or more such deaths.

3. Deaths from cancer and other malignant tumors in the registration area and the registration states, by age and sex, color, general nativity, and parent nativity of decedent.

4. Deaths from cancer and other malignant tumors, classified according to the part of the body affected, in the registration states, by age, sex, color, general nativity, and parent nativity of decedent.

5. Deaths from cancer and other malignant tumors, in the registration states, of single, married, widowed, and divorced persons, and of those of unknown conjugal condition, by sex, age, color, general nativity, and parent nativity of the decedent.

There are also two summary and rate tables with the following headings:

1. Population and deaths and death rates per 100,000 population from cancer and other malignant tumors in the registration area and its subdivisions.

2. Death rates per 100,000 population from cancer and other malignant tumors, classified according to the part of the body affected, for the registration area and for each registration unit in which there were 50 or more such deaths.

The registration area in 1914 included 1,228,644 square miles or 41.3 per cent. of the area of the United States, with a population of 65,989,295 or 66.8 per cent. of the country's total population. 52,420 deaths from cancer and other malignant tumors were reported in this area in 1914. This is a death rate of 79.4 per 100,000 of population, the highest on record since the establishment of the registration area in 1880, when it was 42.8. Of the 52,420 deaths 40.6 per cent. were of males and 59.4 per cent. of females; 96.4 per cent. were white and 3.6 per cent. colored. The largest number of deaths occurred between the ages 60 and 64, e.g., 6,909; but the two sexes showed a difference in the age incidence: deaths of males were most numerous, 3,134, between the ages 65 and 69, and of females, 3,922, between the ages 55 and 59. This as well as the per 100,000 distribution of deaths shows that women die of cancer at an earlier average age than do men.

The highest death rates per 100,000 population were those for Vermont (109.9), Maine (107.6), Massachusetts (101.2), New Hampshire (100.8) and California (97.9). These states showed the highest rates in 1913, also, but not in the same order. The lowest rates were found in Utah (45.8), Kentucky (46), Virginia (48.9), Montana (51.5) and North Carolina (57.8).

The highest rates for cities over 100,000 population were as follows: Albany, 146.7; San Francisco, 128.4; Boston, 118.7; New Haven, 113.5; and Worcester, 111.6. The lowest rates were those for Birmingham, 46.3; Fall River, 55.8; Atlanta, 59.1; Scranton, 60.1; and Milwaukee, 69.4.

A high city rate as compared with country rates "may be caused largely by deaths of non-residents who come to the city for hospital treatment." Further, in comparing the rates of northern and southern states, the color distribution must be considered, "since colored persons are apparently less susceptible to cancer than are white persons."

As to the parts of the body affected, the following percentages were found:

Buccal cavity	4.3	Female genital organs	15.6
Stomach and liver	37.9	Breast	10.3
Peritoneum, intestines, and rectum	12.9	Skin	3.7
		Other organs or unknown site	15.2

H. U.

CAMPAIGN AGAINST UNCLEAN DAIRY UTENSILS

An active campaign against the unsterilized milk can, pail, strainer cloth, and separator, as contributing causes to high bacterial count in city milk, is to be carried on this season by the United States Department of Agriculture in cooperation with the health and milk officials of a number of cities. Already health officers in one hundred and fifty localities have accepted the department's offer to demonstrate to their local milk producers a simple home-made sterilizer, costing not more than fifteen dollars, which if used on the farm will help guard the milk against this initial and serious contamination. How great a bearing sterilization of milk utensils on the farm has on the bacterial content of milk is shown by experiments which have proved that the average milk can, when washed in the ordinary way, may contain over eight billion bacteria, and that almost every milk can so treated harbors millions of bacteria which give a high bacterial count and hastens the souring of milk.

The home-made sterilizer for dairy utensils which is to be demonstrated uses steam as a sterilizing agent. All that is required to develop steam enough to sterilize the ordinary dairy utensils is a two-burner kerosene stove, and there is nothing about the device which calls for special skill in its effective use. The department has twenty of these sterilizers, described in *Farmers's Bulletin 748*, and has offered to supply an outfit for a two-weeks' demonstration to any local health or dairy official who will agree to show it in operation to the milk producers in his section.

The effectiveness of this sterilizer has been fully proved both in the laboratory and on the farm. In one experiment ten gallons of fresh milk were divided into two parts. Five gallons, passed through a separator into a five-gallon can, both utensils washed in the ordinary way, showed at the end of an hour 1,880,000 bacteria per cubic centimeter. The other five gallons, passed through a separator into a can, after both utensils had been washed and sterilized by means of the home-made sterilizer, showed only 24,000 bacteria per cubic centimeter.

The device, moreover, removes foul odors and leaves the utensils dry as well as sterilized. Experience shows that the bacterial count is thus materially reduced, while the producer finds that his milk does not sour so quickly and has an improved flavor.

The specialists of the Dairy Division are hopeful that the device, wherever it is demonstrated, will come into common use. It is believed that this sterilizer will find ready adoption among small dairymen because of its low cost of construction and operation, and because its use will tend to improve the quality and increase the keeping character of the milk.

MCINTIRE PRIZE

Last year Dr. Charles McIntire resigned the secretaryship of the American Academy of Medicine after twenty-five years of faithful service. In appreciative commemoration, the American Academy of Medicine decided to raise a fund, the income of which should be expended in accordance with Dr. McIntire's suggestions. As a consequence, the Academy now announces two prize offers, the prizes to be awarded at the annual meetings for 1918 and 1921, respectively.

The subject for 1918 is "The Principles Governing the Physician's Compensation in the Various Forms of Social Insurance." The members of the Committee to decide the relative value of the essays awarding this prize are—Dr. John L. Heffron, Dean of the College of Medicine, Syracuse University; Dr. Reuben Peterson, Professor of Obstetrics and Diseases of Women, University of Michigan, and Dr. John Staige Davis, Professor of Pediatrics and Practice of Medicine, University of Virginia.

The subject for 1921 is "What Effect Has Child Labor on the Growth of the Body?" The members of the Committee to award this prize are—Dr. Thomas S. Arbuthnot, Dean of the Medical School of the University of Pittsburgh; Dr. Winfield Scott Hall, Professor of Physiology, Northwestern University, and Dr. James C. Wilson, Emeritus Professor, Practice of Medicine and of Clinical Medicine, Jefferson Medical College.

The conditions of the contests are:

(1) The essays are to be typewritten and in English, and the contests are to be open to everyone.

(2) Essays must contain not less than 5,000 or more than 20,000 words, exclusive of tables. They must be original and not previously published.

(3) Essays must not be signed with the true name of the writer, but are to be identified by a *nom de plume* or distinctive device. All essays are to reach the Secretary of the Academy on or before January 1st of the years for which the prizes are offered and are to be accompanied by a sealed envelope marked on the outside with the fictitious name or device assumed by the writer and to contain his true name inside.

(4) Each competitor must furnish four copies of his competitive essay.

(5) The envelope containing the name of the author of the winning essay will be opened by Dr. McIntire, or in his absence by the presiding officer at the annual meeting, and the name of the successful contestant announced by him.

(6) The prize in 1918 for the best essay submitted according to these conditions will be \$100; that of 1921 will be \$250.

(7) In case there are several essays of especial merit, after awarding the prize to the best, special mention of the others will be made and both the prize essay and those receiving special mention are to become at once the property of the Academy, probably to be published in the Journal of Sociologic Medicine. Essays not receiving a prize or special mention will be returned to the authors on application.

(8) The American Academy of Medicine reserves the right to decline to give the prize if none of the essays is of sufficient value.

The present officers of the American Academy of Medicine are: George A. Hare, M.D., Fresno, Calif., *President*; J. E. Tuckerman, M.D., Cleveland, *President-Elect*; Charles McIntire, M.D., Easton, Pa., *Treasurer*, and Thomas Wray Grayson, M.D., 1101 Westinghouse Building, Pittsburgh, Pa., *Secretary*.

VOLTA BUREAU PRIZE

The American Association to Promote the Teaching of Speech to the Deaf announces that it is authorized to pay \$300 of the income received from the Alexander Graham Bell Grosvenor Memorial Fund for the essay, treatise, or other form of composition complying with the following conditions,

that most clearly details how a mother can best teach and train her deaf child in the home from infancy to school age:

Each essay submitted must (1) be delivered at the Volta Bureau, by prepaid express or mail, before 12 o'clock noon of November 1, 1917; (2) must be typewritten in the English language; (3) must contain at least 20,000 words, as it is doubtful if the necessary instructions and suggestions can be properly presented with a less number; illustrations may be used if the author prefers; (4) must bear a distinguishing mark or pseudonym, but nothing to tell who the author is or where residing; (5) must not be folded or rolled, but placed in a large, plain envelope bearing only the title of the essay and the distinguishing mark of the author; (6) must be accompanied by a small sealed envelope bearing the title and distinguishing mark on the outside and containing the name and address of the author in a signed statement that the essay is entirely the writer's own production; (7) must be wrapped and addressed to The Judges for the Alexander Graham Bell Grosvenor Memorial Fund Prize, Volta Bureau, 1601 35th Street N. W., Washington, D. C.

The Judges elected to pass upon the merits of the offerings are:

Mr. and Mrs. Edmund Lyon, Rochester, N. Y.

Dr. and Mrs. A. L. E. Crouter, Mt. Airy, Philadelphia, Pa.

Mr. and Mrs. Gilbert H. Grosvenor, Washington, D. C.

These Judges will render a report to the Directors of the Association, who reserve the right to withhold the prize should the Judges report that none of the compositions possesses sufficient merit to warrant making an award.

The composition awarded the prize becomes the property of the American Association to Promote the Teaching of Speech to the Deaf, to be published where and under such conditions as the Directors may determine.

NOTE. —

To the Editor:

Please tell your readers that any hard-of-hearing person can secure literature that may prove helpful, by addressing the Volta Bureau, 1601 35th Street N. W., Washington, D. C. We do not give medical advice, we have no medicines nor instruments for sale, and we do no teaching.

Sincerely,

THE SUPERINTENDENT.

ALCOHOL'S PART IN THE WAR

Shall We Lose with Liquor or Win Without?

By ALLEN ROGERS, Ph.D., American Chemical Society

Alcoholic beverages must go.

The requirement is clear. Alcohol can fill liquor glasses to satisfy the wilful appetite of thousands of Americans living comfortably at home, — or it can be transferred to fill a hundred hospital needs to save the lives and relieve the sufferings of other thousands on the battlefields.

Alcohol may play its part in the gaieties of the club, in the hotel, and in the home, — or it may play a bigger part in the manufacture of the munitions which alone can bring us victory. It may be transferred into beverages which make for pleasure, or it may become the fuel that will serve the nation when other fuels are lacking.

Alcohol can no longer satisfy the demands of the country's indulgence only. It must serve the thousands of industrial purposes that are the vital needs of America at war. And in war time, everything must go that hampers the work of a successful mobilization of the country's resources, and leads to final victory.

Every extravagance and waste in home life and public life must be eliminated, and the great industry of alcoholic beverage manufacture must bow

before the demands of the nation in its time of crisis. This is no sentimental demand, — or religious, or even moral, — it is the demand of the nation's chemists, based upon scientific analysis.

No man would assume that we should curb our supply of ether in order to increase our supply of beverages in time of peace, and no man will say that our soldiers should be denied the greatest possible protection because the manufacture of their medicines depends upon the reduction of our alcoholic drinks. As a local anæsthetic, as a heart and respiration stimulant, and for many other purposes, ether, so largely made of alcohol, finds wide use on the battlefield.

Ether may be used in connection with kerosene to produce a very satisfactory substitute for gasoline in motor cars. It may be employed as a solvent, as a cleaning solution for guns, and for many other important purposes. Its use as such, on a large scale, is impossible now, because while denatured alcohol is free, pure alcohol, used in the manufacture of ether, costs \$2.40 a gallon, of which \$2.00 is tax. European countries have removed this tax, and ether is now made in quantities, — Europe's plan has been successful. It was forced upon her by dire necessity. Let us learn by her experience.

Alcohol is of fundamental necessity as a solvent in the manufacture of explosives. We must be sure that the present abnormal demand is not hampered even remotely. Consider the comparative importance of alcohol for beverages and for explosives in war times.

As fuel, alcohol finds a great use, and fuel will be in unnatural demand as the war goes on. For internal combustion engines, for cooking stoves, and for numerous other purposes, alcohol, as a fuel, must help win the war. Emergencies will arise, and shortages in other fuels will appear suddenly. There must be no curtailment of this source.

Not only for ether, for explosives, and for fuel, does this country need alcohol. This need goes into nearly every industrial field, and this need is always increased by war. For a great number of medicinal purposes other than ether, alcohol is essential; the preparation of dye-stuffs depends upon it, and the manufacture of many shellacs and varnishes. These are only a few of alcohol's industrial uses.

"But why not use wood alcohol for all these purposes," goes the argument, "and continue using grain alcohol in the manufacture of liquor?" And the nation's chemists answer "impossible." The vapors of wood alcohol are blinding, and its use is highly dangerous for all manufacturing.

Efficiency? Economy? What will become of these if the great industrial units, now elaborately organized and busily engaged in the manufacture of alcoholic beverages, must close up shop, abruptly?

Don't close the breweries and distilleries. Transform them. INSTEAD OF MAKING ALCOHOL FOR DRINKS, MAKE IT FOR THE MANUFACTURE OF EXPLOSIVES, MAKE IT FOR ETHER AND OTHER MEDICINAL PURPOSES, MAKE IT FOR FUEL, MAKE IT FOR DYES AND SHELLACS, — MAKE IT FOR EVERY USE TO WHICH UNCLE SAM'S CHEMISTS CAN PUT IT IN THE SUPREME MOMENT WHEN ALL THINGS MUST GO TO THE MELTING POT TO BE TURNED TO THE NATION'S GREATEST GOOD.

(Issued by the Committee of Sixty for Wartime Prohibition, N. Y.)

A "PREPAREDNESS" NOTICE TO PHYSICIANS

Every physician who is a subscriber to or a reader of the *GAZETTE* is asked to pay particular attention to the following notice, and to *comply with the request* made therein.

"Owing to war conditions, the State Department of Health finds a growing difficulty in obtaining supplies for the manufacture and distribution of diphtheria antitoxin and vaccine virus. There is, in particular, a shortage of bottles for antitoxin. All physicians throughout the State are, therefore, urgently requested to search for antitoxin bottles and return them to the Antitoxin and Vaccine Laboratory, Forest Hills, Mass.

WHAT EVERY MOTHER SHOULD KNOW ABOUT INFANTILE PARALYSIS

Infantile Paralysis (also called Poliomyelitis) is a catching disease caused by a tiny germ. The disease occurs mostly in young children, but now and then attacks older persons.

It is not difficult to recognize typical cases of the disease. Here is a common picture: A child, previously perfectly well, complains of a little stomach trouble or diarrhoea. It is feverish, restless and irritable. In the morning the mother finds that the child cannot stand or perhaps that it cannot move its arms.

Parents should be on the lookout for all cases of illness in their children. No matter how mild, it is advisable to seek a doctor's advice. Don't be misled by patent medicine advertisements. The country is already being flooded by announcements of quacks who want to sell their stuff. None of their medicines are any good. Camphor will not do any good. See a doctor!

The germ of the disease is present in discharges from the nose, throat and bowels of those ill with infantile paralysis, even in the cases that do not go on to paralysis. It may also be present in the nose and throat of healthy children from the same family. Do not let your children play with children who have just been sick or who have or recently have had colds, summer complaint, etc. For this reason **children from a family in which there is a case of infantile paralysis are forbidden to leave their home.** If you hear of their doing so, report it at once to the Department of Health.

Much can be done to reduce the amount of crippling caused by the paralysis. Remember that this requires the services of a trained physician and the care of a competent nurse. Unless you can give these to your child, send word **at once** to the Department of Health, so that the patient may receive proper care in a well-equipped hospital. Of the children cared for in hospitals, only one-quarter as many die as of those treated at home. Give your child a fair chance and let the hospital doctors care for it.

DEPARTMENT OF HEALTH

139 Centre Street, New York

CHRONIC NON-TUBERCULOUS LUNG INFECTION

Nine cases diagnosed by experienced physicians as supposed tuberculosis in which the disease was proved to be non-tuberculous are reported by Albert H. Garvin, W. W. Lyall and M. Morita in the *American Review of Tuberculosis*. The clinical course in these cases begins with an insidious onset with subsequent development of periodic cough and expectoration and even hæmoptysis during a state of rapidly waning health. All the symptoms of pulmonary tuberculosis may occur in chronic non-tuberculous lung infection. Physical signs as elicited in the upright position may or may not differ from those of tuberculous pulmonary infiltration. But while pulmonary tuberculosis is frequently a disease with a wealth of physical signs and a paucity of symptoms, the reverse is true in chronic non-tuberculous lung infection. However, *examination in the inverted position* will often reveal the site of the infected area when it could not be discovered otherwise. In the differential diagnosis from pulmonary tuberculosis the points suggestive of chronic non-tuberculous lung diseases are: (1) longer duration and lesser severity of effect upon the patient, (2) better general health, (3) ninety per cent. of lesions at the base and only ten per cent. in the apices or upper lobes, the reverse of the conditions found in tuberculosis, and (4) physical signs less manifest than the symptoms.

The essential treatment is posture. Drainage of the basal lesion in the inverted position removes the muco-purulent sputum and relieves the pressure and absorption symptoms due to retention of the secretion. At least fifteen minutes four times a day is the minimum rule. Initial treatment may cause a brisk reaction with fever, but, as it is continued, rapid improvement of the general condition and diminution of sputum to a minimum follows. The prognosis in younger patients is excellent.

Bacteriological examination of the deepest or residual sputum showed *B. influenzae* of low virulence in seven out of eight cases. In four of these it was the predominating organism and in the other three second in point of frequency. The persistence of the microorganism places these patients in the carrier group. The microorganism may be the ætiological factor in base lesions of the lung. Management of the cough and sputum as usually practised by tuberculosis patients prevents the dissemination of *B. influenzae*.

THE CLASSIFICATION OF PULMONARY TUBERCULOSIS

Walter L. Rathbun, Otisville, reviews the classification of pulmonary tuberculosis from before the time of Bayle up to the present day, concluding with the classification of the National Association for the Study and Prevention of Tuberculosis, now in general use in this country, and the rearrangement as worked out at Otisville in 1910 and adopted by the Sanatorium Association in 1916, are discussed in the *American Review of Tuberculosis*. The National Association Classification recognizes four groups of cases: "Incipient," "Moderately Advanced," "Far Advanced," and "Acute Miliary Tuberculosis." The rearrangement adopted by the Sanatorium Association uses the above grouping to describe the anatomic lesions in a given case and adds a further qualifying classification of symptoms into "A. slight or none," "B. moderate," and "C. severe," any one of which may describe a case that falls anatomically into any of the four main groups.

These combinations are interpreted as follows:

LESIONS

Incipient. Slight infiltration limited to the apex of one or both lungs, or a small part of one lobe. No tuberculous complications.

Moderately Advanced. Marked infiltration, more extensive than under incipient, with little or no evidence of cavity formation. No serious tuberculous complications.

Far Advanced. Extensive localized infiltration or consolidation in one or more lobes. Or disseminated areas of cavity formation. Or serous tuberculous complications.

Acute Generalized Miliary Tuberculosis.

SUMPTOMS

A. (Slight or None.) Slight or no constitutional symptoms, including particularly gastric or intestinal disturbances or rapid loss of weight; slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.

B. (Moderate.) No marked impairment of function, either local or constitutional.

C. (Severe.) Marked impairment of function, local and constitutional.

This scheme offers the following combinations:

Incipient	A.	Moderately Advanced	A.
"	B.	"	B.
"	C.	"	C.
		Far Advanced	A.
		"	B.
		"	C.

The rearrangement unquestionably greatly increases the flexibility of the classification without appreciably modifying the original text.

URGES CHEMISTS TO ANALYZE EACH CITY'S GARBAGE

"Have your city food chemist analyze your city garbage from week to week and publish prominently what he finds as an index of food-saving or waste in your community," is the suggestion the United States Department of Agriculture is making to municipal authorities throughout the country. Where there is no official chemist, local chemists capable of determining percentages of fats, protein, starch, and organic matter wasted in garbage can render great service to the nation by volunteering to make these analyses in their localities.

Vast amounts of bread, meat and edible fats are wasted in garbage and tons of valuable foodstuff for animals are lost to the food supply of the nation by usual garbage reduction or disposal methods. One of the first results from the careful analysis of city garbage should be the passage of more rigid enforcement of garbage-collection ordinances, requiring that no glass, tin, wood, burnt matches, paper, string, or inorganic trash be mixed with the vegetable material, meat scraps or bones which can be used for feed.

This dual collection of garbage and trash is being rigidly enforced by Germany in all cities of 40 000 people. Garbage so collected from a population of 17 000 000 people in Germany, although the German garbage pail always has been far leaner than the American one and is especially light at this period, furnished briquettes rich in protein which when fed to dairy cattle produced 1 500 000 to 2 000 000 quarts of milk daily.

In most American cities, however, garbage is sent to reduction plants, where all the fat and oil it contains is recovered for use in making soap or greases. The residue after the oil is extracted is used as fertilizer or dumped into the ocean. This practice has been highly profitable because the American garbage pail is very rich in fat, American garbage averaging 3 per cent. of fat, while German garbage rarely shows even 1 per cent. of fat, as the German people never have been wasteful of animal or other fats. Another reason for the use of the reduction method is that in many cities ordinances prevent the use of garbage for feeding animals, particularly dairy cows, although there is no valid hygienic objection to the use of dried and properly sterilized garbage as food for cattle or hogs.

The Department specialists believe that as the thrift idea gains ground less and less fat will be thrown into the garbage pail, and are hopeful that the time is not far distant when the amount of fat will make reduction for the recovery of oils hardly worth while. This will mean that a lot of excellent and valuable foodstuff now being wasted as food will never get into the garbage pail. Even when all fat is eliminated, however, and waste of bread and cereals and meat has been reduced to a minimum, the garbage pail nevertheless will contain, in the form of parings, plate scraps and trimmings, a vast amount of material which should be conserved and used as feed for hogs, cattle or poultry. First, however, the people must face the facts and know the truth of their waste, and in bringing this waste home local chemists can render effective service.

BOSTON UNIVERSITY SCHOOL OF MEDICINE GRADUATION WEEK

Commencement exercises for the graduating class of 1917 of Boston University were held on Wednesday, June 6, at 10.30 o'clock, in Tremont Temple, as in other years, followed by the University Convocation. Bishop Hughes, a gifted orator of the Methodist Episcopal church, delivered the Commencement oration.

The representative chosen to speak for the Medical School at the Convocation was Dr. Samuel E. Fletcher of Chicopee, Massachusetts.

The Baccalaureate Service was held on Sunday afternoon, June third, at four o'clock, in Old South Church, Copley Square, Boston.

On Monday evening, June 4, the Faculty of the Medical School gave the annual Faculty and Graduation Reception, with formal exercises in the auditorium of the Evans Memorial. Dr. Charles T. Howard gave the Faculty address, and Messrs. John C. V. Fisher of Scotch Fort, Prince Edward Island, and John W. Harvey of St. Johnsbury, Vermont, were class speakers. The usual reception and dance in the Medical School laboratories followed.

The annual alumni dinner was held in the Hotel Georgian, Park Square, on Tuesday evening, June 5, and the evening of Wednesday, June 6, was Boston University Night at the "Pop" Concert, Symphony Hall, Boston.

B. U. COMMENCEMENT INNOVATION

Comment on the following is unnecessary. It happens, however, to be a very interesting and useful innovation in commencement exercises, and it seems advisable that all graduates of Boston University School of Medicine and all who are interested in education should know of it. The use of this ceremony added much to the solemnity and dignity of an occasion which is always full of seriousness.

The President's Charge to the Graduating Class of 1917

In advancing you to the degrees that make you graduates of Boston University, and which also admit you as members of the University Convocation, I have admitted you to a worthy company of those everywhere who have enjoyed the privileges and bear the responsibilities of gentle training and scholarly culture. This is a brotherhood entrusted with a noble inheritance. A University is not a mart that sells learning to those who will pay the cost. What you have received here, Boston University has not sold; and you have not paid for it. You are rather made the heirs of the past. Men of generous mind and patient endeavor have labored and you enter into their labors; prophets and sages, scholars and men of science, poets and men of affairs, have given themselves, dreaming, searching, singing; and what they wrought out through long years is yours abundantly. It is yours to use, to increase, and to bequeath to your successors.

We are met to celebrate your incoming. Here are some still young who receive you gladly as their comrades in service; some are here who hail you as those who are to carry the torches they pass on; and others not here are those whose memory hallows your welcome, for they have fought a good fight and have won the crown of glory laid up for them and, pray God, laid up for you also.

In the name of these, and of your sons soon to follow you, the University charges you to be strong, and to quit yourselves like men; and she charges you to unflinching loyalty to:

"Whatsoever things are true, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue and if there be any praise, think on these things."

It is right and seemly that you do here and now publicly declare your purpose so to do, and I claim from you, who become members of our University Convocation, her pledge, which you will be glad to make and which you will endeavor to keep, God being your helper.

The Graduates' Response

With a sober sense of my responsibility I promise to hold my Degree so it suffer no harm in my holding it; to hold it with untarnished honor to myself; In generous loyalty to Alma Mater, and for the honest service of my country and of my fellow-men.

PERSONAL AND GENERAL ITEMS

A course in The Pathology and Diagnosis of Tumors is to be given under the direction of Professor Francis Carter Wood, M.D., Director of Cancer Research at the Crocker Cancer Research Laboratory, beginning July 9, 1917, and lasting six weeks. This is to be in connection with the summer session of Columbia University. The fee is to be \$23, and some knowledge of normal histology is a prerequisite.

Dr. Eleanor M. Anderson (Class of 1916, B.U.S.M.) is spending the month of July on her father's ranch in Wyoming, near Yellowstone Park, and will be at Long Beach, California, during August. She expects to enter the Massachusetts Homœopathic Hospital on September, for a one year's internship.

Beginning in October, 1917, women medical students are to be admitted to the department of anatomy of the University College in London, England.

The *Gazette* reports with much regret the death of Dr. Clyde Bartlett, late of Marion, Massachusetts, which occurred on Sunday, June 10. Dr. Bartlett graduated from Boston University School of Medicine in June, 1915, and settled soon after in Marion.

The Boston Consumptives' Hospital at Mattapan offers unusual opportunities for service to assistant resident physicians for a period of six months each, with re-appointment if desired and the assistant gave satisfaction. The Hospital has a capacity of approximately 425 beds, with a special hospital for 75 beds for children and infants. The salary paid to assistant residents is equivalent to \$1,000 a year.

FOR SALE: Complete electrical outfit, homœopathic remedies, and medical library of the late Russell Bingham, M.D. Location if desired. Write to Mrs. Russell Bingham, 130 Day St., Fitchburg, Mass.

Dr. Percy G. Browne has been appointed Medical Director of the Boston Mutual Life Insurance Company, succeeding the late Dr. Frank E. Allard of Boston. Dr. Browne and Dr. Allard were classmates (1892) in Boston University School of Medicine.

Dr. William J. Taylor of Dedham, Massachusetts, was married on June 13 to Miss Virginia Sherman Thompson of Melrose, Massachusetts. Dr. Taylor is a graduate of the Medical Department of Boston University, class of 1915, and is the successor of Dr. G. E. Hoffses (B.U.S.M., 1898), who retired about two years ago from practice in Dedham and removed to Damariscotta, Maine.

Dr. Sanford B. Hooker, Editor-in-Chief of the *New England Medical Gazette*, is in New York City for a three weeks study of Epidemic Cerebro-Spinal Meningitis at Rockefeller Institute, his work beginning June 27th.

The *Gazette* has received word that Dr. Harriet Horner, recently of Angelica, New York, died on May 11. Dr. Horner was a graduate of Boston University School of Medicine of the class of 1903.

Dr. M. Edna Wallace (B.U.S.M., 1915) has relinquished a promising practice in Stafford, Kansas, to enter the missionary field in China, under the Presbyterian Board of Missions. She expects to sail on August 30 from Vancouver, and is at present taking preparatory studies in New York City.

FOR SALE: Practice, on account of sickness in family. Homœopathic physician located in same office for 20 years. For full particulars, address "Boston" care *New England Medical Gazette*, 80 E. Concord St.

WANTED two associate physicians in a private hospital for chronic, nervous and mental diseases. Either man or woman. Must be registered in Massachusetts. Address Dr. A. H. Ring, Ring Sanatorium, Arlington Heights, Mass.

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ORIGINAL COMMUNICATIONS

OBSTACLES IN THE WAY OF RECOVERY

By JOHN P. SUTHERLAND, M.D., Boston

At first glance it is somewhat mortifying to professional pride to realize the limitations of pharmacotherapeutics. In some quarters it is considered unpardonably heretical to suggest the existence of such limitations, but the practitioner who analyzes his experiences with scrupulous regard for the truth is forced to admit that the field of pharmacotherapeutics is markedly limited, and that it is becoming more and more so with every advance in the great art of healing. A little more than a generation ago the practice of medicine consisted chiefly — almost wholly — in the administration of drugs or “medicines”; but with the discovery and utilization of X-rays and radium, the development of electrotherapy and psychotherapy, and the phenomenal evolution of surgery, the growths of the “specialties,” the increase of our knowledge of dietetics, of hygiene and of preventive medicine, the use of drugs has become more and more restricted. Even with all the resources of modern medical art at our disposal, however, it is the humiliating experience of most, if not all, physicians, that sick people do not always recover; they do not always get well, even though they do not die. In such cases, what are the obstacles in the way of recovery?

In reviewing statistics furnished by Boards of Health the questions may come to us: Why are there more than 52,000 deaths annually from cancer in the registration area of the United States? Why were there 22,000 cases of poliomyelitis last year (1916) in New York, New Jersey, Connecticut and

Massachusetts, with so large a percentage of mortality and so insignificant a percentage of complete recoveries? Why were there in the state of Massachusetts, during the year 1915, 6,447 deaths from pneumonia and 5,047 deaths from tuberculosis? Why are there annually in our Southern States 75,000 cases of pellagra with such a heavy mortality? Why are there in the state of Massachusetts alone upwards of 18,000 mentally deranged individuals, the great majority of whom will never be restored to a condition of mental soundness? The thoughtless may be satisfied with the answer that the conditions here enumerated are incurable, but such an answer is simply begging the question. What are the obstacles in the way of recovery in such cases?

To think of something less depressing because accompanied by practically no mortality, let me ask why do we have such unnumbered hosts of sufferers from the neuroses and psychoses and the indefinite chronics who simply drift from month to month, or even from year to year, without manifesting more than temporary reaction, and without dying? These cases above all others need help because they tend neither to spontaneous recovery like the majority of the so-called "acute" diseases, nor to dissolution. These cases if not inherently incurable are practically so. What are the obstacles in the way of their recovery? Evidently there is something wrong somewhere, and it is the duty of the profession to solve the riddle.

One of the wisest and sanest of medical teachers, with whose teachings his followers should be more thoroughly familiar, is Samuel Hahnemann, one of the greatest reformers medicine has ever known. Few are the medical problems he has failed to attack with the certainty, the insight and the comprehension of a master's mind. His genius led him to the roots of things and to the recognition of principles upon which medical art may be solidly founded.

With every repeated study of the *Organon* I am more profoundly impressed with the colossal common sense, the wide and thorough scholarship, the analytical powers, and the extremely logical mind possessed by Hahnemann. His ability to observe, and to reason from his observations, seems to me equal to that of Hippocrates or Sydenham. His clearness of vision and his definiteness of thought, his originality and initiative have not been equalled by the medical writers since his time. The third paragraph of the *Organon* is one I often think of as wonderful in its comprehensiveness and its great simplicity. In this paragraph Hahnemann makes the convincing claim that the physician should *know*, distinctly and definitely *know what is curable in disease in general and in each individual case in par-*

ticular; he should *know what is curative in drugs in general and in each drug in particular*; he should *know how to adapt what is curative in medicines* (preparation, dose, repetition) to what he has recognized as undoubtedly morbid in his patients; and finally he should *know, in each case, the obstacles in the way of recovery and how to remove them*, in order to act as a true master of the art of healing. There is nothing stunted or half-way, or indefinite or apologetic or quackish in this paragraph; the very soul of honesty and earnestness and wisdom breathes through it. The paragraph as a whole, but the latter part of it particularly, is the subject I would urge you to consider at this time.

It is easy to show from the *Organon* itself that Hahnemann did not expect all cases even of the self-limited and spontaneously curable diseases to get well. As is said in section 73 in reference to the acute epidemic or infectious diseases, "if left to themselves, they will, within a limited period, terminate in recovery or death, as the case may be." "Even when the most carefully individualized and selected treatment is resorted to, many cases of pneumonia, a so-called "curable disease," die. Many cases of typhoid fever also die even when the utmost in the way of diet, hygiene, vaccins, medicine and nursing has been made use of. So it goes, as we all know, with some cases of diphtheria, scarlet fever, meningitis, and many other well-known conditions. As an excuse for the fatal ending we may say the kidneys were not able to eliminate the extra wastes formed by the disease; or the heart was not strong enough to carry the additional load imposed upon it; or the nervous system was overwhelmed by the toxæmia; but these are better excuses than explanations. As a matter of fact, the real obstacle in the way of recovery is often a wholly unrecognizable thing.

In another class of cases, long lasting or "chronic" in nature, originating in an insidious way, possibly not revealing their nature until some distinct anatomical change has been brought about, the course may be a steadily downward one until dissolution occurs. For illustrations, reference may be made to cancer, to pulmonary tuberculosis, to lymphatic leukæmia, to pernicious anæmia, to Addison's disease, to dementia, *etc.* Heroic efforts may be made by patients and friends, physicians and nurses to stem the fatal tide, to strengthen the powers of resistance, to recognize and remove the obstacles in the way of recovery, but without avail. There is evidently much to be learned yet in connection with just this class of cases.

To follow Hahnemann's injunction to *know* "what is curable

in diseases in general and in each individual case in particular" may not be difficult in a broad and general way, but to differentiate between the curable and incurable in that third class of diseases that comes between the acute cases which in the great majority of instances tend spontaneously to recovery, and the more chronic conditions which tend as certainly and inevitably to dissolution, requires a skill in diagnosis and prognosis and a minute and detailed knowledge of pathology which not all of us possess. Hahnemann has thrown out many hints, however, that may prove of service to us. For instance, knowledge of Causes may help us to differentiate between the curable and incurable and to recognize and remove obstacles in the way of recovery. In *section 77* of the *Organon* reference is made to chronic diseases which are produced by constant exposure to *avoidable* noxious influences, such as indulgence in habitual excesses in eating, drinking, and various kinds of health-destroying debauchery; deprivation of the necessities of life; residence in unhealthy dwellings, cellars or other confined places without fresh air, sunshine and exercise; or over-taxation of body and mind; the effect of continued mortification and trouble. Provided there is no chronic miasm pervading the organism, unhealthy conditions thus produced vanish of their own accord under an improved mode of living. Treating the class of diseases here referred to by the heteropathic, antipathic, or homœopathic method frequently proves unsuccessful, the obstacle in the way of recovery being a failure to recognize the cause and remove it. No medical writer has been more emphatic concerning the importance of causes than has Hahnemann. *Sections 5, 77, 224, 225, 238, 244,* and the many sections devoted to the consideration of the three great chronic miasms (Sycosis, Syphilis, Psora) give evidence of the value he attached to causes.

In our own day in some of the largest hospitals, such as the Massachusetts General, "social service departments" have been established for the purpose (among others) of gaining the confidence of patients and making careful inquiry into the character of the patient's mind and temperament, his occupation, his habits and mode of living, his social and domestic relations. Nurses and skilled assistants acquire information about a patient, which is of material aid to the physician in treating the case, and sometimes enables him to succeed where he has previously failed. It is recognized today that non-material causes may play havoc with the material body. People have been killed by sudden fright or intense fear. Sudden violent emotion has so affected a nursing mother's milk as to kill her babe. According to Crile, in his "Mechanistic Theory of War and Peace," prolonged fear and exposure to mortal

danger has seriously modified the structure of brain cells in soldiers during this present war. Anxiety, worry, apprehension are known to disturb appetite, digestion, renal and cardiac functions, sleep, *etc.*, and joy, courage, happiness and hope, immaterial influences though they be, may have an opposite effect. It is this idea that underlies the Freudian methods and modern psycho-analysis. These things support Hahnemann's "Vital Force Theory," which assumes that it is not essentially the liver or kidney or muscle that is sick, but the indwelling *Force* or *Energy* or *Dynamis*. At all events, failure to take cognizance of the possibilities of these immaterial influences may prove an obstacle in the way of recovery.

In *section 21* of the *Organon* emphasis is laid on the fact that drugs are essentially sick-making substances; that first and last, once and always drugs are pathogenic, and it is this sick-making power, this power to disturb health, that must be intelligently used to heal the body of its diseases. It is a misconception to believe that drugs have two actions; to make well people sick, and sick people well. The drug possesses only a pathogenic action which may be used, as Hahnemann should have the credit of pointing out, by an antipathic, a heteropathic, or a homœopathic method or principle. To no other physician of antiquity or of modern times is so much credit due as to Hahnemann for developing our knowledge of drug pathogenesis, and it is to our discredit that we are as unfamiliar as we are with this science. We are too apt to prescribe on "key notes," on "characteristic symptoms," or on "modalities," and to neglect the *totality* of the drug symptoms. We do not always realize that thyroid gland does not *cure* a myxœdema. Its use must be continuous. Interruption in its use allows the condition to return. Digitalis may apparently tone up a decompensated heart, but it is rarely a cure of the condition, which returns on the slightest excuse. Aspirin may benumb pain, but the disease is not *cured* by the drug. Catharsis may be produced by many drugs, but this does not mean recovery from a settled constipation. Probably all will acknowledge that insufficient knowledge of drug pathogenesis, and misconceptions concerning the pharmacotherapeutic principles upon which it is possible to administer drugs, are often obstacles in the way of a real recovery.

Age is not infrequently an obstacle in the way of recovery — an obstacle usually more keenly appreciated by the physician than by the patient. The removal of the obstacle in this case is not as easily accomplished as it is in some others. The evil accompaniments of age in very many cases, however, may be prevented, even without Metchnikoff's sour milk, by a suitable

hygienic and dietetic régime. Insurance companies recognize the influence of this obstacle in the healing of wounds, uniting of fractures, the effects of shock, *etc.*, and refuse to grant accident policies after a certain age has been reached by the applicant. It is a not infrequent experience, however, to have octogenarians make prompt recovery after surgical operations, or from a bad bronchitis, or even a pneumonia. If heart, lungs and kidneys have maintained their integrity such recoveries may be expected.

Notions, whims, family traditions sometimes act as obstinate obstacles in the way of recovery. These notions frequently are connected with diet, as in cases where perfectly wholesome and digestible articles of food are supposed to produce dire results if eaten; or in cases where patients cannot take certain remedies because of the serious consequences which are supposed to follow their use. Obstacles of this nature are varied and numerous and not infrequently retard or prevent a recovery, and unfortunately their removal is a matter of great difficulty.

An obstacle sometimes in the way of recovery that is more easily removed than others, and that lies with the physician rather than the patient, is the insufficient time devoted to the examination of the patient and sympathetic listening to his complaints. Of course, some patients are garrulous, and the poor overworked physician has no time to waste listening to non-essentials, but he should have time to take the temperature with a reliable thermometer; he should take time enough to make a thorough examination of the case, to familiarize himself with the condition of every function and organ of the body. Much harm is done patients and profession by visits too short to do full justice to the case.

A Hahnemannian doctrine that possibly may have degenerated into a mere phrase with many has to do with the "*totality of the symptoms.*" The phrase is more distinctively homœopathic than any other except that one which expresses the therapeutic principle itself — *similia similibus curentur*. Faithful observance of the spirit of the formula would not only frequently prevent the making of incorrect diagnoses, but would give the patient the intelligent care that is his right. For instance, a thorough search for the totality of the symptoms may prove that a case that has been diagnosed and treated as a *neurasthenia* may be shown by urinary analyses to be a case of vicious or deficient metabolism, failure to recognize which has formed a distinct obstacle in the way of recovery, and the recognition of which has caused a change in the treatment with possible subsequent cure. A case of assumed sciatica or rheumatism of the knee may be following a so-called rheumatic

treatment without benefit. The securing of the real totality of symptoms, which includes fallen arches, not only changes the diagnosis, but leads to a successful treatment. A pernicious anæmia with exceptionally icteric sallowness may be undergoing unsuccessful treatment for "biliousness." The totality of symptoms in this case includes the findings of a microscopical examination of the patient's blood. A case being treated for climacteric metrorrhagia, without change for the better, may include in its totality of symptoms an overlooked uterine polypus or a fibroma. Completion of the totality of symptoms not only removes an obstacle in the way of recovery, but leads to a curative operation. A hay-fever-like condition, or an obstinate cough may be due to naso-pharyngeal adenoids, hypertrophied turbinates, or deflected nasal septum. So-called symptomatic treatment of the hay-fever-like condition or the cough may be useless until the totality of symptoms has become inclusive and the abnormal organic condition recognized and suitably treated. A case of constipation and pseudo-paralysis of a leg in a four-year-old may be causing much family unhappiness until protracted search for the totality of symptoms reveals an obstacle in the way of recovery in a phimosis, the cure of which removes the "obstacle" and the "totality."

One more item in this incomplete survey of an important subject should be mentioned. In *paragraph 13* of the *Organon*, in *note 3* to *paragraph 7* and in *paragraph 186*, Hahnemann makes as detailed and positive an acknowledgment of the great value of surgery as was possible in his day and with his knowledge. Unquestionably Hahnemann today would be among the foremost in paying tribute to the marvelous results of modern surgery, by means of which many an obstacle in the way of recovery (in cases otherwise incurable) is discovered and removed. The briefest reports of two cases illustrates the limitations of pharmacotherapeutics and the sometimes brilliant results of surgical intervention.

A fourteen-year-old girl, three years after an appendectomy, fainted in school and began to manifest gastro-intestinal symptoms, progressive lassitude, loss of color, nausea, vomiting, epigastric pain, nervous symptoms, irregularity of menstruation, and finally peculiar seizures suggestive of epilepsy. Conscientious if not intelligent, pharmacotherapeutic, dietetic and hygienic treatment proved to be absolutely ineffective after about a year's trial. A diagnosis of probable gastro-duodenal ulcer was made and confirmed by laboratory and X-ray findings. Exploratory incision was recommended and made. No ulceration was found, but three unusually thick cord-like adhesions were

found binding intestinal loops together and to the previous abdominal wound. The obstacles to recovery were removed, including liberal freeing of a bound-down clitoris, and a most happy recovery followed.

A woman thirty-eight years of age had suffered severe indigestion for 7 or 8 years; had suffered also from severe pain in right lumbo-iliac region; had lost in weight and strength. She had been treated in Chicago, Pittsburgh, Philadelphia and elsewhere dietetically and medicinally without benefit. Her condition finally was diagnosed as probable chronic appendix, and advice to be operated upon was accepted. The appendix was found to be practically normal, but a strong membranous adhesion between the ascending and transverse colon made a sharp infra-hepatic kink, which was the obstacle in the way of her recovery. Suitable surgical treatment rejuvenated and restored that patient to a most encouraging state of mind and health. It is unnecessary to discuss *Jackson's membranes* and *Lane's kinks*; it is enough that the obstacle to recovery was found and removed.

In conclusion it seems consistent and suitable to urge:

- that the *Organon* be more thoroughly read and studied;
- that the doctrines advocated therein be made matters of more general knowledge;
- that the physician should determine to the best of his knowledge whether his cases are curable or incurable;
- that the physician owes it to his patient to give him time enough for a thorough examination;
- that thoroughness in diagnosis is most desirable and necessary;
- that we should secure the absolute totality of symptoms, which necessarily includes laboratory examination of blood, fæces, urine, stomach contents, and X-ray and physical examinations of all sorts;
- that an earnest search be made for the causes of diseases;
- that one should not forget that diseases are really non-entities and that immaterial agencies and influences may be potent ætiologically and therapeutically;
- that whenever a reasonable expectation of improvement or cure fails to be realized, the obstacle in the way of recovery must be energetically sought for and removed;
- that we should not be unreasonably expectant in using any form of pharmacotherapeutics;
- that while the physician must know all about diseases, and all about drugs, his range of knowledge must include the obstacles in the way of recovery and how to remove them, in order to act as a *master of the art of healing*.

**REPORT OF THE SECRETARY AND TREASURER OF THE
FINANCE COMMITTEE OF BOSTON UNIVERSITY
SCHOOL OF MEDICINE FOR THE YEAR 1916**

During the past year five new members have been added to the Finance Committee: Dr. Frank C. Richardson, Dr. Clara D. Gary, Dr. H. M. Pollock, Dr. H. L. Babcock, and Dr. S. H. Calderwood.

Ten meetings of the committee have been held, eight at the office of the secretary and two at the Boston Art Club. President Murlin was present at a meeting at the Boston Art Club.

At the meeting held May 1st, it was voted that the secretary ascertain the dates of various medical society meetings in New England and that a committee provide speakers for those meetings to present the cause of Boston University School of Medicine. In compliance with this vote, the secretary investigated several lanterns and finally purchased a stereopticon, screen and extra lamp.

Lantern slides were prepared from photographs of the medical school, hospital and homœopathic hospitals of New England, the entire expense being \$81.70. Dr. Southwick gave a talk on "Medical Education at B.U.S.M.," illustrated by these slides, in Worcester, at the Worcester Co. Homœopathic Medical Society meeting. Dr. Sutherland represented us at Augusta, Me., Dr. Patch appeared before the Vermont State Society, and Dr. Watters at the American Institute of Homœopathy at Baltimore.

We propose to send a representative to the meetings of the homœopathic state societies of New Hampshire, Rhode Island and Connecticut.

We were encouraged by the results obtained from our campaign among high-school graduates last year, and it was decided to repeat it. Four thousand sixty-one post-cards were sent to the high school graduates of New England, asking what business or profession they proposed to enter and where they planned to continue their studies. One thousand fifty replies were received, which are classified as follows:

Business	241
Chemistry	57
Law	56
Engineering	246
Medicine	56
Agriculture	93
Dentistry	16
Ministry	10

College decided.....	123
Miscellaneous.....	153
	<hr/>
	1,050

The entire cost of this campaign was \$133, which is to be borne proportionately:

Medical School.....	\$20.52
Business Administration.....	91.00
Law School.....	21.48

To the 56 students who signified their intention to study medicine, personal letters and literature were sent.

Last year's list of prospective students of medicine was covered twice and college catalogues were sent upon request. As a result of this campaign, a number of students are now preparing for medical school at the college of liberal arts.

Coincidentally with this campaign, a letter was sent to each alumnus, reminding them of the superior qualifications of the school and requesting the names of prospective medical students.

In connection with the Clinical Congress of Surgeons of North America, the *Journal of Surgery, Gynecology and Obstetrics* published an excellent description of the college and hospital, written by Dr. Sutherland. Five thousand reprints from this journal were secured and these were sent out with a personal letter to alumni and homœopathic physicians of New England, and also to a list of prominent laymen.

In conjunction with the College of Business Administration and in conference with Dean Lord, we prepared circulars in Spanish for distribution in South America and Cuba. Three thousand of these were enclosed with Dean Lord's publications to prospective students, without expense to us for postage.

Two years ago, a course of war lectures was given by Mr. Balch. Last year, a dramatic reading was given by Mrs. Gale. This year, the Finance Committee presented a course of three concerts under the management of Frank Stanley Tower. These concerts were given at Jacob Sleeper Hall on Dec. 6th, Jan. 10th and Feb. 14th, by Irma Seydel, violinist; Jeska Swartz-Morse, contralto; Heinrich Gebhard, pianist; Josef Malkin, 'cellist; Myrna Sharlow, soprano; Francesco Savasta, tenor.

Tickets were sold to the value of \$858. By arrangement with Mr. Tower, the gross proceeds were divided equally. Mr. Tower furnished the artists, the piano and the printing. The Finance Committee was responsible for the other expenses.

The net proceeds for the Balch course were \$841; from the dramatic reading, \$517; and from the three concerts \$339. In comparing the merits of these three entertainments, we feel that Mr. Tower's concerts far excelled our previous efforts and should have been more profitable to our cause. We regret that this was not the case; that there seemed to be greater difficulty among the members of the committee in disposing of tickets than heretofore. This points conclusively to the fact that the project of yearly entertainments has outgrown its popularity and should be discontinued. It was hoped that this very excellent concert course as conducted by Mr. Tower would become a yearly event, anticipated with pleasure by our alumni and their friends. It could have been given with very little effort and have resulted in a substantial revenue annually. The secretary must confess to a keen disappointment that this plan does not apparently meet with approval.

At the same time, the secretary wishes to express his appreciation of the coöperation extended by certain members of the Finance Committee, who showed extraordinary zeal in the disposal of tickets.

During the year, in addition to the work already described, 9,012 multigraphed and personal letters have been sent out and 16,350 pieces of printed matter have been mailed, in addition to 6,380 post-cards. The mailing lists have been carefully revised and brought up to date.

The endowment fund has been augmented by the purchase of one bond costing \$1,012.92.

During 1916, \$29,400 have been added to the permanent endowment fund; \$16,000 of this amount was from the estate of J. P. Payne. In addition to this, a bequest of \$10,000 to the medical school has been inserted in a will.

Thus, the good work progresses, not with the celerity we would wish, but we are encouraged in the belief that our efforts will finally be rewarded by a substantial endowment to the medical school.

The Finance Committee is exploiting the medical school among physicians in New England, laymen interested in missionary work, tax-payers of Boston and suburbs, among prosperous men of New England, millionaires of this country and prospective students of medicine. In all, 120,000 printed circulars, 63,101 multigraphed letters and 4,544 personally written letters have been distributed, a total of 187,645.

This enormous amount of work has constituted an educational campaign, has called the attention of thousands to the existence of our medical school and has acquainted them with its needs.

The work of the Finance Committee for 1916 has been directed very largely to securing new students for B.U.S.M. We have recognized that a medical school must have students as well as endowment and it seemed to the committee an appropriate time to bend our efforts to this end, especially in view of the high entrance requirements now demanded.

We have been deterred from actively engaging in a campaign for raising money because of the unprecedented calls for charity occasioned by the war and the very strenuous demands of all home charities for assistance.

It is interesting to note that as we have given less attention to appeals for funds, the gifts to the endowment fund have materially diminished.

However, it seemed to us imperative that the Finance Committee concentrate its efforts in the direction of interesting prospective medical students and in acquainting the community and the medical profession at large with the advantages and facilities which we have to offer. It is believed that a relatively small proportion of the homœopathic profession appreciates the advantages which the school offers, its unexcelled clinical facilities, the high excellence which it maintains and the commendable progress which has placed it in the first rank among the homœopathic medical schools of this country.

To promulgate this information widely, we believe to be the greatest service which the Finance Committee can render the medical school at this time.

J. EMMONS BRIGGS, M.D.

477 *Beacon St.*,
Boston, Mass.

SUMMARY OF ONE HUNDRED AND FORTY-EIGHT CASES OF ACUTE ANTERIOR POLIOMYELITIS

Treated at the West Department of the Massachusetts Homœopathic Hospital from August 12th, 1916, to January 8th, 1917

By SAMUEL A. CLEMENT, M.D., Resident Physician

Towns from which cases were admitted:—

Abington, 1; Acton, 1; Arlington, 3; Belmont, 2; Boston, 4; Braintree, 3; Bridgewater, 4; Brockton, 2; Brookline, 3; Cambridge, 29; Canton, 1; Chelsea, 6; Dedham, 8; Dorchester, 1; Dover, 1; Everett, 22; Franklin, 1; Framingham, 1; Lexington, 2; Medford, 4; Middleboro, 2; Milford, 1; Milton, 3; Natick, 2; Norwood, 1; Quincy, 14; Reading, 1; Rockland, 1; Stoughton, 2; Walpole, 1; Watertown, 3; Wellesley, 1; Winchester, 10; Winthrop, 2.

Nationality

American	81
Greeks	2
Negroes	2
Canadians	5
Hebrews	5
Poles	7
Irish	25
Swedes	5
Fins	1
Italians	14
Syrians	1

Complexion

Dark	60
Light	86
Colored	2

Sex

Males	84
Females	64

Age

5 months	1
1 year	26
2d year	35
3d "	22
4th "	14
5th "	14
6th "	4
7th "	5
8th "	4
9th "	1
10th "	3
11th "	1
12th "	1
14th "	1
15th "	1
18th "	1
19th "	4
21st "	2
23d "	1
24th "	2
25th "	3
26th "	3
31st "	1
35th "	1
50th "	1

Onset

Gastro-intestinal symptoms and lameness characterized the onset in about 95% of the cases, and the others had symptoms referable to the upper respiratory tract.

Date of Onset of Paralysis

1st day.....	1
2d ".....	10
3d ".....	17
4th ".....	77
5th ".....	38

In the others the date of the onset of the paralysis was unknown.

Type of Paralysis

Ascending.....	19
Spinal.....	85
Bulbar and Spinal.....	31
Bulbar.....	7
Cerebral.....	3
Abortive.....	2

Parts Paralyzed.

Face, ocular muscles, muscles of mastication, larynx, throat and neck, thorax, diaphragm, abdominal muscles, posterior trunk muscles, bladder and bowels, upper and lower extremities.

Combinations of Paralysis

Face, left.....	4
“ right.....	1
“ right and neck.....	1
“ right and lower left.....	1
“ left and throat.....	1
“ left neck, throat, larynx and diaphragm.....	1
“ right, neck and upper right and left.....	1
“ left and ocular muscles.....	1
“ right, palate and diaphragm.....	1
“ right and lower right and left.....	1
“ left, neck and upper right.....	1
Muscles of Mastication.....	1
Ocular muscles, and lower right and left.....	1
“ “ upper right and left, post. trunk and lower right and left.....	1

Larynx and thorax, right, upper right and lower right and left.	1
“ upper left and lower right and left.	1
“ neck, thorax, upper right and left.	1
“ lower right and left.	1
“ throat, neck and thorax.	1
“ neck, upper left, thorax, lower right and left.	1
“ neck, thorax, upper left and posterior trunk.	1
“ neck, upper right, thorax, lower right and left.	1
“ neck, thorax, upper right and left, bladder, lower right and left.	1
Throat and thorax.	1
Throat, neck, thorax, upper right and left, trunk, lower right and left.	2
Throat, neck, upper right and left, thorax, lower right and left, bladder and bowels.	1
“ and lower left.	1
Neck, upper right and left, lower right and left.	1
“ posterior trunk, lower right and left.	5
“ thorax, upper right and left, abdominal muscles, bladder and lower right and left.	1
“ lower right and left.	1
“ lower left and posterior trunk.	1
“ and posterior trunk.	1
“ thorax, posterior trunk and upper left.	1
“ thorax, upper right and left, bladder.	1
“ and upper right.	1
Thorax and diaphragm, abdominal muscles, upper right and left and lower right and left.	1
Thorax, upper right and lower left and right.	1
“ upper right and left, lower right and left and bladder.	1
“ posterior trunk and lower right and left.	1
Posterior trunk, upper left and lower right and left.	1
“ “ and lower right and left.	5
“ “ lower right and left and bladder.	6
“ “ bladder and lower right.	1
“ “ and lower left.	1
Bladder, bowels and lower right and left.	1
“ upper right and left and lower right and left.	2
“ lower right and left.	2
Upper left.	3
“ right.	4
“ right and left.	3
Lower left.	7
“ right.	11
“ left and right.	26
Lower left and upper left.	3

Lower right and upper right	1
“ right and left and upper left	1
“ right and left and upper right	2

Relapses

Lower right and left, followed in five weeks by upper right and left, thorax, ocular muscles, bladder and bowels.

Upper right followed in ten days by thorax and trunk.

Complications

Double otitis	1
Right otitis	3
Diphtheria	1
Nasal purulent diphtheria	4
Pneumonia	1
Gastro-enteritis, with bloody movements	6
Relapses, in ten days	2
“ in five weeks	1
Private cases	4
Two in family	5
Three in family (?)	1

Treatment

Medical	148
Immune serum	20
Fluid (spinal)	20
Lumbar puncture	20
Normal serum	20
Osteopathic treatment	1

Lumbar puncture before admission 6

Mortality

Deaths	27
Death rate	18.2%
Adults	31.1%
Children	15.3%
Moribund on admission	16

Regression

Improvement has been noticed in all but three cases.

Cases referred, wrongly diagnosed:

One each of Erb's paralysis, apoplexy, spastic paraplegia, acute gastritis, convulsions, enteritis, alcoholism, pericarditis, meningitis, bronchitis.

SOLANUM DULCAMARA *

By WALLACE McGEORGE, M.D., Camden, N. J.

Dulcamara is better known by pharmacists as *bittersweet*. It derives its name from the two Latin words, *dulcis* (sweet) and *-amarus* (bitter); but as the bitter taste often comes first, the German name, *Bittersuss*, is correct. It is also known as the *woody nightshade*.

Dulcamara is a perennial plant growing in moist places, in ditches, along hedges, and on the borders of rivers in this country and in Europe. It is a climbing shrub. Long after the leaves have fallen off, berries of a bright scarlet hue hang on in pretty bunches. Children who pick and eat these berries generally have vomiting spells followed by diarrhœa and sometimes by a rash simulating nettle-rash.

Dogs, rabbits and pigeons that have been experimented upon with this drug sometimes die from the poisonous effects, yet *dulcamara* is not a violently toxic drug. If given in full doses of the tincture to sensitive patients, many unpleasant symptoms supervene: diarrhœa, vomiting and occasionally syncope.

It is a remedy not often used except in certain seasons of the year. In late summer or early fall, when the days are hot and the evenings and nights are cool, or for people who spend their vacations in the mountains, it is frequently called for and given with excellent results.

In children who are kept in during the heat of the day and given their airings in the evening after the sun has gone down and the air has grown chilly, who take cold and have persistent diarrhœa from these sudden changes in temperature, *dulcamara* is often a good remedy.

For people who live in damp houses or in houses where there is water in the cellar, or as a prophylactic against sickness after exposure in a cold, damp house, *dulcamara* may be useful.

Guernsey, in his "key-notes," says: "The patient's symptoms are aggravated when the weather suddenly becomes colder, especially if the weather is damp." Hering told us to think of *dulcamara* in dropsical affections after suppression of sweat by damp, cold air. Nash considers it a great remedy for back troubles from taking cold.

In acute ascending paralysis, Dr. Hart says, *dulcamara* is good in simple paralysis of the extremities if the circulation

* Read before the Materia Medica Branch of the Philadelphia County Homœopathic Medical Society March 27, 1917.

is so interfered with as to produce an icy coldness of the surface, and where the general sensibility is unaffected.

Dulcamara is useful in the early stages of nephritis following scarlet fever, particularly if the patient has been exposed to cold. But when, with the albumin and the casts, there is considerable blood in the urine, *cantharis* is better. Bönninghausen says that *dulcamara* is the best remedy for "stinking" urine, but I have found benzoic acid better if the offensive odor is the result of renal cancer. While benzoic acid will make the patient more comfortable, it does not permanently remove this disturbing symptom.

In retention of urine, in inflammation of the mucous coat of the bladder, with ropy, stringy, gelatinous masses of mucus in the urine, if a result of exposure to cold or damp, *dulcamara* is useful. But *chimaphila* will relieve the pain and lessen this mucous discharge quicker than does *bittersweet*.

When you have a patient who says: "If I get chilled, I must hurry to urinate; if I get into a cold place, I must go to stool or to urinate," *dulcamara* is the remedy. For ineffectual urging to stool, *dulcamara* is as useful as *nux vomica*.

Phillips, in his useful book on "Materia Medica," says that psoriasis and pityriasis are amenable to the influence of *dulcamara*; and Sir Alexander Crichton stated that out of twenty-three cases of "lepra" (psoriasis) treated with *dulcamara*, only two failed to be relieved.

In closing, I give you Kent's picture of the *dulcamara* patient: "The *dulcamara* patient often becomes a sickly patient with threatening of the catarrhal discharges to center in the bronchial tubes, *i.e.*, in the mucous membrane of the breathing apparatus. Many adults die of acute phthisis that might have been cured by *dulcamara*, and you will find very commonly among this class of patients those who are worse from every cold, damp spell of weather. Such enter right into the *dulcamara* sphere. They are better by going south, where there is a continuously warm climate. The *dulcamara* patient is a sickly patient, threatened with acute phthisis, and he has a pallid face that is sickly yellow and sallow."

HOMŒOPATHIC PHYSICIANS IN THE WAR

A Conference at Washington with Surgeon-General Gorgas and The Council of National Defense

HOW TO ENLIST

By DEWITT G. WILCOX, M.D., F.A.C.S., Boston

These are the days in which history is in the making, not only in war, but in medicine. Every loyal homœopathic physician throughout the United States, no matter what his age or line of practice, has been desirous of doing "his bit" for his country in a manner wherein he could best employ his abilities. His chief concern has been, "Will my services be accepted without prejudice?" The apparent disinclination of the Red Cross to accept as Base Hospitals certain of our well-equipped homœopathic institutions has tended to accentuate the impression that prejudice existed. So acute has the situation become that it seemed imperative a definite understanding should be reached, and that right quickly.

The Executive Committee of the American Institute of Homœopathy has been diligently following the instructions given it at the Rochester meeting in seeking an answer to this question. In pursuance thereof, Dr. Franklin Martin, Chairman of the General Medical Board, Council of National Defense, sent the following invitation:

1. At the suggestion of Dr. C. E. Sawyer of Marion, Ohio, I, as Chairman of the General Medical Board of the Council of National Defense, invite you to a conference of homœopathic physicians to be held at the offices of the Council of National Defense, Munsey Building, Washington, D.C., at 10.30 o'clock, July 27th, 1917.

2. The purpose of the conference is to consider the best means of bringing before the medical profession of each State the problems of the Government in the matter of enrollment of medical men for service in the Officers' Reserve Corps of the United States Army. Our plan is to invite one or two men from each state to this meeting. The conference will be addressed by the Surgeons-General of the Army and Navy, and those in attendance will be requested to appoint a committee to present recommendations to the General Medical Board which will meet on Sunday, July 29th at 10.30 o'clock, in the rooms of the Medical Section of the Council of National Defense.

3. Trusting you will be able to attend this conference, and that you will advise me of your intention, I am

Yours very truly,

(Signed) FRANKLIN MARTIN,

Chairman, General Medical Board, Council of National Defense.

This conference was held July 27 and 28, at the New Willard Hotel, Washington. Some thirty-five States of the Union were represented, besides officers and Trustees of the Institute, making a total present of about 125 physicians. The Council of National Defense was represented by Dr. Franklin Martin, Surgeon-General Gorgas of the Army, Major-General

Noble of the Surgeon-General's office; Surgeon-General Braisted of the Navy, and Colonel Goodwin of the English Army.

Just prior to this conference, a short preliminary was held in the Hotel Raleigh, addressed by Dr. C. E. Sawyer, Chairman of the Board of Trustees of the American Institute, Dr. Sawyer urging that we as homœopathic physicians should take a dignified stand as American citizens and *qualified* physicians, and upon these unassailable grounds to demand a proper recognition of our rights to serve our country without prejudicial discrimination.

At the conference with the Medical Defense Board, which then followed, Dr. Franklin Martin gave a stirring address, the dominant note of which was an urgent appeal to physicians to enlist in the Officers' Medical Reserve Corps. He regarded it the paramount duty of every physically able physician between the ages of twenty-two and fifty-five so to enlist. There are also places, said Dr. Martin, for women physicians, and their services will be very acceptable. A committee of seven has been appointed by Surgeon-General Gorgas to place women physicians where they can be most helpful. Dr. Martin reminded his audience that conditions at the front were not materially improving for the Allies; that Germany was in a better condition physically and financially than a year ago; and that she would have one million new recruits to put into the field next year. At the present time England has in the field 12,000 physicians, and she needs 35,000 more. So far we are sending only a few scattering units. He urged that the younger physicians should enlist, no matter how much their services might be needed in medical colleges and hospitals, and that men beyond the age limit of fifty-five be requisitioned to man the hospitals and colleges.

Major-General Noble then spoke, and his air of serious earnestness impressed us deeply with the urgency of the medical situation. He estimated that for every two million soldiers enlisted there would be needed ten thousand physicians, and upon that basis we needed ten thousand more physicians at once. Up to the present time the Medical Board has enrolled nine thousand physicians, which number is not adequate to the present enlistment of soldiers.

A pertinent matter in which many of us are interested is the drafting of medical students. Dr. Noble said it was the desire of the Medical Board to exempt medical students, especially the seniors, from military service until after their graduation; but Congress has disapproved their request, on the basis that it is unconstitutional. A further request was then made, that each drafted medical student be granted a furlough until

the completion of his course. This also was disapproved. So as it now stands, under-graduates in medicine will be subject to the same draft as other men.

Dr. Noble closed his address by saying, "We want physicians to enlist in the Officers' Medical Reserve Corps. We want them now. *We do not care what school they belong to*, so long as they are qualified, registered physicians. What we want is medical men and women."

As a guest of the Medical Board, Col. Goodwin, an English physician, honored the Conference by his presence and held the close attention of his audience by a plain matter-of-fact talk concerning the medical situation in England and the front generally. Col. Goodwin's bearing and appearance proclaimed him as one who withheld much more than he expressed, which gave his words added weight. "Do not," he appealed, "make the awful mistake which England did, of sending armies to the front with an insufficient number of doctors. If you do, the loss of life will be something appalling." England has today about twelve thousand physicians in military service. This leaves such a shortage of physicians in the home towns of England that there is but one physician to every six thousand of the civilian population. The number of English physicians killed in military service has been greatly exaggerated, said Dr. Goodwin. As a matter of fact, but two hundred have been killed and seven hundred wounded.

England is responsible at the present time for the maintenance of about one million beds at the East and West fronts, together with the base hospitals in England.

After the addresses by the representatives of the Medical Board, the latter withdrew and the meeting was turned over to the assembled physicians representing the various States. Dr. Van Baun, President of the American Institute, acted as Chairman. The first matter considered was our representation upon the National Red Cross Committee. We now have two homœopathic physicians (Drs. Kahlke and Van Lennep) upon this committee, which has forty-seven members. We desire a third member and also a representative upon every one of the State Red Cross Committees.

Before the adjournment of the morning session, it was agreed specifically that our committee, of which Dr. Sawyer was Chairman, should ask the General Medical Board, Council of National Defense, that three additional homœopathic hospitals be accepted as base hospitals: namely, Hahnemann Medical College and Hospital of Philadelphia, Hahnemann Medical College and Hospital of Chicago, The Metropolitan Hospital, Department of Public Charities, New York.

During the interim between the morning and afternoon sessions, a large number of Senators and Representatives were called upon by the physicians from their respective States and districts and informed of the conference in session, its objects, and the attitude of the Red Cross toward the homœopathic school. The results of these visits, as reported in the afternoon session, were highly gratifying. The following resolution was unanimously adopted:

“That we earnestly recommend that Congress be asked to authorize the application of the principle of selective conscription to medical men and women, below the age of 55; and that there be appointed in the several States exemption boards composed of members of the medical profession only; and further, that in view of the vital importance of conserving the medical resources of our country, we recommend that the President of the United States be requested to exempt from service those men who are actually enrolled as students of medicine.”

The following morning Surgeon-General Gorgas addressed the conference. He expressed much pleasure in learning that the homœopathic physicians of the country were offering their services and assured us such services would be most welcome. He said the country would need fifteen thousand physicians by September. He emphasized the fact that England has found that the “all-around physician, the general practitioner” has proved more valuable than any other class of physicians to the general army needs. Specialists are needed in the base hospitals. Aside from surgeons, the specialists most needed are orthopedic, eye, ear, nose and throat men and neurologists. Col. Gorgas regarded thirty-five years as being the most desirable age for physicians in active service.

In the September issue the *Gazette* will give a detailed report of the conference between the American Institute Committee and the General Medical Board, as noted in the invitation sent out by Dr. Martin, at which conference all of the matters discussed will be considered and acted upon. The net results of the conference, however, are these: An assurance from the General Medical Board that homœopathic physicians not only will be accepted in, but are urgently requested to join the Officers' Reserve Corps; that at least one thousand such physicians would be accepted at once. Second, that three additional homœopathic hospitals will be accepted as base hospitals; that the Red Cross has virtually ceased to control or have any management of base hospitals; that in the future such affairs will be entirely in the hands of the Army Department. Third, that no agreement could be made as to where enrolled physicians would

be sent. A physician who is a member of the staff of a hospital which later became a base hospital may be transferred to such base hospital if he has already enlisted, or if he enlists before his hospital is accepted.

Finally, we are urged to secure at least one thousand homœopathic physicians for enrollment. To secure this number the Executive Committee of the Institute will appoint one man in each district to secure men from his district and forward the names to Dr. Thomas E. Costain, of Chicago. Dr. DeWitt G. Wilcox has been appointed to secure enrollments from New England.

EDITORIAL

Books for review, exchanges and contributions — the latter to be contributed to the GAZETTE only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

THE GAZETTE does not hold itself responsible for the opinions expressed by its contributors. Reprints furnished at cost.

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SURGICAL SHOCK

One of the most valuable and interesting contributions to medical literature which has recently appeared is the Shattuck Lecture, delivered (*in absentia*) before the Massachusetts Medical Society last month by Professor Cannon of Harvard.¹ The original article is a scholarly piece of work and well worth careful perusal. A summary of it is here presented.

No attempt is made to define the condition known as surgical shock, the author considering a careful description of the observed phenomenon of more value than a definition. The descriptions given by Fischer and by Cheyne are summarized, and the phenomena are divided into four main groups, *viz.*, disturbances of sensation, of motion or respiration, and of the functions and control of the circulation. These groups are then further analyzed.

It is well known that persons in shock have a diminished sensitiveness to stimulation. Blunted sensation and apathy are, indeed, striking features of the condition. It is a demonstrated fact that repeated stimulation of a group of afferent nerves will result in a lessened capacity of the nerves to transmit impulses, and Sherrington has shown that the ingoing impulses are probably blocked at the synapsis between the afferent peripheral and central neurons. This condition can be produced diffusely experimentally by exposing the intestines. Again, other workers have proved that a low arterial pressure results in a raised synaptic threshold, the lack of oxygen or the in-

¹ Cannon, W. B. *The physiological factors concerned in surgical shock.* Bost. Med. & Surg. Jour., 1917, clxxvi, 859.

crease of carbon dioxid being the chief factor. In short we have both of the mechanisms at work, so that the blunting of sensation is accounted for.

The lowered blood-pressure results in an inadequate blood-supply for muscles, as well as for nerve cells, so that the muscles are less efficient while at the same time the synaptic resistance is increased. These facts account for the relaxation and feeble movements. Secondarily, the temperature falls because the flaccidity prevents the shivering which is an important element in the bodily heat regulation.

Several views of the cause of the typical shallow and rapid respiration are discussed. It is considered most likely that the true explanation is that the decrease in the circulating blood causes an acidosis, together with an undue irritability of the respiratory centre. Incidentally, the respiratory movements of the diaphragm, being much reduced, do not give the usual aid to the heart in pumping the blood; the tax on the myocardium is thereby increased.

Circulatory changes are shown especially by a low arterial pressure, pallor, a small thready pulse, and a cold skin. The various factors in the production of the low arterial pressure (the basic condition) are discussed, these being the cardiac, vasomotor, and those dependent on blood volume. The heart is affected only to the extent of the decrease in the coronary circulation. The vasomotor center is exceedingly resistant, and is probably, if anything, more active than usual. The work of Crile, who attempts to prove exhaustion of nerve-cells by the histological examination of such cells taken from shocked animals, is open to the objection that similar appearances (even granting that they are abnormal) can be produced by hæmorrhage, and therefore be the result of the shock rather than its occasion. We are forced, then, to conclude that the fundamental factor is that of blood volume. It is generally agreed that the blood accumulates in the splanchnic area during the condition of shock. The stagnation of this blood, with the consequent increase in carbon dioxid content and therefore in hydrogen ion concentration, promotes the relaxation of the portal vein.

The main question is, what prevents the blood gathered in the splanchnic area from returning to the general circulation? A brief review of the physiology of the portal system readily suggests the answer. The capillaries of the stomach, intestine, pancreas and spleen deliver their blood into the mesenteric branches of the portal and the capillaries of the liver; through these the blood must flow before being gathered in the hepatic veins and carried to the inferior vena cava. The work required

to drive the blood through these fine divisions results in a drop of blood pressure from about 120 mm Hg. at the aortic level to approximately 10 or 12 mm Hg. at the portal level, and a further drop in passing through the liver, so that in the inferior vena cava the pressure is practically zero.

There is evidence to show, as we have hinted above, that the vasomotor centre is rendered more active under conditions of improper oxygenation such as obtain in shock; the branches of the portal vein in the liver are subject to nervous control, and are therefore contracted. This contraction would be effective in restraining the blood from its onward passage if the pressure from the arteries were not high.

With the blood accumulated here, however, the *vis a tergo* is lost, and we enter upon a vicious circle. The vasomotor centre is insufficiently oxygenated, and therefore, becoming more active, shuts up more blood between the two capillary regions of the portal area, thus depriving itself still further of its required blood supply, and at the same time reducing still further the arterial pressure.

In the light of these facts, it is doubtful whether any of the present methods of treating shock are adequate. The insufficiencies of each are then explained. The suggestion is made, entirely *a priori*, but nevertheless upon reasonable grounds, that the intraperitoneal administration of some substance causing contraction of smooth muscles may be of value in constricting the portal vein and thus returning the entrapped blood into the general circulation. Such a substance is pituitrin, a natural secretion which seems to have a special action upon smooth muscles causing contraction. This idea, coming from an authority of Professor Cannon's eminence, is well worth consideration, and may prove of value in treating a condition in the face of which at present we feel nearly helpless.

W. O.

BASE HOSPITAL NO. 39

The organization of *Base Hospital No. 39* under the American Red Cross for foreign service during the war has nearly reached completion. This hospital unit holds the unique distinction of being the first homœopathic organization of this character in the United States, its medical personnel being almost wholly made up of members of the staff of the Massachusetts Homœopathic Hospital.

The organization of this unit has proceeded under the direction and supervision of the American Red Cross. The United States Government has no authority to organize military medical units in time of peace, but by a presidential proclama-

tion in 1911 the Red Cross was authorized to act as a Government agent to prepare in advance certain hospital units, composed of medical men, nurses, and, as far as possible, of orderlies, laboratory assistants and administrative staff, who had been working together in similar relative capacities in some large hospital. These were organized under the American Red Cross, and each member was required to hold himself or herself in readiness to respond to any call by the Government on a declaration of hostilities. During war these units may be enlisted as regular military organizations under the sole control of the War Department, and each of the medical officers must be a member of the medical reserve corps. This arrangement was designed to make well-organized hospital units immediately available for service in the base hospital in time of war and to avoid the necessity of calling together men from different parts of the country who had no previous association.

When the hospital unit is called into active service the War Department furnishes three officers from the regular army to take charge of the administration, a major as commanding officer, and two captains acting respectively as adjutant and quartermaster, the medical service otherwise remaining as organized under the Red Cross. A registrar with rank of captain is commissioned to serve on the staff.

Under the organizing director, Dr. William F. Wesselhoeft, a commissioned medical staff comprising three majors, ten captains and eleven first lieutenants has been selected, and these men have been enrolled in the Medical Reserve. At the present time the names with the necessary papers have been forwarded to Washington for final enactment.

The professional staff comprises ten surgeons, nine medical men, including the various specialties, a pathologist, a bacteriologist, a radiologist and two dental surgeons. The enlisted personnel comprises sixty-five nurses who are graduates of the training school of the Massachusetts Homœopathic Hospital, and approximately one hundred and fifty-three non-commissioned officers and privates, who have been enrolled by Dr. A. W. Rowe in the various capacities of clerks, orderlies, laboratory assistants, plumbers, electricians, chauffeurs, *etc.*

When the enrollment and equipment are completed, for which purpose \$30,000 has been subscribed and given over to the Red Cross, the hospital unit will be subject to call for over-sea service by the War Department at any time.

D. L. B.

The calling of a conference between the representatives of the homœopathic profession of the United States and the General Medical Board, Council of National Defense, is a matter

of vital importance to all our homœopathic physicians individually and the school in particular. It is quite apparent that the results of this conference will settle some of those disturbing questions which have caused much indignation to our profession because of the unjust discriminations which while existing have been so intangible that they have been all the more aggravating.

It is a well known fact that the Army and Navy, as well as the Red Cross, have studiously avoided recognizing Homœopathy in the Army or Navy. Anything bearing the name "homœopathy" was tabooed. It was quite apparent that the Red Cross had definitely determined that no hospital bearing the name "homœopathic" would be accepted as a base hospital. All this seems quite likely to be radically changed. One hospital, the Massachusetts Homœopathic Hospital, has been accepted, and three more, Philadelphia, Chicago, and New York, have been promised acceptance.

Surgeon-General Gorgas has urged homœopathic physicians to enlist at once. The need for them is great. We shall have homœopathic representatives upon the Red Cross Committee, both National and State. The point now is for us to do our part and secure at least one thousand physicians of eligible age to enlist at the earliest moment.

A detailed report of the Conference appears in this number of the *Gazette*.
D. G. W.

Notice: Any homœopathic periodical literature of the homœopathic journals reviewed in this department may be borrowed by subscribers of the *Gazette* for a period not exceeding five days. Not more than two numbers will be lent at one time. Send requests to the *Gazette* office and enclose six cents in stamps to cover postage.

The British Homœopathic Journal. May, 1917

1. Contributions to the treatment of asthma. 121. Purdom, P.

Most important in connection with the treatment of asthma is the condition of the digestive organs and of the naso-pharynx. The question of diet is almost as important as medical or local treatment of any kind. Most adult asthmatics suffer from naso-pharyngeal catarrh or other nasal disturbance, the removal of which goes a long way toward the recovery of asthma. Potatoes seem to have "a peculiarly bad effect on asthmatical patients."

2. Clinical thermometry in drug pathogenesis. Goldsbrough, G. F. Cont. from p. 400, 1916.

Baptisia tinctoria, borax and boracic acid, and bryonia are discussed from the standpoint of temperature changes observed during their provings.

June, 1917

3. *Clinical memoranda of a case of cervical ribs and one of carcinoma of the sigmoid.* 153. Wright, D. D.

In the first case the cervical rib caused pressure symptoms and necessitated operative interference. In the second case the sigmoid was removed.

4. *Kalmia.* 165. Stonham, T. G.

The Clinique. June, 1917

5. *Sore eyes.* 274. Koons, H. E.

Some more or less common forms of eye disease are considered, and their treatment by the general practitioner is emphasized.

6. *Materia medica for the general practitioner. What shall be taught? What shall be studied? What shall be practiced?* 283. Hobson, S. M.

"The general education of the physician ought to equal that of the majority of the community he is to serve."

7. *Treatment of burns.* 286. Remer, W. H.

Burns of the first degree need practically no treatment; in those of the second degree remove all epidermis over ruptured vesicles and puncture "those blebs which seem to be over tense." In third degree burns, remove as much as possible of the charred tissue, but avoid too much hæmorrhage. Apply sterile gauze saturated with the following:

Picric acid, 85 grains
Magnesium sulphate, 4 drachms
Cantharis 3x (alc. dil.), 2.5-3 oz.
Sterile water, 1 qt.

Cover dressing with sterile gauze and cotton. Keep dressing moist with the solution and change every two to four days according to the amount of discharge. At each dressing remove exudate and sloughs and apply hydrogen peroxid before replacing the saturated gauze.

The Hahnemannian Monthly. May, 1917

8. *Why I am a homœopathic physician.* 257. Wells, G. H.

9. *A study of carcinoma of the stomach based upon eighty-three cases.* 266. Bartlett, C.

10. *Some modern proofs of homœopathy.* 280. Besson, J.
11. *Scurvy and rickets.* 285. Seybert, C. H.

The most important remedy for scurvy is phosphorus. Others that may be indicated are ferrum phos., rhus tox., ruta and mercurius vivus. In rachitis, too, phosphorus is often very valuable, as may also be calcarea carb., calc. phos. and ferrum phos.

12. *Pernicious anæmia with a report of a case of aplastic pernicious anæmia.* 189. Wurtz, J. G.
13. *Colds in the head.* 298. MacKenzie, G. W.
14. *Antimonium crudum.* 303. McGeorge, W.

The Homœopathic World. Jan., 1917

15. *Therapeutic problems and possible answers.* 4. Wheeler, C. E.

The Indian Homœopathic Review. March, 1917

16. *Lachesis cases.* 69. Majumdar, P. C.
17. *Bacteriology vs. homœopathy.* 76. Das, H. P.
18. *Cancer cures.* 91. Peterman, J. H.

The Journal of the American Institute of Homœopathy. May, 1917

19. *Militant homœopathy in big business.* 1266. Wieland, F.

This interesting article relates the author's experience as director of the medical department of the Montgomery Ward plant in Chicago. During the first month of his incumbency, there was a saving of over three hundred dollars on prescriptions because of the change to homœopathic management.

20. *Publicity for the purpose of educating the intelligent public, including the homœopathic profession.* 1278. Copeland, R. S. (Abstracted in the *Gazette* of July, 1917. 401.)
21. *The indications for Cæsarean section.* 1283. Gramm, T. J.
22. *Ninety-five abdominal and vaginal Cæsarean sections.* 1294. FitzPatrick, G.
23. *When is Cæsarean section indicated in elderly primiparæ?* 1299. Ward, F. N.
24. *Prophylaxis of puerperal convulsions.* 1307. Blodgett, S. H.
25. *The busy man and high blood pressure.* 1313. Halbert, H. V.
26. *Reflex and toxic epilepsy.* 1316. Wood, J. C.
27. *New apparatus.* 1330. King, W. H.
28. *Skin cancer: 139 cases cured by X-ray.* 1335. Grubbe, E. H.

June, 1917

29. *The business address.* 1395. Van Baun, W. W.
 30. *Samuel Hahnemann and modern medicine.* 1409. Bagley, W. D.
 31. *Unsatisfactory anæsthetics and their causes.* 1419. Buchanan, T. D.
 32. *Pyelitis of pregnancy and the puerperium.* 1423. Danford, L. L.

Rest in bed, copious intake of water, liquid diet are general measures useful in the treatment of pyelitis. Hexamethylenamin (urotropin), 5 grains three or four times daily, is useful as a urinary disinfectant. *Berberis vulgaris* has been very efficient in the author's experience, although other remedies such as *cannabis sativa* and *cantharis* are at times indicated. According to De Normandie, alternating the reaction from strongly acid to alkaline has given excellent results. Hyperacidity is produced by giving 5 grains of sodium benzoate every hour until marked acidity to litmus is shown to be present; then the reaction is quickly changed to alkalinity by thirty to forty grains of potassium acetate every two hours.

33. *Therapeutics of nephritis.* 1430. Rowland, J. E.

In selecting a remedy for the treatment of renal diseases, it is essential to take into account not only the patient's subjective symptoms, but also the actual pathological process existing in the kidneys, as revealed by uranalysis. The symptomology and renal lesions for the following drugs are given: *arsenic*, *phosphorus*, *plumbum*, *cantharis*, *apis mellifica*, *terebinth*, *fuchsin*, *potash*. For therapeutic purposes, cases of nephritis may be divided into three classes: (1) acute nephritis (including active hyperæmia), which calls for remedies such as *aconite*, *belladonna*, *gelsemium*, *cantharis*, *terebinth*, *apis mellifica*; (2) chronic nephritis usually requires *cantharis*, *terebinth*, *apis mellifica*, *arsenic*, *mercurius corrosivus*, *phosphorus*, *plumbum*, *rhus toxicodron*, *digitalis*, or one of the various compounds of *potassium*; (3) secondary renal lesions (passive congestion, amyloid degeneration) indicate the treatment of the causal disorder.

34. *A plea for the early diagnosis of urinary tuberculosis.* 1437. Sprague, E. R.
 35. *Preventive medicine.* 1440. Richardson, A. M.
 36. *The patient.* 1444. Stevenson, H. M.
 37. *Radium in the physician's daily practice.* 1456. Bailey, E. S.
 38. *The limitations of medicine.* 1460. Hanchette, W. H.
 39. *Hydrotherapy; its uses and abuses.* 1466. Walter, R.
 40. *The dietetic clinic.* 1478. Woodbury, B. C.

The North American Journal of Homœopathy. June, 1917

41. *Dyspituitarism*. 329. Wilson, J.

42. *A few thoughts on medical education from an analysis made of students in three medical colleges of A+ rating*. 342. Baker, W. F.

43. *An epitome of comparisons in homœopathic materia medica and therapeutics*. McMichael, A. R.

Diseases of the liver: *bryonia*, *carduus mar.*, *chelidonium*, *lycopodium*, *mercurius*, *nux vomica*, *podophyllum*; flatulence: *carbo vegetabilis*, *lycopodium*; dropsy: *apis*, *apocynum*, *phaseolus*; red nose: *agaricus*, *lachesis*, *aurum met*; vascular system: *carbo vegetabilis*, *æsculus*, *aloe*.

44. *Mental symptoms of digitalis*. 350. Minton, H. B.

Minton reports the case of a man who, after six months of digitalis therapy, one drachm of infusion three times daily, became delirious. The digitalis was discontinued, and about four weeks later the delirium disappeared. The cardiac condition during the digitalis-free interval became so bad, however, that the drug was again given, followed in about a month by the delirium. Digitalis was again withheld, and a month later the delirium disappeared. After that the remedy was given with "more judicious management," so that no further mental symptoms developed until the patient's death seven months later. Although heart disease may be accompanied by delirium, in this case the mental symptoms would seem to be due directly to the digitalis; first, because cardiac delirium occurs usually only a few days before death; second, because the withdrawal of the drug was followed, although only after about four weeks, by disappearance of the mental derangement.

The mental symptoms, in this case due to digitalis poisoning, and therefore constituting a proving of this drug, were "a confusion as to the identity of self and as to the identity of persons and things once familiar, and a failure to recognize friends and acquaintances as such, together with a belief that statements of fact made by the patient were not given credence and were persistently contradicted and misstated by those about him."

45. *Clinical cases*. 354. Sloan, T. G.

46. *Remarks about infection*. 356. Hayes, R. E. S.

47. *Heritage vs. homœopathy*. 358. Leggett, S. L. G.

48. *The Hahnemannian doctrine of attenuation*. 359. Abrams, A.

The Pacific Coast Journal of Homœopathy. June, 1917

49. *Radium in epitheliomas*. 277. Cowperthwaite, A. C.

"Except in the treatment of epitheliomas occurring on the

surface of the body, radium is not a substitute for surgery, but it is rather a valuable auxiliary and should be invariably employed after every operation for cancer, wherever the disease may have been located."

50. *President's address — The problem of twentieth century medicine.* 282. Rice, P.

51. *Perineorrhaphy.* 293. Murphy, F. W.

Rivista Omiopatica e L'Omiopatia in Italia, Vol. 10, Nos. 1 and 2
(This issue contains no original articles).

H. U.

REVIEWS

Clinical Medicine

The symptomatology and treatment of arteriosclerosis. Stoner, W.
A. Jour. Med. Sci., May, 1917. 153, 625.

Arteriosclerosis may be classified clinically as (1) high pressure arteriosclerosis with or without chronic renal disease; (2) involutionary or senile sclerosis; (3) infectious or toxic (typhoid, syphilis, diabetes, lead). The first comes usually between the ages of forty and sixty, has an average duration of ten to twenty years, and brings death by cerebral hæmorrhage or heart failure; the senile form begins at fifty or sixty and extends over an indefinite period.

Renal disease is not as frequently present in arterial hypertension as has been supposed. Urinalysis and renal function tests are important aids in differentiating the essential hypertensions from nephritic cases; but albuminuria alone is not necessarily an indication of nephritis.

In early cases high blood pressure may be the only symptom. The appearance of dyspnœa and sternocardia show that the case is no longer early. "There is no question that a hyperpietic case can be detected when it is curable."

Common symptoms associated with hypertension are substernal distress on exertion, transitory hitches in speech, vertigo, numbness of extremities, tendency to fatigue, mental depression, sleeplessness, headache, irritability, "nervous dyspepsia." The patient's description of his symptoms is often vague: "he is cognizant of ailing but scarcely knows how, and feels the need of stimulation." Many of these cases are diagnosed neurasthenia.

The physical signs are more significant. The heart, especially the left ventricle, is more or less hypertrophied, and the aortic second sound is accentuated. Later there is dilatation

with mitral insufficiency. The arteries become thick and tortuous. Oedema may be present in the anterior tibial region. Albumin may be present in the urine. Bronchitis may exist. Cerebral symptoms include migraine, vertigo, epileptic seizures. Transitory numbness or slight mental confusion (claudication, angiospasm) may occur before any other symptoms appear.

Involuntary or senile sclerosis may show no symptoms and is not incompatible with long years of life. The heart in this type is atrophic, differing greatly from the hypertrophic heart of essential hypertensive sclerosis.

Advanced arteriosclerosis is not amenable to treatment, but the "presclerotic" high blood pressure is. Early cases, put at rest in bed, with encouragement of waste elimination, will, if favorable, show lowering of pressure, lessening of the intensity of the aortic second sound and diminution in the cardiac hypertrophy. If no improvement follows such management the prognosis is less favorable.

"The patients must not be treated at the expense of their well-being. It requires extreme tact in rightly managing them, for there is a tendency to live around the blood-pressure and become very introspective."

The diet should be restricted, particularly in respect to meats, condiments, stimulants, sugars and fats. Reduction in body weight is advisable if the patient is obese. Salt should be withheld if oedema be present.

Walking is the best exercise for early cases. Advanced cases need a period of rest in bed with warmth, passive exercises, and baths ranging between 33° and 40° C. Change of residence to a mild and equable climate is desirable. The daily ingestion of liquids should usually not exceed 1.5 to 2 liters. Venesection may avert a crisis, but should only be resorted to in essential hyperpiesis and never if there is kidney involvement.

Auricular fibrillation: some clinical considerations. Levine, S. A. Am. Jour. Med. Sci., July, 1917. CLIV, 43.

Levine, in the introductory paragraph of his article, says: "Auricular fibrillation is a condition in which numerous irregular very rapid impulses are sent out by the auricles."

The author concludes that "Auricular fibrillation is a very common condition in a general hospital, being met with almost as frequently as lobar pneumonia." The transient form of auricular fibrillation is much more common than is ordinarily believed. Careful observations and electrocardiographic tracings are necessary in order to avoid missing the transient cases. About one-third of the cases of persistent auricular fibrillation have had one or more attacks of rheumatic fever or chorea and

show clinical signs of chronic organic mitral endocarditis. The average age of these patients is about thirty-seven years. About one-third of the cases have not had rheumatic fever or chorea and show no signs of chronic organic mitral endocarditis.

The average age of these patients is about fifty-eight years.

A consideration of the clinical classification of chronic nephritis.

Christian, H. A. Cleveland, Med. Jour., April, 1917.

Clinical classification of chronic nephritis has been in the past based chiefly upon the pathological end result of the disease process, as found at autopsy. It is now recognized that this method may be misleading, because there is evidence that two disease processes essentially different in their earlier courses may produce the same or very similar pathological end lesions. Classification based upon pathological anatomy is, therefore, unsatisfactory. Two other classifications might be attempted, one based upon ætiology, the other upon function. Aetiological classification is at present impossible, because our knowledge of the causes of nephritis is too incomplete. Renal function, however, is better understood and has of late received much attention.

It is impossible to make an accurate *antemortem* diagnosis of the finer renal structural changes present in a given case of chronic nephritis. The author after many years of experience finds it safer at present to make a diagnosis simply of "chronic nephritis" perhaps "without or with hypertension"; whereas some years ago he attempted to distinguish interstitial, glomerular, or parenchymatous forms of the disease.

Renal function tests enable us to make better diagnoses as to the presence or absence of kidney lesions; they help us to determine the relative importance of the renal disturbance in the production of the total symptom complex and to form a better idea as to prognosis. Of the many renal function tests that have been devised, four have been found especially useful:

1. The phenolsulphonephthalein elimination;
2. The determination of the urea nitrogen content of the blood and its rate of excretion as indicated by the McLean index of excretion.
3. The two-hour renal test, somewhat modified from the form originally described by Schlayer and Hedinger.
4. The amount of diuresis produced by a diuretic such as theocin.

It is a mistake to group cases of nephritis solely upon the basis of renal disturbance, because the inter-relation between the cardio-vascular and renal apparatus is so intimate and so important that any clinical classification cannot be satisfactory

if it fails to take both into account. On this cardio-vascular-renal basis patients may be classified for clinical purposes as follows:

1. *Primary or essential hypertension.* This includes cases of hypertension without definite cardiac or renal insufficiency. Albuminuria and cylindruria may only occasionally be present. Oedema if present is not marked.

2. *Cardio-renal cases in the later stages.* These have hypertension with renal insufficiency, and most of them in the later stages show cardiac insufficiency. Frequent and often marked oedema usually of cardiac origin but sometimes of combined cardiac and renal origin is found.

3. *Chronic nephritis with or without secondary hypertension.* Renal insufficiency is present, but hypertension if present develops later. Oedema is infrequent, but may be considerable and is then of renal origin.

Satisfactory treatment of cardio-vascular-renal cases must be based upon the degree of disturbance of renal function (as determined by function tests) and upon the presence or absence of oedema. "Very rigid dietary limitations are desirable only for those patients with very low renal function. Oedema with fair renal function is almost always of cardiac origin, and responds well to digitalis followed by a diuretic. On the other hand, oedema with poor renal function is usually of renal origin, and diuretics produce only very little diuresis and are apt to be injurious. Very often in these patients functional tests show poor salt elimination, and here salt restriction in the diet often greatly reduces the oedema."

H. U.

BOOK REVIEWS

Roentgen Technic. (Diagnostic). By Norman C. Prince, M.D., Attending Roentgenologist to the Omaha Free Dental Dispensary for Children; Associate Roentgenologist to the Douglas County Hospital, Bishop Clarkson Memorial Hospital, Swedish Immanuel Hospital, St. Joseph's Hospital, and Ford Hospital, Omaha, Nebraska. 140 pages; 71 illustrations. Price \$2.00. St. Louis, C. V. Mosby Co., 1917.

To students and general practitioners who desire to gain an intelligent understanding and working knowledge of Roentgen technic but have not the time to give to a more extended study of the subject, this small book will be of great value and interest.

It begins with an explanation of the general principles of the X-ray, the fluorescent screen, the sensitization plate, intensifying screen, and the modes of generating the necessary electric currents. X-ray tubes are described, showing the difference between gas and Coolidge tubes. Operating the machine, general examination routine, positions, and exposure, sinus injection, location of foreign bodies, and dark room procedures are each taken up separately and thoroughly.

The chapter on positions and exposures goes into minute detail, explaining the technic as to size of plate necessary, diaphragm used, spark gap,

milliamperage, and distance, time allowed for different parts of the body, with photographs illustrating each part and position to be taken. Gastro-intestinal examination, an important branch, is taken up with details of preparing the patient, the various mixtures used, and the routine followed in every case. Great stress is laid on the fact that one meal should be adopted and maintained as a standard; switching from one to another gives varying results and will lead to trouble.

For such a little volume—less than one hundred and fifty pages—a great deal of information is given, and such a publication is surely needed and should be appreciated.

G. H. O.

General Medicine. Edited by Frank Billings, M.S., M.D. The Practical Medicine Series. 1917. Pp. 383. The Year-Book Publishers, Chicago. \$1.50.

This volume is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume is complete on the subject of which it treats for the year prior to its publication.

This series is published primarily for the general practitioner; at the same time the arrangements in several volumes enables those interested in special subjects to buy only the parts they desire.

The volume on general medicine reviews the work of 1916 on the infectious diseases, diseases of the chest, heart, blood vessels, blood and hæmatopoietic organs, ductless glands, kidneys and metabolism. Consideration is also given to research work, experimental medicine and laboratory technic. A useful index is appended. The articles reviewed are well chosen and, in the main, authoritative.

General Surgery. Edited by Albert J. Ochsner, M.D., F.R.M.S., LL.D., F.A.C.S., Surgeon-in-Chief of August and St. Mary of Nazareth Hospitals, Professor of Surgery in the Medical Department of the State University of Illinois. Practical Medicine Series, Vol. II. The Year-Book Publishers, Chicago, 1917.

This volume is a review of the progress of surgery for the past year. Touching briefly the advances in general surgery, it serves admirably as a guide to more extended reading. Many things in current literature escape the eye of the busy surgeon, and this little volume calls attention to the points overlooked.

The method of using ether for short operations, obtaining analgesia by a small amount of ether with forced respiration, is well worth trying out. The section on the treatment of infected wounds considers the methods of Carrell, Dakin, Wright, and others, and is a chapter that deserves careful perusal and analysis. It pertinently raises the question as to whether Dakin's solution is entirely worthy of the prominence accorded it at the present time or whether other and simpler methods are not equally efficacious.

The treatment of burns with straps of adhesive plaster is new and theoretically should prove as satisfactory as the much advertised ambrine method. By keeping down excessive granulations, protecting the wound from the air and affording freedom from painful dressings, it would seem to fulfill all the requirements for healing burns with little scar formation.

Other chapters, dealing with the surgery of special organs, are of interest, giving as they do the most advanced thought on these topics.

C. T. H.

SOCIETIES

National Society of Physical Therapeutics

The National Society of Physical Therapeutics celebrated at Rochester, New York, on June 19th, its twenty-fifth anniversary by giving a Silver Anniversary Dinner to its founder, Dr. William Harvey King. The Society presented Dr. King with a beautiful silver-mounted fountain pen.

Dr. William H. Dieffenbach of New York City was toastmaster, and

responses were made by Dr. Clara E. Gary of Boston, Dr. Benjamin F. Bailey of Lincoln, Nebraska, and Dr. Ernest P. Mills of Ogden, Utah.

On motion of Dr. Gary, the Society voted to contribute one hundred dollars to the Base Hospital fund of the Massachusetts Homœopathic Hospital, Boston, and the check for this sum was brought back to Boston by Dr. Gary and handed over to the Hospital treasurer.

The Vermont Homœopathic Medical Society

A special meeting of the Vermont Homœopathic Medical Society was held in the Berwick parlors, Rutland, May 19. The meeting was called at the request of the Committee of the American Institute, and took the place of the regular annual meeting.

Dr. W. A. Dewey represented the Committee from the American Institute, and gave a most interesting illustrated talk on homœopathic hospitals and institutions. He also presented the plan for a closer union of the State Society and the American Institute, and the resolutions looking to the carrying out of the plans were adopted by a unanimous vote.

The following officers were nominated and will be elected at the regular meeting to be held later: President, W. G. Hodsdon, Rutland; Vice-president, Geo. E. Morgan, Burlington; Secretary, Geo. I. Forbes, Burlington; Treasurer, F. E. Steele, Montpelier. Censors: Edward Kirkland, Bellows Falls; C. A. Gale, Rutland; Geo. E. Morgan, Burlington.

The next annual meeting will be held May 22, 1918.

The Society voted twenty-five dollars toward the propagandist work of the American Institute.

GEO. I. FORBES.

The next Annual Meeting of the Southern Homœopathic Medical Association will be held in Washington, D. C., on October 24th, 25th, 26th.

ANNUAL MEETING AND BANQUET OF THE ALUMNI ASSOCIATION OF BOSTON UNIVERSITY SCHOOL OF MEDICINE

The annual business meeting was called to order at 6.45 at the Hotel Georgian by President John Hillman Bennett.

The various reports were read and accepted.

It was voted to invest some of the Society's funds in Liberty Bonds.

The following officers were elected for the coming year:

President, Eliza B. Cahill
First Vice-President, Elmon R. Johnson
Second Vice-President, Susan M. Coffin
Secretary, Harold L. Babcock
Treasurer, Howard Moore
Auditor, Nathaniel R. Perkins
Directors:

Howard P. Bellows
 John H. Bennett
 Charles A. Eaton
 George E. Percy
 J. Arnold Rockwell

Advisory Committee, Frank A. Gardner

After the meeting was adjourned, slightly over one hundred members and friends partook of the banquet. Members of the graduating class were entertained according to custom.

The postprandial exercises consisted of remarks by retiring President J. H. Bennett, President Murlin of Boston University, Dean Sutherland, Mr. Senecal of the senior class, and President-elect E. H. Cahill.

Music was furnished by the Meistersingers.

H. L. BABCOCK,
Secretary.

PENNSYLVANIA STATE NOTES FOR JULY, 1917

The Sixty-Ninth Annual Commencement of Hahnemann Medical College was held at the Garrick Theatre, on Thursday, May 31st, 1917, at twelve o'clock noon. Thirty-seven graduates were given the degree of M.D. by Mr. Charles D. Barney, President of the Board of Trustees. Mr. Russell Duane, a lawyer of Philadelphia, delivered the Commencement Oration, and Dr. Wm. A. Pearson, Dean of the College, made a short address.

Eight of the graduates were Philadelphia men. The first honor man who received the highest average for the four years' work was Wm. A. Doebel, Philadelphia; second honor man, John G. Powell, Hollidaysburg, Pa.; third honor man, John H. Reading, Overbrook, Pa.

The Commencement banquet was held in the evening, at the Hotel Adelphi. At that time Dr. Robert W. McClelland of Pittsburg presented the college with a painting of his brother, Dr. James H. McClelland, who died in 1913, and who held the chair of surgery at Hahnemann College in 1876 and 1878.

At the Annual Business Meeting of the Alumni Association at the College building, held in the afternoon, six prominent physicians were taken in as associate members:—Drs. J. L. Jennings, Danville, Va.; E. Elmer Straub, Minersville, Pa.; Walter E. Reilly, Fulton, Mo.; A. B. Webster, Philadelphia; H. E. Koons, Indianapolis, Ind.; V. E. Washburn, Wilmington, Del.

The graduates received the following hospital appointments:

Hahnemann Hospital, Philadelphia: Drs. Wm. Doebel, Horace W. Jack, Thomas Mills, John H. Reading, Jas. S. Seitz, F. G. Stubbs, F. C. Tongue and R. G. Walter.

Children's Homœopathic Hospital, Philadelphia: Dr. L. A. Kennell.

Women's Homœopathic Hospital, Philadelphia: C. E. Stevenson, M.D.; H. G. Straub, M.D.

St. Luke's Homœopathic Hospital, Philadelphia: M. J. Pierson, M.D.

West Philadelphia General Homœopathic Hospital: A. V. Crosby, M.D.

Crozer Homœopathic Hospital, Chester, Pa.: R. E. Pilgrim, M.D.

Pittsburg Homœopathic Hospital: Drs. P. G. Atkinson, R. B. Brown, J. Castro, A. R. Seraphin, and E. C. Neibaum.

Scranton Homœopathic Hospital: J. V. Allen, M.D., and E. R. Davis, M.D.

West Jersey Homœopathic Hospital: H. S. McKinstry, M.D., Jos. S. Miller, M.D., and J. L. Shoemaker, M.D.

Ann May Memorial Hospital, Spring Lake, N. J.: J. G. Savannah, M.D.

Wilmington Homœopathic Hospital: A. K. Lotz, M.D.

National Homœopathic Hospital, Washington, D. C.: R. E. Henderson, M.D.

Metropolitan Hospital, Blackwells Island, N. Y.: R. S. Blood, M.D., and J. R. Skeoch, M.D.

Miami Valley Hospital, Dayton, O.: W. H. Pather, M.D.

United States Navy Medical Corps: J. G. Powell, M.D.

Scholarships awarded were as follows: President's scholarship to the member of the third-year class attaining the highest average, awarded to Norman Roberts. Walter E. Hering scholarship to the member of the second-year class attaining the highest general average, awarded to Wallace E. Prugh.

The Pittsburg Alumni Scholarship to the member of the first-year class attaining the highest general average, awarded to Robert E. Kistler.

CHANGES IN COLLEGE AND HOSPITAL APPOINTMENTS OF THE HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA, PA.

Department of Medicine: Drs. John R. Redman and Benjamin K. Fletcher promoted to Associate Professor of Pediatrics. Dr. Clarence R. Smith promoted to Clinical Lecturer in Medicine. Drs. H. C. Nicholson and Howard F. Heinkel to Instructors in Medicine and Physical Diagnosis respectively. Dr. Paul C. Wittman to Instructor in Dermatology. Dr. George Simmer resigned.

Hospital Staff: Drs. G. Morris Golden, G. Harlan Wells, George H. Bickley and Wm. R. Williams promoted to Physicians to the Hospital; Drs. Wm. Steele and Jos. McEldowney as Assistant Physicians to the Hospital. Drs. John R. Redman and Benj. K. Fletcher as Hospital physicians to Children. Dr. Paul C. Wittman appointed Junior in the Dermatological Section of the Dispensary.

Department of Rhinology, Laryngology, Ophthalmology and Otology: Drs. Oscar Seeley and Fred W. Smith promoted to Associate Professors of Laryngology and Rhinology. Dr. Percy A. Tindall promoted to Associate Professor of Ophthalmology. Dr. Jos. F. V. Clay promoted to Associate Professor of Otology.

Premedical Faculty: Dr. David Wilburn Horn promoted to Professor of Analytical and Organic Chemistry. Everett B. Irwin, Ph.B., appointed Instructor in Biology. Robert B. Kistler, Ph.B., Instructor in German.

Department of Materia Medica and Therapeutics: Dr. Wm. B. Griggs appointed Associate Professor of Therapeutics and Director of the Constantine Hering Laboratory. Dr. J. W. Frank appointed Professor of Roentgenology. John A. Bornman, Ph.C., Professor of Pharmacy. Dr. Frank J. Frosch, Professor of Pharmacology. Dr. H. Leslie Frey, Assistant in the Hering Laboratory.

Department of Obstetrics: Dr. Warren C. Mercer promoted to Clinical Professor of Obstetrics.

GOUT AND INFECTIOUS ARTHRITIS

In two clinical lectures, in the International Clinics for June, Dr. H. A. Christian considers the differential points between gout and acute and chronic arthritis.

There are three types of gout:—

First, obvious depositions of urates in the bone or in the cartilage, or in both.

Second, in which that does not occur, but in which there are chronic arthritic changes, with exostoses and associated atrophy of the cartilage, *etc.*, sometimes with depositions of urates in the soft parts around the bone, adjacent to the bone, but not in the bone.

Third, very little change in the joints, inflammatory change in the soft parts, but no obvious deposition of urates in the soft parts about the joints or in the bones or cartilage. In all three types depositions of urates in the ears occur giving typical tophi that are easily recognized.

In regard to the value of uric acid metabolism studies, Christian points out that we are dealing with a substance which is present in the blood and in the urine in relatively very small quantities. Anything present in small quantities brings up the possibility of error in its determination. In the second place, we are dealing with a substance which in the blood is very difficult of quantitative determination, and there is still a question as to whether the methods available are satisfactory; or, to put it another way, other substances than uric acid may cause the same colorimetric changes which are used by Folin in his method of determining the uric acid.

In regard to roentgenographs he states that we are justified in diagnosing as gout only those cases in which there is the typical punched-out area in the bones with thickening in the bony substance around the area.

JAUNDICE WITH ENLARGED LIVER IN A YOUNG ADULT

(Primary Carcinoma of the Gall-Bladder)

An example of this rare condition is reported, in the International Clinics for June, by Dr. Thomas McCrae.

The patient was a young man, age thirty years, who entered the hospital because of illness dating back five months. The trouble began with pain in

the right side, and loss in weight. Jaundice appeared about three weeks after his admission to the hospital. Physical examination showed prominence of the surface veins of the abdomen and fulness in the epigastrium due to a firm mass with a distinct edge which came within 1 cm. of the naval in the mid-line. The mass extended to the left beneath the left costal margin opposite the ninth rib. To the right it passed under the right costal margin and in the nipple line was felt below the costal margin on deep inspiration. The mass was smooth and hard and presented no irregularities. The gall-bladder was not felt. An active antisyphilitic treatment had been tried before his admission to the hospital and the Wassermann test was negative. A moderate leukocytosis was present and the red cells were slightly reduced in number.

After considering the various conditions which might account for the tumor mass, loss of weight, jaundice, *etc.*, the diagnosis was correctly made by exclusion. The conditions considered were: Hypertrophic biliary cirrhosis of Hanot; syphilis; portal cirrhosis; abscess, cholangitis, and neoplasm. The latter seemed the most probable diagnosis. This was confirmed by an exploratory operation and later by autopsy.

Most of the cases of primary carcinoma of the gall-bladder are associated with gall-stones, the figures varying from 75 to 100 per cent. The case reported belongs to the exceptions.

SKIN GRAFTING

In a well illustrated article, in the *International Clinics* for June, Dr. A. M. Shipley describes the excellent results he has obtained in the treatment of chronic leg ulcers by the use of skin grafts. He employed the method described by J. S. Davis in the *Journal of the American Medical Association*, September 19, 1914.

Shipley reports eight cases of the obstinate type of leg ulcer in which complete success was obtained.

He recommends this method for the following:—

First, the ease and the simplicity of the procedure.

Second, its uniform success if the proper precautions are taken in the preparation of the surfaces and the application of the grafts.

Third, the robust surface that is formed by the graft.

Fourth, the fact that the operation can be done without a general anæsthetic.

Fifth, the very rapid and remarkable filling up of the base of the ulcer to the level of the surrounding tissues.

The method is not available on an exposed surface like the face, unless the grafts are closely placed, otherwise the resulting surface has a spotted appearance.

VACCINATION AGAINST ANTHRAX

Improvements in the preparation of preventive vaccin and serum assist in minimizing loss from this disease.

Losses from anthrax, or charbon, which at the present time is responsible for the death of large numbers of live stock in low, moist lands of a more or less mucky character, may be minimized by the proper use of protective vaccin and the proper disposal of the carcasses of infected animals. This disease affects chiefly cattle and sheep, but none of the domestic animals is exempt, and even man is sometimes a victim. Some centuries ago it is known to have caused the death of more than 60,000 persons in southern Europe. Since that time the disease has apparently become less virulent, but it is still the cause of considerable loss to stock owners.

The preventive vaccin recommended by the U. S. Department of Agriculture is a development of the method devised about twenty-five years ago by Pasteur. Since that time, however, scientists have succeeded in removing

many of the objections to Pasteur's vaccin and the new method is less dangerous to the animals treated and surer in its operation.

In a new publication of the U. S. Department of Agriculture, Farmers' Bulletin 784, detailed directions for the administration of this treatment are given. The treatment consists, in ordinary cases, of an injection under the skin, on one side of the animal, of 10 cc. of anti-anthrax serum, followed immediately by a similar injection, on the other side of the body, of 1 cc. of spore vaccin. In the case of sheep, which are peculiarly susceptible to the disease, the quantity of vaccin is reduced to 0.25 cc.

In the bulletin mentioned, stock owners are warned to obtain the serum and vaccin from reliable manufacturers only, and not to administer the treatment unless the disease has already appeared in the vicinity, or the pastures on which the animals are to be turned out are known to be infected. Careless handling of the vaccin may result in spreading instead of controlling the disease.

The principle underlying this treatment is the same as that which in man has resulted in the minimizing of death from smallpox, typhoid, and other diseases. It consists in conferring upon men or animals an artificial immunity to the infection to which they are susceptible.

A fly can easily carry a sufficient quantity of blood from an animal infected with this disease to kill a horse. Nevertheless by repeated inoculations, scientists have succeeded in developing such a high degree of immunity in a horse that the animal has been able to withstand the injection of more than a pint of the most virulent anthrax culture obtainable. This, of course, is a much higher degree of immunity than is required to insure an animal against ordinary infection.

The cause of anthrax is a bacillus which multiplies rapidly in the body, especially in the blood, and produces poisonous substances which ordinarily cause death. The symptoms of the disease resemble, in certain respects, those of tick fever and black leg. The differences which will enable stock owners to distinguish it from them are described in detail in the bulletin already mentioned. In acute cases medicinal treatment is seldom effective. For this reason the best methods of combating the disease are to vaccinate all animals likely to be exposed to the infection and by deep burying or cremating of infected carcasses, to make certain that the infection is not likely to establish itself in pastures.

It is a well-known fact that under certain conditions and in certain forms the germs of the disease are remarkably resistant to heat, cold, and drought. They will remain for a long time in a pasture and be capable of infecting any animals turned out on it. Ordinarily the disease is taken into the body through the mouth with food. It may, however, be absorbed through a wound or even an insignificant scratch. It is in this way that human beings usually become infected, and the name "wool sorter's" disease is derived from the fact that men engaged in sorting wool are particularly liable to contract the disease through infection of scratches or other small wounds or abrasions on their hands.

Experiments have shown that if the carcass of an infected animal is buried promptly without having been opened to permit the entrance of air, the anthrax germs die within a short time. If, on the other hand, the carcass is allowed to remain in the field or is thrown into a near-by stream, the gradual decomposition favors the formation of spores. It is in the form of these spores that the disease persists so long in infected pastures and elsewhere. For this reason great care should be taken never to skin or to cut open the body of an animal killed by anthrax. The blood that flows out when this is done is one of the most dangerous means of spreading the infection, if it is taken into the soil where the conditions favor the development of the spores. In burying carcasses a useful precaution is to cover them with quicklime.

Where the bodies are burned instead of buried, great care should be taken to see that the operation is thoroughly done. Even the earth upon which the carcass has lain should be thoroughly and deeply burned over so that the heat will penetrate to a depth sufficient to kill the germs that may have passed into the soil with fluids from the body.

PERSONAL AND GENERAL ITEMS

Boston University School of Medicine is the recipient of a gift of five hundred dollars, to be used for apparatus for orthopædic work in Dr. Alonzo G. Howard's clinics.

Drs. Conrad Wesselhoeft, 2d., of Boston, James Y. Rodger (B.U.S.M. 1914) of Lowell, and Reuel A. Pierce (B.U.S.M. 1912) of Canton, Mass., are at Camp Oglethorpe, Georgia, for special medical training for the United States army.

The University of Chicago is to have a medical department, and it will start with an endowment of \$8,000,000 and will supersede old Rush Medical College (established seventy-five years ago), which is to go out of existence. The School is to be built on the Midway Plaisance of the World's Columbian Exposition of 1893, now a part of the University of Chicago property. All teachers for clinical as well as laboratory studies are to give their entire time to teaching and research in the University hospital and medical school.

Dr. Harold L. Babcock of Boston is engaged in performing the Barany vestibular tests for equilibrium, at the Boston recruiting station for aviators for the United States Army Aviation Section.

PRACTICE FOR SALE, on account of sickness in family. Homœopathic physician located in same office for twenty years. Terms satisfactory to right party. For full particulars address, "Boston," care *New England Medical Gazette*, 80 East Concord St., Boston, Mass.

The National Committee for Mental Hygiene has created a subcommittee on furnishing hospital units for nervous and mental disorders to the United States Government, the project having been approved by Surgeon General W. C. Gorgas of the U. S. Army.

This subcommittee, of which Dr. Pearce Bailey of New York is chairman, is authorized to secure the services of alienists and neurologists to be commissioned in the Officers' Reserve Corps, Medical Section, and to serve in the neuro-psychiatric units which are to be attached to the base and other hospitals of the military services of the United States. Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to The National Committee for Mental Hygiene, 50 Union Square, New York City.

Dr. Spencer D. Whiting (B.U.S.M. 1905) is Physician in Charge, East Farm Sanatorium, Phoenix Indian School, Phoenix, Arizona.

Dr. H. D. Handy of Harwich, Massachusetts, is Medical Examiner for Barnstable County, First Division.

Dr. M. Roedmann of Philadelphia has removed to the Flanders Building, 15th and Walnut Sts.

Dr. Anna R. Manittoff (B.U.S.M. 1915) is House Physician at the Needham Heights, Massachusetts, Mothers' Rest, for the season. This is a very worthy charity which gives a two-weeks country outing to worn-out mothers who could not otherwise have the needed rest and change. When necessary, they take their babies and very young children with them, and the Rest provides a physician or attendant to supervise their health and physical welfare.

The *Gazette* has recently learned that Dr. Anna C. Stewart (B.U.S.M., class of 1887), formerly of East Cambridge, is located at 201 Remington Gables, Remington St., Cambridge, and that her name is now Stewart-Pervear. Dr. Pervear writes that she is an invalid.

Dr. Herbert E. Maynard (class of 1902 B.U. School of Medicine) of Winchester, Massachusetts, is giving a six months service as surgeon in a hospital, Woolwich, England. He expects to resume his practice in the late autumn.

The Bristol Homœopathic Hospital (England) has received a gift of £20,000 for a new hospital building, providing sufficient funds are raised to purchase a suitable building site. The site has been selected and efforts are being made by the hospital authorities to obtain the money (£20,000) necessary for its purchase.

Dr. Emerson F. Hird (B.U.S.M. 1910) for some years in practice in Bound Brook, New Jersey, has gone to Roumania for medical service there.

Dr. Raymond E. Senecal has opened an office at 180 Elm St., New Bedford, Mass., and Dr. Joseph Segal has succeeded him as house physician at Emerson Hospital, Jamaica Plain. Both are graduates of the class of 1917 Boston University School of Medicine.

Dr. Granville E. Hoffses (B.U.S.M. 1898) who some years ago sold his practice in Dedham, Massachusetts, and retired to country life in Damariscotta, Maine, has purchased the practice of Dr. Charles A. Sturtevant of Manchester, New Hampshire. Dr. Sturtevant is entering the United States Army Medical service.

Dr. Ettore Ciampolini (B.U.S.M. 1916), who returned to Italy in the late winter, is busily engaged in relief work in a hospital near Florence. He writes that the heroism of wounded Italian soldiers is most inspiring, and those who can be relieved are eager to return to the front, where "on the highest peaks of the Alps they are conquering inch by inch."

Dr. Ralph H. Hopkins (B.U.S.M. 1915) has taken the practice of the late Dr. Clyde Bartlett (B.U.S.M. 1915) at Marion, Massachusetts.

Dr. John P. Sutherland of Boston is a patient in the Massachusetts Homœopathic Hospital, making a most satisfactory recovery from a critical operation following perforation of a gastric ulcer. He was taken suddenly and violently ill on July 11, but happily was near enough to the Hospital to be rushed there for the operation, which was performed by Dr. J. Emmons Briggs of Boston.

PRACTICE FOR SALE.—Owing to ill health I offer my house, practice and good will for sale. Situation eight miles from Boston in the finest suburban town in the State. For full particulars address "Homœopath," care *New England Medical Gazette*, 80 East Concord St., Boston.

The Gizzard Club of Boston held a midsummer outing at Pemberton Inn, Hull ("down the Harbor"), on July 16, afternoon and evening, with a "shore dinner," ball game, etc.

AUTOMOBILE FOR SALE AT A BARGAIN.—A Buick seven-passenger, six-cylinder automobile, 1915 model, in first-class condition; engine recently overhauled. Has been run for private family use only. To be sold in settling an estate. Can be seen in Auburndale, Massachusetts; telephone, *Newton West* 1304-W.

Hahnemann Medical College of Philadelphia is conducting a campaign to raise funds for a base hospital to be offered the Government by the College and Hahnemann Hospital. A contribution of \$5,000 was made to the fund by George W. Elkins, given to the team organized by Drs. Clarence Bartlett and William B. Van Lennep. Dr. Youngman of Atlantic City obtained a subscription of \$500 from an Atlantic City donor.

Hahnemann College has recently received a gift of \$500 from the estate of B. F. Mertzmann of San Diego, California.

Drs. E. A. and F. T. Krusen of Norristown, Pennsylvania, have opened a private hospital, to be called Riverview Private Hospital, at Sandy St., Norristown. It was formally opened on July 11.

Miss Ruth Ward, daughter of Dr. James W. Ward and Dr. Florence N. Ward of San Francisco, was married on June 30 to Mr. Ray Durant Bowers.

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ORIGINAL COMMUNICATIONS

HOMŒOPATHY IN THE PROPHYLAXIS AND TREATMENT OF SCARLET FEVER *

By CONRAD WESSELHOEFT, 2d, M.D., Boston

INTRODUCTION

Since modern medicine is striving by means of clinical and laboratory research to free itself from the shackles of dogmatism, it is only proper that the homœopathic school should play its part in the much needed search for truth in the great field of therapeutics. This can be carried out in two quite distinct ways. The first and most important way is to investigate from the laboratory and clinical standpoints the fundamental principles of homœopathy. This requires the most accurate observations by highly trained experts in serologic, immunologic, and pharmacologic technic. It requires the most careful and painstaking work on the part of true scientists who must give us the detailed results of their observations, whether of positive or negative value to these underlying principles, and who must be cautious of the deductions and conclusions drawn from their experiments.¹

The second way to go at this problem of enlightenment is to investigate the efficiency of homœopathic therapeutics as it is taught and practiced. In order to do this the clinical test must be applied. Just as control provings with placebos are

¹ One laboratory worker in the homœopathic school informed me that he refrained from publishing findings which did not corroborate homœopathic therapeutics. To my mind, this spirit is so foreign to true science that it should be severely condemned.

* Read before the A. I. H., Bureau of Clinical Research, at Rochester, N. Y., June, 1917. From the Pharmacologic Laboratory of the Evans Memorial and the Contagious Department of the Massachusetts Homœopathic Hospital, Boston.

Published also in the *Jour. A. I. H.*, Sept., 1917.

essential to the accurate proving of a homœopathic remedy, so are control cases treated without medicine absolutely essential to the proper estimation of the value of homœopathic treatment. This work requires accurate clinical observations and detailed records. Furthermore, the clinician must be sufficiently experienced in the course and nature of the disease under study and sufficiently familiar with the literature on the various aspects of his undertaking to warrant him in drawing conclusions. It is only by familiarizing himself with the work of his predecessors and his contemporaries on a given subject of research that a clinician can gauge the results of his own efforts.

Two years ago, Dr. John L. Coffin, in an oration at the annual meeting of the Massachusetts Homœopathic Medical Society, emphasized the need of research in the field of homœopathy, implying that as a school we were guilty of dogmatism and negligent of our opportunities to investigate the accuracy of our teachings. He brought out the fact that our society, founded for the purpose of discussing problems relative to homœopathy, had drifted far afield from this original purpose. The cause of this has been ascribed by some to a lack of time on the part of the present-day "homœopath" as his "success with this form of therapeutics promptly makes him too busy to do anything but attend to his practice." This hardly holds good when we hear on other sides that our predecessors were more successful with homœopathy than this younger generation, which, it is said, fails to devote the proper respect and attention to our materia medica. We must, however, give due credit to the homœopathic physicians of the last century who in spite of their professional activities took the time to investigate and study homœopathy as relatively few are doing today. The present trend of our younger men seems to be to drift into the surgical specialties, and thus away from the difficulties and perplexities of our materia medica. This leads them to practice a cut and dried homœopathy. They fail to individualize their cases and prescribe remedies in a superficial routine way contrary to the fundamentals of the system they profess to follow.

This brings up the question as to how we shall practice homœopathy. Has the busy practitioner time to study his cases sufficiently to warrant a homœopathic prescription? The answer is that he usually does not have the time to use a repertory and consequently he is forced to generalize. He prescribes on a few leading symptoms, and usually is guided in the selection of the remedy by a few so-called "key-notes." This is especially true in acute cases and still more so in hospital practice. To facilitate this, homœopathic literature abounds

with short cuts to prescribing in the more common diseases. We have merely to look up the disease in question and we find a résumé of the indications of the remedies which are called for. The value of such works can not be disputed. Nevertheless, an analysis of such indications shows that they are based more frequently on clinical experience than on a proper understanding of the relation of the symptoms of the drug to those of the disease. We find, for instance, that belladonna is the first remedy to be thought of in scarlet fever, mercuric cyanid in diphtheria, euphrasia in measles, *etc., etc.* The indications are homœopathic, it is true, but their wide usage in these conditions is based not so much on this, as on the fact that their administration in these conditions has proved successful in the hands of clinicians. Moreover, clinical experience is more often the factor in selecting a remedy than is a consideration of the true similar to the condition to be treated. We become blinded by our supposed successes with a given remedy in a given disease, and as a result we make off-hand prescriptions with a degree of confidence that excels even our confidence in the fundamental principles of homœopathy, which we make ourselves believe we are applying when in reality we are practicing empiricism.

We must recognize that to a large extent the principle underlying homœopathic therapeutics is empirical. Merely because there is a scientific law that likes are cured by likes, it does not follow that we should always be correct in assuming that we should always treat likes with likes. A man has two legs, but not everything with two legs is a man, consequently everything with two legs can not be fed and treated like a man. *Similia similibus curentur* is merely the principle underlying our therapeutics. As such, it is, within certain well recognized limitations, plausible and logical. But, when we come to apply this principle, we promptly meet with uncertainties which are the cause of so much disagreement in our school. One clinician lays especial emphasis on the subjective symptoms, while another lays the greatest stress on the objective symptoms; one says, give the low dilutions, and another says, give the high dilutions, *etc., etc., ad infinitum*, until the only thing left we can all agree on is the fundamental principle; and, as none of us know absolutely how to apply it, we are left to work out our own salvation individually, with the result that we become empiricists in our practice because we don't know that we are right, we merely assume that we are. And, in this respect, the high potentists and the low potentists are in the same boat. Furthermore, the low potentists have not the right to flatter themselves that they are more scientific by giving material doses until they can establish to the scientific world that their

material doses are more efficacious than the "potentized" milk sugar of their colleagues.

Far be it from me to belittle homœopathy as a method. Our foundations are being made more and more secure by the recent advances in immunology, but we must admit a degree of helplessness in ascertaining the correctness of our ability to apply our therapeutic rule. Clinical research is the means by which we must learn how to apply this rule in the most efficacious manner. This is the final criterion of the efficacy of all therapeutic measures, and is attended by many snares and pitfalls. What I have said is merely to prepare your minds for the results of the researches which I have carried out in connection with scarlet fever at the West Department of the Massachusetts Homœopathic Hospital under the auspices of the Evans Memorial for Clinical Research and Preventive Medicine. The two problems which I have undertaken both pertain to homœopathy, and yet they take up two very different aspects of this field of therapeutics. The first is the efficacy of belladonna as a prophylactic in scarlet fever. This is one of the empiricisms of our school to which I have previously alluded. It is one of the ideas which has crept into our literature, and with a statistical backing, it has received much attention. The second concerns itself with the efficacy of homœopathic medication in the lower potencies in cases of scarlet fever.

BELLADONNA AS PROPHYLACTIC IN SCARLET FEVER

In the homœopathic literature much has been said in regard to the prophylactic value of belladonna in scarlet fever. This idea, though advanced by Hahnemann in 1799, was held by writers of the old school as late as 1891. In 1912, in a review of the subject, I, myself, championed the prophylactic value of this drug in this disease.* The most that I ventured to conclude from my researches into the literature was that, in the light of all the available statistics, it was as efficacious as any of the vaccins which had been tried for this purpose and that it warranted further investigation.

One of the best opportunities to test the value of belladonna as a prophylactic is afforded in the pupil nurses who serve on the scarlet fever wards. These nurses serve in the diphtheria wards first; consequently they were given this remedy for from one to two weeks before they started in on the scarlet fever side of the hospital. They continued taking it while on the scarlet fever wards. Belladonna** 3x trituration tablets

* Wesselhoeft, C., 2d: *A Review of the Question of Belladonna as a Prophylactic in Scarlet Fever*. North Am. Jour. Homœop. 1912. 3rd series, xxvii, 672.

** The belladonna was obtained from Otis Clapp & Sons, who informed me that the tablets shipped to us were freshly prepared.

were used; two being taken morning and night. The time of year selected was the winter months when the nurses are worked the hardest, and consequently are most prone to contract the disease. During the winter of 1914, 26 nurses took this prophylactic treatment. Ten came down with the disease, or 38.5 per cent. In only one of those who took the remedy was there a suggestion of symptoms which could have been attributed to the disease. This consisted in a headache, sore throat, and a fine, smooth, diffuse rash. As she went from this into a true mild scarlet fever, it is impossible to say whether or not this was the drug or the preliminaries of the disease. My own feeling is that it was the latter.

Owing to the apparent failure of belladonna to protect against the disease, I used atropin 3x the next winter, giving one tablet morning and night before and during the service on the scarlet fever wards. Here again 26 nurses took the remedy and exactly 10 came down with scarlet fever, again 38.5 per cent.

This winter, of the 28 nurses who served on the scarlet fever wards and who received no prophylactic treatment, 10 contracted the disease, or 35.7 per cent.

TABLE I

Winter months	Prophylactic treatment	Number of nurses	Number contracted scarlet fever	Per cent contracted scarlet fever
1914	Belladonna 3x	26	10	38.5
1915	Atropin 3x	26	10	38.5
1916	No remedy	28	10	35.7
Intervening summer months	No remedy	26	3	11.5
Total		104	33	31.7

The similarity of the figures for the three winters is very striking, and they are quite contrary to what the staff had expected. These three years have been the heaviest in scarlet fever patients in the history of the institution, and each year has given us successively greater numbers of patients. This accounts for the two extra nurses in 1916. The general impression received during the course of this experiment was that the nurses who received the belladonna had the highest morbidity rate. These statistics, when compiled from the records, show how easy it is to misjudge results without figures. The explanation of this faulty impression probably lies in the fact that the belladonna cases made a greater impression on us as we expected them to be immune. During these three winters, the nurses were equally hard worked on the wards, and they all received

the usual instruction in contact infection. In the course of the late spring, summer, and early fall months which intervened, only 26 nurses were employed on the scarlet fever wards. These received no prophylactic treatment and only three contracted the disease, or 11.5 per cent.

In regard to the severity of the cases of scarlet fever following belladonna as a prophylactic, nothing definite can be said. None of the 104 nurses had a bad case of the disease and all were able to be discharged before the full six weeks of quarantine were up. In fact, it is of interest to note that in the history of the West Department we have never had a death among our pupil nurses from any contagious disease. This as applied to scarlet fever is of significance when compared to a similar record regarding diphtheria among nurses at the South Department of the Boston City Hospital since antitoxin has been in use. The early recognition of the disease and the prompt care is to a large extent responsible in both cases, irrespective of the early medical treatment in the former and the undoubted value of early serum administration in the latter.

I can not at this time enter into a discussion of the previous statistics of other authors on this subject. In the preliminary report published in 1912, I gave the details of these statistics and showed that the results of belladonna as a prophylactic compared favorably with the results from streptococcus vaccin used with a similar purpose. I still maintain this to be the case in spite of the results which I have obtained. If homœopathic therapeutics has become associated with mistaken notions and erroneous empiricisms, vaccin therapy has, to my mind, gone it one better. Whether Dr. Mallory's recent discovery of a diphtheroid in pre-scarlet fever throats will give us anything better as a prophylactic vaccin remains to be seen. This organism must first be definitely proved to be the causative factor in the disease.

To conclude this portion of my work, it is very evident from the above table that belladonna 3x and atropin 3x given in the way mentioned above to young adult females has no prophylactic value in scarlet fever.

I wish to express my indebtedness to Mrs. Flash and Miss Ramstadt for their willing collaboration, and their invaluable assistance in making the above study possible.

THE RELATIVE VALUE OF HOMŒOPATHY IN THE TREATMENT OF SCARLET FEVER

In the fall of 1914, Dr. Chadwell reported on a series of cases of scarlet fever treated with and without belladonna. This instructive paper, based on so much labor on the part of

the author and his intern, Dr. Parris, failed for some unaccountable reason to be published. Nevertheless, to those who heard Dr. Chadwell, there can be no doubt as to the time and effort he put into this unpublished work and as to its value to the homœopathic school when he sees fit to have it printed.

Today I have to report on a further study of the work on scarlet fever begun by Dr. Chadwell. Profiting by the results he obtained and by the criticism offered to his paper in the discussion which followed, I have not attempted to devote myself to the efficacy of belladonna in all cases of scarlet fever. In passing, however, I wish to bring out the important bearing which Dr. Chadwell's work has on the subject at large, and to uphold the justification of the course he pursued.

Dr. Chadwell gave every other case belladonna 3x and found that, if anything, the cases receiving no medicine did, on the average, slightly better than those which received belladonna. In view of the much vaunted value of belladonna in this disease, his results were to say the least a shock to many of us. In the discussion he was severely criticized for assuming that belladonna was indicated in every case, and consequently for committing an injustice to homœopathy. In his behalf it must be reiterated that he was not examining the accuracy of the fundamental principle of homœopathy. On the contrary he was investigating the accuracy of one of the myriad of notions which have arisen in the past hundred and twenty years and which have become part of the practice and teachings of a large element of the homœopathic school. The notion he investigated concerned the much vaunted value of belladonna in scarlet fever. What he showed very conclusively was that this drug in the third decimal dilution was not as efficacious in the average case of scarlet fever as one is led to believe from homœopathic teachings. Further criticism as to the dosage employed was irrelevant to the proposition and to the conclusions drawn. He was talking from cold facts which nobody could contradict.

Owing to the commonly held idea that belladonna is the homœopathic remedy first to be thought of in scarlet fever, it is most instructive that this medicine should have given such negative results in the series. And furthermore, it was by no means unreasonable, owing to this common idea and impression, that belladonna should be the only medicine given, since we must deduce from his results that in the third dilution it is not efficacious in the average case which comes to the West Department of the Massachusetts Homœopathic Hospital. This deduction alone warrants a more careful prescription in scarlet fever than is commonly made by homœopathic physicians and

more cautious statements as to the efficacy of this medicine in this disease. Especially does this apply to our teachings in the medical schools where crude empiricisms are too often dogmatically offered to students in the guise of pure homœopathic therapeutics.

A study of belladonna tends to explain Dr. Chadwell's results. This drug does not produce the picture of scarlet fever with any suggestion of constancy. It is true that the same thing may be said of cinchona and quinin in regard to malaria. Nevertheless, the totality of the symptoms of quinin resembles that of malaria far more closely than do the symptoms of belladonna resemble those of scarlet fever. The rash of cubebs, quinin, antipyrin, salicylates, morphin, and, when applied locally, corrosive sublimate, chrysarobin, iodine, and chloral hydrate, may also give the appearance of scarlatina and may be followed by a desquamation. Furthermore, foreign serums may produce a rash which in itself is in all respects like that of scarlet fever, even to the character of desquamation.* The administration of a water enema in some people gives rise to a rash which may be confused with the disease in question.** The typical objective throat symptoms of scarlet fever are extremely rare with belladonna, and the strawberry tongue is only mentioned once in the provings recorded under this drug in the *Cyclopædia of Drug Pathogenesis*. The rapid pulse is characteristic of both the drug and the disease. The nausea and vomiting is so common in infections and in drug poisonings and provings that it can not do more than play a small part in the totality of the symptoms of both.

There is one indication for belladonna in scarlet fever which is only rarely found in the type of the disease which rages in these parts. Hahnemann and his followers emphasize that this remedy is only indicated in the "true smooth scarlet fever of Sydenham." In my experience, a smooth type of eruption is contrary to the diagnostic features of the disease. The scarlet fever rash in its typical form is characteristically rough. In fact I make my students feel the rash in order that they may learn this characteristic roughness of the skin. The more severe the rash, the rougher it is. Since the belladonna rash is smooth, the drug can only be a similar to the rash of the mildest form, which usually means the mildest type of the disease. The dryness of the skin is characteristic of the drug and the disease. The throat is also dry, smooth, and bright red, but in the provings nothing is said of the characteristic enanthem of the soft palate found in scarlet fever. This enanthem is rough, not

* Ker, C. B.: *Infectious diseases*. London, 1909, 403.

** *Ibid.*, 116.

smooth. Furthermore, the throat of scarlatina is generally much more suggestive of *mercurius corrosivus* and *lachesis* than it is of *belladonna*. So far as dryness of the throat is concerned, I have rarely elicited this symptom from an objective or subjective standpoint. In severe cases, salivation and ulceration are more frequently met with. Consequently *belladonna* is theoretically only indicated in that mild smooth type of the disease, which, as any one with experience knows, usually subsides in two to five days without any medicine, the desquamation being delayed in inverse proportion to the intensity of the rash. I have frequently given *belladonna* 3x to one of two children of the same family with equally mild cases in which the remedy is said to be indicated. Invariably the two would recover equally promptly. My opinion is that when *belladonna* 3x is indicated in the smooth type of scarlet fever, the case is so mild as to require no remedy and the administration of it is a waste of time and energy. *Belladonna* does have a definite place, however, in the homœopathic treatment of scarlet fever.* In the severer forms of the disease the cerebral symptoms frequently call for this drug. Here I am under the impression that the 6x of *belladonna* is more efficacious than in any of the lower dilutions. In the cystitis sometimes met with as a complication in adult females, I prefer *belladonna* 2x.

We now come to a consideration of the value of this form of therapeutics as determined by an analysis of 227 cases, half of whom were given no remedy but in other respects received the same treatment. On what shall we base our determination of the value of homœopathy? I have tabulated these cases as to age, sex, time of onset before admission, height and duration of the initial temperature, complications with details, and stay in the hospital. Except for the insignificant data regarding age and sex, the figures are deceiving. If a case comes in one week after the onset the initial temperature on admission is of little value in comparison to the case which comes in on the first day of the disease. The duration of the initial fever is equally misleading for the same reason. The percentage of complications may be of some value in determining whether the use of homœopathic remedies helps to increase the general resistance of the patient to the disease. The average stay of the patients in the hospital would mean more if boards of health did not differ so widely in the requirements for releasing a patient from quarantine. However, in a large series of cases some value may be placed on these figures. I present this table

* I might remark here that *belladonna* is far more frequently indicated in erysipelas than in scarlet fever, and it is in this latter disease that I have been more impressed with its usefulness.

for your consideration. I wish it made me out a better prescriber than it has. There are more complicated tables which will be published from my records, but we have not the time to go into them here. I wish to express my indebtedness and gratitude to Drs. Frank Mathewson and Samuel Clement for their assistance in this work, and to Dr. Helmuth Ulrich for helping me with the arithmetic.

No. of patients	No Remedy	Remedy	Totals
Average time in M.H.H. in days	113	114	227
Delay from Rhinitis	50.16	46.36	48.26
Complications	9	3	12
Otitis	38	34	72
Mastoid	18	15	33
Nephritis	2	1	3
Arthritis	9	11	20
Endocarditis	6	6	12
Stomatitis	1	2	3
Impetigo	0	1	1
Cervical Adenitis Suppuration	1	1	2
Diphtheria	2	1	3
Pneumonia (lobar)	2	0	2
Bronchitis	1	1	2
	2	1	3

As to the art of prescribing. A repertory is out of the question in routine hospital work on a large service. I had only one graduate assistant in this work and at times one or two senior medical students to help in the routine work on the wards. With over a hundred patients in the hospital and anywhere from three to ten admissions in a day, it is impossible to prescribe on anything but the predominating symptoms. Most of the patients are children, and some of these do not speak English. Physical examinations take up most of the time, and the recording of notes takes up the rest. It is only rarely and then only on bad cases that I take the time to study properly

one of these hospital cases in connection with homœopathic materia medica. Ever since I began work in the contagious department under Dr. Sutherland, I have studied the materia medica in connection with scarlet fever, so that I ought to be familiar with the remedies called for. Nevertheless I am often confronted by a case which is confusing and for which no remedy seems to fit. On my way home from the hospital I often wish that I had given some other remedy in a given case, but on my return the following day I find the patient relieved in spite of the faulty prescription. Another blow to my pride is prescribing comes when I order some uncommon remedy with a degree of confidence because of the indication, and then when I flatter myself the next day at seeing the patient so much better, I am told that the remedy I ordered could not be found in the pharmacy and consequently had not been given. To effect a cure by merely wishing a remedy on a patient is the highest potency I know of; or shall we call this "absent" treatment?*

The use of the 3x of iodine, ferrum phos., china, ipecac, arsenicum album, mercurius solubilis, mercurius biniodatum, bryonia, and cuprum aceticum have failed to impress me as having any well defined value in the numerous cases in which they were prescribed when compared to similar cases where no remedy was given. In the arthritis following scarlet fever, bryonia 2x and 3x has proved absolutely useless even when the joint symptoms plainly called for this remedy. Rhus tox. was rarely in-

** It is pertinent here to make note of three modes of treatment of scarlet fever which have come into vogue in recent years. The first is that of Milne¹ of London, who after 25 years experience with the application of eucalyptus oil to the skin of scarlet fever patients was convinced from his observations that the course of the disease was shortened and that return cases were avoided. Impressed by the logic of this treatment and by the results in a few cases, Koerber² of Hamburg made a study of 151 cases treated according to Milne's method as against 274 cases treated in the usual way without eucalyptus. To his surprise he found that the mortality remained the same, that the course of the disease was not altered, the duration was not shortened by the eucalyptus treatment and furthermore he found that from the eucalyptus-treated cases he got 5.5 per cent. return cases whereas without the eucalyptus treatment he got 5.3 per cent. return cases. So that, I am not the only one that has been surprised by the results of my clinical research.

Owing to the fact that a positive Wassermann is not infrequently met with in the course of scarlet fever, salvarsan has been used for therapeutic purposes in this disease. The result of this drastic treatment has been no less than what might have been expected from our knowledge of the relation of arsenic to the pathological picture of scarlet fever.

Glaser³ found that this treatment had no influence on complications or on toxic cases and could not be said to exert other than a deleterious influence.

Klemperer and Woita⁴ found that the results of salvarsan treatment in scarlet fever gave a mortality of 8.3 per cent. and nephritis in 25 per cent., which figures speak for themselves.

dicated and when given in the 3x and 6x did not seem to do the good I fancy I have seen it do in the Out-Patient Department and in my private practice.* *Ailanthus* in bad cases never showed any signs of doing good. A review of the provings confirmed my idea that it is never indicated in scarlet fever, in spite of the few successes reported by the late Dr. Wells.

Ferrum phos. and cinchona did not seem to benefit cases with the characteristic pallor during convalescence. Most of these continued to show pallor when discharged whether they got the remedy or not. Iodin has not impressed me as being useful where there is much glandular involvement. Cervical adenitis occurs to some degree in over 80 per cent. of our cases. We have tried various remedies without any striking results. The only thing that seems to bring relief in the large painful glands is an ice bag. No homœopathic medicines in my hands benefited ear complications so far as I am able to see. The only measures which afforded relief were hot irrigations, paracentesis and the application of a hot water bottle or an ice bag.

In nephritis, *mercurius corrosivus* 6x, *arsenicum* 4x, and *cantharis* 6x were most frequently employed. I believe, however, that the diet and keeping the skin warm were always the chief means of securing a recovery. In this connection it might be well to remark that we have notions regarding the efficacy of diet just as we have in regard to remedies. Pospischill** gave 1186 cases of scarlet fever a meat-free diet consisting mostly of milk, and 1186 other cases a full diet with meat. Both were given a restricted diet, however, during the acute stage. In both series the percentage of nephritis was practically the same (9.78 with milk, and 9.95 with meat. This is certainly contrary to the accepted ideas of diet in scarlet fever. It shows, however, that our practice is based more on theory than on science. The would-be scientist in medicine is too often a philosophical faddist. In my wards, the younger children do not get meat,

* The arthritis of scarlet fever is not relieved by 5 to 10 grain doses of sodium salicylate every 3 hours to anywhere near the same extent as it is in rheumatic fever. I am informed by an experienced observer that even in large doses this drug is not reliable in stopping the pain.

** Pospischill, D., & Weiss, F.: *Ueber Scharlach*, Berlin, 1911. Much work has been done along the lines suggested by the work of Pospischill and Weiss.⁵ Gerstley⁶ of Chicago studied 306 patients in this connection, half of whom were given milk diet and the other half meat with a mixed diet. He concluded that in scarlet fever a nephritis is not apparently induced by a meat diet and that on the contrary, in older children and adults a mixed diet lessens the tendency to post scarlatinal anæmia as shown by the hæmoglobin and red count. De Biehler⁷ of Paris, on a very small series of cases, found nephritis more frequent with a mixed and meat diet. Brückner⁸ of Dresden treated 241 cases of scarlet fever from which he draws the conclusion that a mixed diet with meat is not conducive to nephritis.

because I am of the opinion that they do not need it. The older ones and the young adults are allowed meat during convalescence. I don't think they need it, but they do. Convalescence in quarantine is hardly a desirable vacation under any circumstances.

So much for my inability to prescribe these homœopathic remedies in scarlet fever with any degree of efficacy. I have already remarked upon the usefulness of belladonna 6x when cerebral symptoms predominate. I wish now to mention two remedies in which Dr. Clement and I have come to place much confidence. These two are *mercurius corrosivus* 6x and *lachesis* 6x. In the severer forms of the disease these two medicines in their triturated forms have seemed to justify their receiving an important place in the treatment of scarlet fever. Control cases similar to those in which these remedies were given when indicated did not seem to do as well in all respects. The malignancy of the throat symptoms or the presence of a diarrhœa led to the prescription of *mercurius corrosivus*, while the malignancy of the rash with a marked hæmorrhagic tendency led to the use of *lachesis*. Frequently both were used on the same case, but of course at different times. Alternation has never been used on my service for the reason that I can not see the justification of it from a theoretical point of view, and secondly because I have followed the practice of Dr. Sutherland, who was my preceptor at the West Department. I can not prove the accuracy of my observations in regard to the efficacy of *mercurius corrosivus* and *lachesis*. Bad cases are always complicated and usually run an irregular course. The efficacy of *lachesis* 6x trituration is especially perplexing. We are told that this snake venom is rapidly oxidized in the presence of milk sugar. Consequently we should infer that I gave these cases an inert substance. But because we do not understand how a remedy can act is not proof that it can not act. No one knows yet how *salvarsan* benefits syphilis. I can not understand how this *lachesis* can do good, but I know of nothing better, and I give my experience with it as one of those empiricisms which may benefit others in the treatment of this disease. For the past year I have used the 6x dilution in glycerin, but am unable to ascertain that it has more remedial powers than the triturate, although I believe it should have.

Just one word in connection with Dr. Coffin's remarks of two years ago. He stated that most of us instinctively would rather be treated by the gentler homœopathic method and die a natural death than be hastened to our graves by the agony of purgatives, blisters, and emetics. I have had the opportunity of seeing scarlet fever treated in the "old-school" hospitals of

this country and abroad. I have ample opportunity to observe what the average old-school practitioner gives his private patients at Brighton. If what they give is the so-called "expectant treatment" we hear so much talked about, this "expectant treatment" is pretty drastic. What they expect of it Heaven only knows! I won't go into the details of their many vagaries. It were better if both schools looked for the beams in their own eyes. Suffice it to say that our statistics compare very favorably with the statistics of other contagious hospitals.* I can safely say that I prefer the homœopathic treatment of scarlet fever, not so much because of a profound faith in homœopathy as because of lack of faith in the pharmacotherapeutics as practiced and taught by the "old school."

The above study need not discourage homœopathic prescribers. On the contrary, it should stimulate them to further research along these lines.

The results of my clinical researches do not tend to inspire me with an undue confidence in my ability as a homœopathic prescriber. There is a solace, however, in the fact that no one else in the Institute seems to dare to show what he can do by working up a similar series with, and without, the remedy. This series of mine ought to serve as a challenge. It does not look hard to beat.

CONCLUSIONS

1. The study of homœopathy may be advantageously pursued through laboratory and academic research, but clinical research must be the final criterion of the efficacy of homœopathic therapeutics.

2. Neither belladonna 3x trituration, 2 tablets *b.i.d.*,

* As to my mortality in scarlet fever, no case was allowed to die without medicinal treatment, consequently the deaths are not given in the table. Out of the total number of cases the death rate was 3.95 per cent. All of these fatal cases received homœopathic treatment before death. Of these, one died 5 hours after admission, one on the third day, two died on the fourth day, one on the sixth day, and three after the first week. Causes of death:

Ludwigs' Angina.....	1
Double otitis media, nephritis, congenital absence of the left kidney.....	1
Malignant scarlet fever.....	4
Cervical adenitis, suppuration.....	1
Lobar pneumonia on admission.....	1

During this period, among the private patients treated by old-school physicians at this hospital there were 20 deaths, giving a death rate of 15 per cent.

In a recent publication, Donnally⁹ gives the fatality of scarlet fever, based on several million cases. The average fatality he places at 14.25 per cent. For the past 40 years the fatality in Boston has been 7.2 per cent.

nor atropin 3x, 2 tablets *b.i.d.*, given to young adult female nurses one to two weeks before exposure to scarlet fever, have prophylactic value.

3. Belladonna is rarely indicated as a homœopathic remedy in scarlet fever. In the mild cases, where indicated, belladonna exerts no apparent beneficial action as far as can be ascertained from our records.

4. Judging the statistics as a whole, it must be stated in all fairness that my homœopathic prescribing in the above series of cases of scarlet fever can not be shown definitely to have benefited the patients to any appreciable degree.

REFERENCES

1. Milne, Robert: "A plea for the home treatment and prevention of scarlet fever." London, 1910
2. Koerber, E.: *Ueber die Eukalyptusbehandlung des Scharlachs.* Münch. med. Wchnschr., 1912, lix, 581
3. Glaser: *Salvarsan in scarlet fever.* Deutsch. med. Wchnschr., 1914, xl, 1760
4. Klemperer and Woita: *Salvarsan in Scarlet Fever.* Therap. d. Gegenw., 1912, liii, 198
5. Pospischill, D., and Weiss, F.: *Ueber Scharlach.* Berlin, 1911
6. Gerstley, J. R.: *Die Beziehung der Diät zu Verlauf, Blubefund und Nephritis beim Scharlach.* Monatschr. f. Kinderh., 1913, xii, 121
7. De Biehler: *Le Regime dans la scarlatine.* Arch. de med. d. enfants. 1912, xv, 759
8. Bruckner: *Die Diät beim Scharlach.* Fortschr. d. Med. 1912, 1059
9. Donnally, H. H.: *Morbidity and Fatality of Scarlet Fever.* Am. Jour. Dis. Child., 1916, xii, 205-232

REFINED WHEAT FLOUR AND ITS VALUE AS A FOOD*

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We hear much at the present time, both from members of the medical profession and in the public press, on the undesirability of white wheat bread as a food. Claims are frequently made that the essential elements of food contained in the wheat have been removed by the more modern processes of milling and that but little is left except the starch.

Some even go so far as to contend that the purifying process has been carried to that extent as to render it an actual poison, and as such, a great menace to the public health.

As these claims are circulated and find credence in the minds of the public, it would seem to be our duty to ascertain the true facts and not only to prepare ourselves to answer the many inquiries, but to give advice.

In the preparation of this paper I have quoted largely from the writings of Professor Snyder, Professor of Chemistry in the University of Minnesota, who is likewise Chemist of the Agricultural Experiment Station. Professor Snyder is an expert in all that pertains to the milling industry, as well as being an

* Read before the Hughes Club, May 18, 1917.

eminent chemist, and a leading authority on the chemistry of cereals and of food products.

I have also drawn largely from the bulletins of the United States Department of Agriculture in their reports on the nutritive value of food products, and from numerous other sources.

In order more fully to comprehend our subject, it will be well for us to give a few moments' attention to a brief review showing the immense production and consumption of wheat in this country alone, and to note the evolution of the milling industry and processes of milling.

The annual production of wheat in the United States is from 600 000 000 to 1 000 000 000 bushels, from 50 to 70 per cent. of this quantity being raised in the winter wheat states, and the balance being spring wheat.

This wheat yield fluctuates from 12.3 to 16.6 bushels per acre, the average for the past seventeen years being about 14.2 bushels. According to government statistics the average consumption of wheat in the United States is given as 5.4 bushels per capita, which equals 240 pounds of flour. This shows that the consumption of flour in this country is equal to one and one-fifth barrels per year for each man, woman and child. This seems almost incredible when we further learn that the United States is not one of the largest bread-eating nations.

The United States Census shows that the number of flour mills either in active operation or capable of being operated approximates 7 500, and these have a total daily capacity of about 1 000 000 barrels. This industry is widely distributed, no one state having over 15 per cent. of the total flour-making capacity.

The products of wheat are perhaps best briefly given by quoting here from the descriptions of samples used in the government tests and recorded in Bulletin No. 101, United States Department of Agriculture, under numbers 41 to 52, as follows:—

“No. 41. First patent flour; produced by the roller process of milling. This is the highest grade of patent flour manufactured. The gluten from this flour has a greater power of expansion than that from any other grade, and the flour also absorbs the most water and produces the whitest and largest-sized loaf of bread.

“No. 42. Second patent flour, sometimes called standard Minneapolis patent flour. It is similar to first patent flour but the bread produced is a shade darker in color, and the gluten does not possess quite so high a power of expansion.

“No. 43. Standard patent flour is made up of the sum of the first and second patent grades and the first clear or bakers'

grade of flour, and is the ordinary bread flour most frequently found on the market. It was used in the investigations as the standard for comparison with the entire-wheat and graham flours. About 72.6 per cent. of the screened wheat is recovered as standard patent flour.

"No. 44. First clear grade flour. After the first and second grades of patent flour are removed, about 11.8 to 12 per cent. of the first clear grade flour is obtained, which contains slightly more protein than either the first or second patent flour. The protein, however, does not contain gliadin and glutenin in the right proportions to produce so good a quality of bread as the patent grade flours.

"No. 45. Second clear or low grade flour. After the standard patent flour has been removed there is obtained about 0.5 per cent. of flour called second clear or low grade, which contains a high percentage of protein. The gluten, however, is of poor quality for bread-making purposes.

"No. 46. 'Red dog' flour. This is the lowest grade of flour produced. It is dark in color and has but little power of expansion. It is secured largely from the germ or embryo and adjacent portions of the wheat, and contains a relatively high percentage of protein. 'Red dog' flour produces a small and dark-colored loaf of bread as compared with flour of better quality.

"No. 47. Middlings or shorts. About 11.6 per cent. of the cleaned wheat is recovered in middlings, which consists of the fine bran that has been more completely pulverized. When this product contains a large part of the germ it is much richer in protein than ordinary shorts and is called shorts middlings. The term middlings, as used in this sense, should not be confused with the same term applied to the material obtained when wheat is milled by the old process. The middlings of the old process are now reduced and recovered in the various grades of patent flours.

"No. 48. Bran. This is the episperm or outer covering of the wheat kernel.

"No. 49. Entire-wheat flour. This is the product obtained by removing a portion of the bran (the larger part of the coarse bran is removed) and then grinding the remainder of the wheat kernel. The flour is of a coarser texture than the patent and clear grades. Entire-wheat flour is sometimes called 'purified graham' or 'natural' flour.

"No. 50. Graham flour. This is the entire-wheat kernel (bran and all) ground into meal. The presence of the bran prevents the fine grinding of the material, and particles of the bran are apparent when the flour is examined. Graham flour

is practically wheat meal. No sieves or bolting cloths are employed in its manufacture, and many coarse particles of unpulverized material are present in the product.

"No. 52. Gluten flour. This is a flour containing as high a percentage of protein as it is possible to secure by the ordinary roller-process milling. It is not composed entirely of gluten, but simply contains a high percentage of this material. No flour can be composed entirely of gluten.

"By mixing various amounts of the different standard grades of flour described above, large numbers of flour with different trade names are obtained. Many of the brands of flour sold in the market are produced by blending different amounts of the patent and clear grades of flour." The term flour is, however, generally understood to apply directly to the fine bolted product of wheat.

There has been a gradual evolution in the processes of flour milling, the effort being to obtain a cleaner as well as a more wholesome grade of flour, both for bread-making and for other food purposes. This has necessitated a finer grinding of the wheat and a more complete removal of the fiber and the wheat offals from the flour. It must be recognized that in the gathering of wheat a large amount of dirt or earthy matters, entirely distinct from the wheat, must find its way into the bins and mills.

The principle of crushing or of grinding of grains was discovered over 5 000 years ago and it has been used and is still used by both savage and civilized today.

Recognizing the necessity of grinding, or more correctly of the milling, of wheat, it is but natural that every effort should be made to perfect the processes with a view of securing the largest amount of nutritive materials, and this in a form to make it most available and of greatest value as a food.

The development of the mechanism of milling has been gradual. What might be called the ancestor of the millstone was a rounded stone which could be held in the hand, and with which grains or nuts were crushed or pounded into a coarse meal. These crushing stones must have been found of different shapes, varying from a rounded form to that of an elongated or pestle-shape muller. The latter type is not infrequently found in prehistoric remains.

The saddle-stone may be called the connecting link between the original hand-pounder or muller and the quern which was the direct ancestor of the millstone and which is said to be still used in the production of flour.

The saddle-stone was a stone with a more or less concave face on which the grain was spread, and in and along this

hollow surface it was crushed and ground into a coarse meal. This form of stone has been found in the sand caves of Italy, in the dolmens of France, in the pit dwellings of Britain and also in the lake dwellings of Switzerland and in other places all over the world.

It is still in use in parts of Mexico and in South America, where it is known as *metate* and is employed in making their maize cake called *tortilla*.

According to Richard Bennett, the quern was the first complete milling machine and was first used in Italy, and probably originated about the second century B.C. Querns are still said to be used in parts of Scotland and Ireland, and are known to be used in primitive countries. The quern is looked upon as having revolutionized the method of flour grinding by introducing the rotary motion of the millstone, a principle which exists today even in the rolls of the roller mill.

The Romans were the first to make use of water power in milling, and steam power is said to have been first used by the English for this purpose towards the end of the eighteenth century.

Sieves were used to remove the coarse materials and much of the bran two hundred years before the process of roller grinding was brought into use; in fact, there is evidence to show that sifting out the bran and coarser particles has been employed for over two thousand years.

The roller mill for the grinding of wheat was first introduced by a Swiss engineer named Sulzberger in the third decade of the nineteenth century, and later was improved by Hungarian millers, and it is said to have been first used in Great Britain in 1872. Machines fitted with rolls for the grinding of corn are said to have been used as early as the seventeenth century.

More than ninety per cent. and possibly ninety-nine per cent. of the flour consumed in this country and Great Britain is now made in roller mills, the wheat being broken and floured by means of rollers, and these mills are all what is termed automatic, that is, the wheat from the time it is brought into the mill till it is completely sacked, ready for shipment, is not touched by human hands.

Professor Snyder calls attention to the fact that there is a "popular misconception regarding the mechanics of milling. Some have the idea that the old millstone flour contained all the bran, or a large portion of it, and that there was either no separation or only a limited elimination of the fibrous parts of the wheat kernel in the milling. Such an idea is a mistake."

He clearly shows that when the roller process was intro-

duced, it brought in "no new system of separation; that is, the bolting or sifting of products, not in vogue in the old millstone system, was and is a feature of both the old and the new processes of manufacture. The rolls simply change the method of reduction of the stock, steel rolls being substituted for the millstones."

Other improvements have been developed which more thoroughly clean the wheat, remove the dirt from the surface and prevent its getting into the flour, consequently yielding a cleaner and purer product, and the yield is increased, as the flour formerly left in the bran is now removed by improved methods of milling. The rich hard glutinous middlings found in the harder wheats which are rich in food value are now reduced so as to form an essential part of the best grade flour.

The old process of flour-making left a small portion of bran, together with varying amounts of dirt and flour dust, which are now removed by the modern methods of milling; and much has been said and written as to the value of the products claimed to be removed by the modern methods. The authors of a work entitled "Bread as a Food," and others, have claimed that "these *débris* particles carry special substances known as *vitamines*," and that "these substances (the *vitamines*) are located in the intact kernel in the outer layer (aleurone layer) and probably also in the germ." Their claim is that these were retained in the old process of milling, but that they are eliminated in the new. Professor Snyder shows conclusively "that the fiber specks left in the old-process flour did not carry enough of the total bran to affect the *vitamine* content of the flour, when you consider that now with the more exhaustive process of milling, more of the flour from and near the aleurone layers is recovered than in the case of grist-mill flour." Further, he shows that it is distinctly to the advantage of the miller to recover from the wheat all the valuable and nourishing parts, as the flour yields in normal times from $2\frac{1}{2}$ to 3 cents per pound, while the bran sells for about $1\frac{1}{2}$ cents.

It should be understood that white wheat flour can be made by either the roller process or by the old process of grinding between stones, and that the old-process flour cannot indiscriminately be called whole wheat or graham flour; in fact, either the whole wheat or the ordinary white flour can alike be made by either the grinding or the roller process.

In order to show the condition of the wheat when received for milling, and the parts removed in the perfection of flour, I quote from Zimmer, in his article on the processes of milling in the *Encyclopædia Britannica*:

"Fully to appreciate the various processes of modern mill-

ing, it must be remembered not only that the wheat as delivered at the mill is dusty and mixed with sand and even more objectionable refuse, but also contains many light grains and seed of other plants.

“The miller must therefore command the means of freeing it from foreign substances.

“The wheat berry is a fruit, not a seed, the actual seed being the germ or embryo, a kidney-shaped body which is found at the base of the berry and is connected with the plumule or root. The germ is tough in texture and is in roller milling easily separated from the rest of the berry, being flattened instead of crushed by the rolls, and thus readily sifted from the stock. The germ contains a good deal of fatty matter which, if allowed to remain, would not increase the keeping qualities of the flour.

“Botanists distinguish five skins on the berry — epidermis, epicarp, endocarp, episperm and embryonic membrane — but for practical purposes the number of integuments may be taken as three.

“The inner skin is often as thick as the outer and second skins together, which are largely composed of woody fibre; it contains the cerealine, or aleurone cells, but although these are made up of certain proportions of proteids, on account of the discoloring and diastasic action of the cerealine in flour, they are best eliminated. The endosperm, or floury kernel coming next to the inner skin, consists of starch granules which are caught, as it were, in the minute meshes of a net. This network is the gluten, and this glutinous portion is of great importance to the baker because on its quantity and quality depends the strength or rising power of the flour, and the aim of modern roller milling is to retain it as completely as possible, a matter of some difficulty, owing to its close adherence to the husk, especially in the richest wheats.

“Another organ of the wheat berry which has an important bearing on the work of the miller is the placenta, which is in effect a cord connecting the berry with its stalk or straw. The placenta serves to filter the food which the plant sucks up from the ground; it passes up the crease of the berry, and is enfolded in the middle skin, being protected on the outer side by the first, and having the third or inner skin on its other side. A good deal of the matters filtered by the placenta are mineral in their nature, and such portions as are not digested remain in the crease. This is the matter which millers call ‘crease dirt.’ It is highly discoloring to the flour, and must be carefully eliminated. The fuzzy end of the berry, known as the beard, also has a distinct function; its hairs are in reality

tubes which serve to carry off superfluous moisture. They have no nutritive value.

“The yield of flour obtained averages 70 to 73 per cent. of the wheat berry. The residue, with the exception of a very small proportion of waste, is offal, which is divided into various grades and sold. In millstone milling, the yield of flour probably averaged 75 to 80 per cent., but a certain proportion of this was little more than offal.”

The relative merits of white and whole wheat or graham bread has been discussed for over a hundred years, and it has been a subject of investigation by many scientific bodies and men. Sir J. B. Lawes and Sir Henry Gilbert, well known as two eminent scientists, jointly investigated the question, and some of their conclusions here given are of interest:

“The higher percentage of nitrogen in bran than in fine flour has frequently led to the recommendation of the coarser breads as more nutritious than the finer. We have already seen that the more branny portions of the grain also contain a much larger percentage of mineral matter. And, further, it is in the bran that the largest proportion of fatty matter—the non-nitrogenous substance of higher respiratory capacity which the wheat contains—is found. It is, however, we think, very questionable whether upon such data alone a valid opinion can be formed of the comparative values of bread made from the finer or coarser flours ground from one and the same grain.

“Again, it is an indisputable fact that branny particles, when admitted into the flour to the degree of imperfect division in which our ordinary milling processes leave them, very considerably increase the peristaltic action, and hence the alimentary canal is cleared much more rapidly of its contents.

“It is also well known that the poorer classes almost invariably prefer the whiter bread, and among some of those who work the hardest, and who consequently soonest appreciate a difference in nutritive quality (navvies, for example), it is distinctly stated that their preference for the whiter bread is founded on the fact that the browner passes through them too rapidly; consequently, before their systems have extracted from it as much nutritive matter as it ought to yield them.

“In fact, all experience tends to show that the state as well as the chemical composition of our food must be considered; in other words, that the digestibility and aptitude for assimilation are not less important qualities than its ultimate composition.

“But to suppose that whole wheat meal as ordinarily prepared is, as has generally been assumed, weight for weight more

nutritious than ordinary bread flour, is an utter fallacy founded on theoretical textbook dicta; not only entirely unsupported by experience, but inconsistent with it. In fact, it is just the poorer fed and the harder working that should have the ordinary flour bread rather than the whole meal bread as hitherto prepared, and it is the overfed and the sedentary that should have such whole meal bread.

“Lastly, if the whole grain were finely ground, it is by no means certain that the percentage of really nutritive nitrogenous matters would be higher than in ordinary bread flour, and it is quite a question whether the excess of earthy phosphates would not then be injurious.”

The United States Department of Agriculture some twenty years ago instituted a series of tests which extended over a period of nearly ten years, with the object of determining the relative digestibility and nutritive value of white wheat bread and of what is known as whole wheat bread and of graham bread. These tests were all made from the same wheats, but they included various types and kinds of wheats.

The tests were conducted under the immediate supervision of Professor W. O. Atwater, Chief of Nutrition Investigations, and Professor Charles D. Woods, and the results of these investigations have been published in several bulletins issued by the United States Department of Agriculture.

These studies were in fact a continuation of investigations on the nutritive value of cereal products conducted at the University of Minnesota by Professor Harry Snyder, and at the Maine Agricultural Experiment Station by Professor Charles D. Woods. The published reports of the investigations cover over three hundred printed pages.

These tests were made upon thoroughly scientific lines, and every provision was made for accuracy. The bread and milk consumed was in every case weighed and carefully analyzed, and also all of the waste products (urine and fæces), and from the total quantity of food consumed and the amount excreted in the indigestible waste, the actual amount digested and utilized by the body was determined.

Time will admit of giving but a brief statement of these tests, but the following extracts from Bulletin No. 156 will be of interest:

“The general plan of these investigations has been to prepare the three common types of flour—graham, entire wheat and standard patent—from the same lot of wheat, and then determine their comparative digestibility and nutritive value by experiments with bread made from the flours. As stated in a former report, graham flour is unbolted ground

wheat; entire wheat flour contains all the wheat kernel with the exception of a portion of the bran which is removed with a coarse screen, while the standard patent, or straight grade flour, contains neither the bran nor the germ, but is fine white flour which has passed through a No. 14 bolting cloth."

In order to compare accurately the nutritive values, it was necessary to have their samples prepared from the same lot of wheat, because of the wide variations in composition of different kinds of wheat.

"The earlier experiments were made with wheats from widely different localities, including Minnesota northern-grown hard spring wheat, Michigan soft winter wheat, Indiana soft winter wheat, Oklahoma hard winter wheat, and Oregon soft winter wheat."

"The tests made and described in bulletin No. 156 were made with Oklahoma hard winter wheat and Oregon soft winter wheat, obtained from the Oklahoma and Oregon experiment stations, respectively."

Complete analyses of all the wheat and flour samples were made, and also of the milk.

In the digestion experiments "the diet consisted of milk and of bread made from the different grades of flour. In the first series, the first three experiments were carried on simultaneously, the three subjects being fed on bread from the entire wheat flour milled from the Oregon wheat, and in addition sufficient milk to make the diet palatable. Three more experiments followed, in which bread from the straight grade flour was substituted for the entire wheat bread; and, finally, in three more experiments, graham bread was used. In the second series the experiments were repeated in a similar way with bread made from the Oklahoma wheat."

"Besides these, two additional experiments were made with each subject in order to determine the influence of the bran and germ upon the completeness of digestion. In the first of these the diet consisted of bread from bran flour, eaten with some milk. In the second, bread from germ flour was substituted for the bran flour bread."

"The total number of separate experiments was therefore twenty-four. The period of duration on each of the experiments with the ordinary flours was four days, or twelve meals; in the experiments with the bran and germ flour one reads it was three days, or nine meals."

"The subjects designated in these experiments were young men in good health; one, a laborer doing field work, and two, students devoting part of their time each day to miscellaneous muscular work."

“This simple diet of bread and milk was eaten, each material being consumed *ad libitum*, but the amount taken at each meal weighed and recorded. The digestibility of the nutrients of the total diet was determined from the quantity of each in the food and fæces. The digestibility of the nutrients in the bread alone was computed by assuming coefficients of digestibility for the nutrients of the milk.”

“The fæces for the experimental period were collected and analyzed by the usual methods. The separations of the fæces at the beginning and end of each period were effected by means of charcoal in gelatin capsules as a marker.”

“The urine of each subject was collected during each experimental period, beginning with 7 A.M. of the first day of the experiment and ending at 7 A.M. of the first day immediately following the experiment. The total amount and specific gravity of the urine and the percentage of nitrogen in it were determined for each day.”

A general summary of the results and the conclusions drawn from these tests are given on pages 53 and 54 of bulletin No. 156, and they certainly should prove of interest to us at this time. They harmonize with the results of previous experiments along these lines made by the Department of Agriculture, and extending over a period of ten years.

GENERAL SUMMARY OF RESULTS AND CONCLUSIONS OF EXPERIMENTS WITH BREAD

“In eighteen digestion experiments with men it was found that white (straight grade) flour was more completely digested than either graham or entire wheat flour, and yielded a larger amount of digestible nutrients and available energy. While graham and entire wheat flours contain more total protein and fat and have a higher heat of combustion, they actually yield to the body, because of their lower digestibility, smaller percentages of digestible nutrients and available energy than the straight grade flour.

“The same general differences in digestibility of the three grades of flour have been noted in experiments with hard northwestern spring wheats grown in Minnesota and Dakota, hard winter wheat grown in Oklahoma, and soft winter wheats grown in Michigan, Indiana, and Oregon. In fifty-four digestion trials with both hard spring wheats and soft winter wheats in which six separate samples of wheat have been milled so as to produce the three types of flour—graham, entire wheat, and straight grade—uniform results have been secured, and in all of the comparative trials the largest amounts of available nutrients and energy have been secured from the white flour.

“In the three digestion trials in which finely pulverized bran was added to white flour in the same proportion as is removed in milling, it was found that the addition of the bran lowered the digestibility of the flour so that a smaller amount of digestible nutrients and available energy was obtained from the bran flour than from the white flour with which the bran was mixed. The flour containing finely pulverized bran was more digestible than the coarsely granulated graham flour, but less digestible than the white flour. When bran was finely pulverized it failed to digest as completely as the white flour and, therefore, the addition of the bran lowered the food value of the flour.

“In three digestion trials in which finely pulverized wheat germ was added to white flour in the same proportion as is removed in milling, it was found that the addition of the germ did not materially change the digestibility of the flour, and that the amount of total digestible nutrients and available energy in the germ flour and the white flour was about the same. There was no material gain in total digestible nutrients by the addition of the germ to the white flour. The germ flour produced a smaller sized, sweeter, but less porous loaf than the white flour. Because of its fermentable character wheat germ is excluded from white flour.

“As to pecuniary value, a larger amount of available nutrients and energy can be procured at the usual prices for a given sum of money in the form of white, that is, straight grade flour, than of any other flour. White flour contains the largest amount of available nutrients, and is not only the most digestible, but at present average market prices is also the cheapest kind of flour. It should not be inferred, however, that the use of entire wheat and graham flour is to be discouraged. All the flours are very nutritious and economical foods, and experience has shown that they are wholesome as well. The difference in the amounts of total nutrients furnished the body by the various grades of flour are comparatively slight, all grades being quite thoroughly digested.

“In discussing the nutritive value of the breads made from the three kinds of flour, the quite noticeable effect of the breads upon the subjects is of interest. In the experiments reported, all the subjects expressed a preference for the white bread. The graham bread, when it furnished the bulk of the ration for four days, produced a little discomfort, suggesting a slight irritation of the digestive tract. The ration of white bread and milk was less bulky in character and gave better results as to satiety and particularly as to ease of digestion. It should be borne in mind, however, that the tendency of the

coarser flours to increase the peristaltic action of the intestines is often of undoubted value, particularly to persons of sedentary habit, and that their use as a laxative is in many cases extremely beneficial.

“The use of different grades of flour for bread making is a convenient means of increasing the variety of the diet. Because of varying requirements, no general rule can be laid down in the matter, and the extent to which the various grades of flour should be used must be determined largely by the individual himself.

“In this investigation the comparative digestibility of the phosphates and other mineral constituents was not determined, nor were the quantities consumed and the amounts and proportions excreted in the urine and faeces studied. As yet entirely satisfactory methods have not been generally adopted for determining the digestibility of mineral constituents, and consequently there is a lack of definite knowledge concerning body requirements and the changes which are involved in the metabolism of the ash constituents of the diet. Considerable work along these lines is now being carried on by a number of investigators in France and elsewhere in Europe, and in the United States studies of the forms in which ash constituents, especially phosphorus, sulphur, and other ash constituents in food and excretory products, and various problems concerning the functions of these elements are being taken up in connection with the nutrition investigations of this Office and by experiment station workers and other investigators. It is believed that this work may be more appropriately summarized when the investigations now in progress have been continued for a longer time.”

In the year book of the United States Department of Agriculture, 1903, will be found a most interesting article on “Wheat, Flour and Bread,” by Professor Harry Snyder and Professor Charles D. Woods, in which are given the results of upward of 100 digestion experiments made on healthy men with bread from different grades of flour ground from hard and soft wheats from different States. These experiments were made with the same care and conditions previously referred to, and the results, therefore, give very definite information regarding the relative digestibility of bread from different grades of flour.

The averages of the results obtained with the three grades of flour, *viz.*, graham, entire wheat and standard white, give the following proportions of nutrients that were digested from the different flours, these factors being commonly termed coefficients of digestibility: standard patent flour protein 88.6 per cent. and carbohydrates 97.7; entire wheat flour, protein 82

per cent. and carbohydrates 93.5; graham flour, protein 74.9 per cent. and carbohydrates 89.2 per cent.

In experiments made to show the digestibility of bread to which 14 per cent. as much bran as flour was added, this being about the proportion removed during milling, as compared with that of bread made from the same flour without the bran, the addition of the bran increased the protein content from 15.1 per cent. to 15.3 per cent. but a slight amount, whereas it very decidedly decreased its digestibility, as the following will indicate: bread with bran, protein 85.9 per cent. and carbohydrates 93.3; bread without bran, protein 91.6 per cent. and carbohydrates 97.8.

These experiments were made with the addition of bran which had been very finely ground, much finer than what is found in the graham or entire wheat flour, and the results obtained show conclusively that the defective digestibility of the bran is not due entirely to the coarser grinding, though it should be noted that the bread made from the mixture of ordinary flour and the finely ground bran was found more digestible than that from either the graham or entire wheat flour from the same lot of wheat.

Other experiments were made to ascertain the effect of adding 7 per cent. of the germ to 93 per cent. of standard flour, this being even a larger portion than was removed in process of milling. The digestibility of the bread made from this mixture was for protein 90 per cent. and carbohydrates 97.6; and for bread from standard flour, protein 91.6 per cent. and carbohydrates 97.8. There was therefore no gain in nutritious value by retaining in the flour the germ that is ordinarily removed in the milling.

An extended series of digestion experiments upon breads made from white and graham flours was made by Myer and Voit of Munich, with the result that bread made from fine white flour "yielded the highest percentage of digestible nutrients." (U. S. Department of Agriculture, Farmer's Bulletin No. 112). Graham Lusk of Cornell University, in his work on "The Fundamental Basis of Nutrition," refers to Carl Voit as the man "to whom more than any one else the world owes its fundamental knowledge of nutrition." As Professor Snyder has stated, the list of scientists that have made investigations relative to the digestibility and nutritive value of breads is a long one, and without exception their findings have been in favor of white bread.

A few words may be added as to the vitamin product in wheat and bread. Vitamins are something new, and there is much yet to be learned about them and their uses and value.

It is a word that has been conjured with and that has been much used by the unscrupulous to serve their purposes.

It is sufficient here to say that vitamins are certain nitrogenous compounds, produced during the growth of yeast. They are akin to protein and possess no phosphorus, and are to be found in food of high protein compound.

“When bread is made with yeast, and milk is used, it is enriched with the most active and valuable vitamins known.” The claim that the new processes of flour making has removed the vitamin product is certainly a fallacy, as Professor Snyder has shown “that in modern milling the flour layers supposedly richest in vitamins are now more completely recovered than in the old grist-mill product, where much of these flours went with the feeds.”

As to the proteins in flour, the more recent investigations show that not all proteins have the same nutritive value. Some contain typical substances necessary for growth and others are deficient, so that to class a substance as a protein does not signify its absolute food value.

“Generally speaking, a flour with 12 per cent. of protein has about 5 per cent. each of gliadin and glutenin, and about 2 per cent. collectively of a number of other proteins, albumins, globulins and proteoses. The gliadin is the glue-like body particularly characteristic of wheat and serves as the ‘binder’ of the gluten. The glutenin has all the essential components for purposes of nutrition, and ranks equally with such proteins as casein, meat proteins, or ovalbumin as a source of protein supply. There are present in flour approximately six per cent. of these proteins of the A, or highest, grade, which is twice as much as is found in milk, and beside these there are six per cent. more of gliadin and similar proteins to serve for general conservation purposes.”

In order more fully to realize the importance of bread and other products of wheat as a food for man, and more particularly for the laborer, we have only to take note of these facts: “The annual per capita consumption of flour in this country is 240 lbs., and the average flour mill test would show this to contain an average of 11.50 per cent. of protein. On the basis of standard dietary tables, this flour would furnish from 40 to 45 per cent. of the protein consumed by an average family. In addition, this flour supplies 50 per cent. of the total energy yielded by all the foods consumed.”

Professor W. O. Atwater, formerly Professor of Chemistry in Wesleyan University, and now of the United States Department of Agriculture, who is recognized as an authority in Nutrition and Dietetics, and has contributed the articles on Dietetics

in the last edition of the *Encyclopædia Britannica*, has given us a table showing the "Composition of some of the Common Food Materials," the study of which is of special interest with reference to the subject we are now considering, and which enables us to compare the percentage of nutritives and mineral salts in flour with that of other common food materials.

The following extracts will prove of interest: The percentage of protein in fresh meat varies with the kind of animal and the part, varying from 13.4 per cent. in the loin of pork or of mutton to 16.1 per cent. in a chuck of beef.

In chicken and goose we have about 13.5 per cent., and in turkey 16.1 per cent.

In fresh cod 11.1 per cent., and in oysters but 6 per cent.

In eggs we have 13.1 per cent., and in milk 3.3 per cent.

In nuts we have much variation, ranging from 5.2 per cent. in chestnuts to 11.5 per cent. in almonds.

In fruits and fresh vegetables the percentage is quite small, varying from 0.3 per cent. in apples to 1.8 per cent. in potatoes, or less than 1 per cent. in fruits and less than 2 per cent. in vegetables.

Dried beans, however, contain 22.5 per cent. and dried peas 24.6 per cent. of protein matter.

Compare these values with those of white wheat flour, which contains an average of about 11.4 per cent protein, and of graham flour which is here given as containing 13.3 per cent.

And what is of greater interest, inasmuch as it has been claimed that all the mineral salts had been eliminated from white wheat flour, we find that while a rib of beef contains but 0.9 per cent. of mineral matter, and other fresh meats varying from 0.7 per cent. to 0.9 per cent., white wheat flour, after all its sifting, bolting and purifying, still retains 0.5 per cent. of mineral matter, which is in excess of most fruits, including apples, grapes and oranges. The same, in fact, as that contained in tomatoes, and in excess of squash, and even potatoes have but 0.8 per cent. and cabbage and beets but 0.9 per cent.

Doubtless we are justified in accepting the figures of Professor Sherman of Columbia University, in his "Chemistry of Food and Nutrition." His analysis of the ash shows the presence of 0.68 per cent. mineral matter in white wheat flour, which is very near the average in all common food materials.

The most reliable data will, I think, show that while the high patent grades of flour contain from 0.5 per cent. to 0.55 per cent. of ash (mineral matter), the standard grades of white wheat will average from 0.62 to 0.72 per cent.; in fact, the

result of official tests at the United States Agricultural Experiment Stations at different points have verified this statement.

These facts will tend to show that white wheat does supply a liberal amount of mineral matters. This was the opinion of Graham Lusk, and even Dr. H. W. Wiley, in discussing the mineral matters of flour, says: "Enough is left, however, not only to supply the need of the body for mineral constituents, but also for the condimentary purposes mentioned above."

In reply to my request for further information as to the quantity of phosphates and other mineral salts present in refined wheat flour, Professor Snyder has sent me the following extracts from Professor Sherman's work and his comments thereon, which seem to me fully to corroborate the conclusions drawn, and to show that white wheat bread does contain its full share of mineral salts:

"Professor Sherman of Columbia University, in his 'Chemistry of Food and Nutrition,' gives the following composition of the ash of milk and of wheat flour, along with that of many other foods." (Copied from Table 11, page 332.)

ASH CONSTITUENTS OF FOODS IN PERCENTAGE OF THE EDIBLE PORTION

	CaO	MgO	K ₂ O	Na ₂ O	P ₂ O ₅	Cl	S	Fe
Milk (cow)	.168	.019	.171	.068	.215	.12	.033	.00024
Wheat flour	.025	.027	.146	.04	.20	.07	.17	.0015

In amplifying on the result of this analysis, he writes as follows:—

"As to the chief constituents: *phosphoric anhydrid*, *potassium oxid*, *magnesia* and *iron*—there is but little difference between the amounts found in milk and refined white flour, the milk showing a total of .40 and the flour .37. The difference is less than would occur between duplicate analyses of the same material or between the results of two chemists analyzing the same substance. As to the ingredients not mentioned: there is an excess of *sodium* and *chlorine* in milk, which is due to sodium chloride or common salt. Since this ingredient (salt) is added in bread making, it is liberally provided for in the bread product and need not give us further concern. As to the lime and iron: the flour has about six and one-half times more iron than milk. As to the lime, the apparent deficiency in the flour is of minor importance as compared with the most essential ash constituents such as potash, phosphates and iron, and they total practically the same in each food.

Sherman states that 'inorganic forms of calcium are utilized in nutrition,' meaning that the lime in drinking water is available for purposes of nutrition. One can tell from the deposit in the tea-kettle if their system is likely to get enough lime or not.

"The point is: Milk is universally recognized as a perfect food rich in phosphates and other materials. Now, if milk is taken as the recognized standard, then any food which contains as much phosphate, potash, magnesia and iron compounds as milk must be a satisfactory food and in every way, so far as these constituents are concerned, the equivalent of milk. On the basis of a milk standard, therefore, refined white flour cannot be considered as deficient in phosphates as is so frequently claimed. If flour has as much phosphate material as milk, and all authorities show this to be the case, why condemn refined flour unless we also condemn milk? It is certainly illogical to say that milk is well supplied with phosphates and flour is deficient in phosphates, when according to chemical analyses they both contain the same amount."

In conclusion, I will briefly summarize the deductions which it seems to me we may properly make from the facts here presented:—

First: We have learned that the new process of milling has not effected any radical change in the character of the flour produced. While it has enabled the miller to obtain in his product a larger percentage of the nutritive elements of the wheat, it has also enabled him to eliminate more of the undesirable portions, including the dirt and offals.

Second: We have found that the elimination of the bran and germ has not materially reduced the quantity of protein matter, the flour still retaining about twelve per cent., which would appear to be its full normal proportion as compared with other food products.

Third: The result of the many tests made in this country and in Europe, including the long series of tests made by the United States Department of Agriculture, have without a single exception shown the superiority of the white wheat flour over that of graham or entire wheat flour as a food product.

Fourth: It has been clearly shown that there is no foundation for the claim that bread made from white wheat flour is deficient in vitamins.

Fifth: It has also been shown that white wheat flour does contain its full share of essential mineral salts, and in this regard it compares favorably with milk and other common food products.

Bread made from refined wheat flour has long been regarded as one of the principal, if not the chief of, food products, and it would appear to me that a careful study of the facts will lead us to the conclusion that we must continue so to regard it.

67 St. Paul St.

IRRITABLE BLADDER

By JAMES C. WOOD, A.M., M.D., F.A.C.S., Cleveland, Ohio

I shall study the causes responsible for irritable bladder under three divisions:

- I. — Difficult or painful urination.
- II. — Frequency of urination due to slight irritation.
- III. — Irritation with incontinence of urine.

I. The causes of difficult or painful urination are numerous and may be enumerated as follows: 1. Inflammatory diseases of the bladder and urethra. 2. Malignant diseases of the bladder. 3. Vascular tumors and eversion of the mucous membrane of the urethra. 4. Abnormal positions of the uterus. 5. Vesical calculi. 6. Diseases of the *ostium vaginæ*. 7. Abnormal conditions of the urine. 8. Cystocele. 9. Urethral irritation.

II. The causes responsible for frequent urination, in addition to those already enumerated under the head of difficult or painful urination, are: 1. A too concentrated urine. 2. Azoturia (excessive urea). 3. Lithuria (excessive uric acid and urates). 4. Ingestion of certain drugs or foods (terebinth, cantharis, asparagus, *etc.*). 5. Neurotic or hysterical conditions. 6. Diabetes insipidus and diabetes mellitus.

III. Irritation with incontinence of urine (that is the inability to control the escape of urine from the bladder or the passing of it unconsciously) may be due to relaxation or paralysis of the bladder sphincters, or to irritation with contraction of the detrusor muscular layers of the bladder. If both are paralyzed, there is associated with the incontinence a dribbling of the urine. These conditions may result from: 1. Disease of the brain itself, or, disease of the cord, for the cord is the connecting link between the bladder and the vesical centers. Under the first head (diseases of the brain) are epilepsy, apoplexy, alcoholism, idiocy, shock, sunstroke, insanity and certain of the infectious diseases. The lesions of the cord giving rise to incontinence of the urine without actual disease of the brain are hæmorrhage into the meninges, myelitis, spinal meningitis and

locomotor ataxia. If there is total paralysis of the bladder with retention and dribbling, the reflex arc is usually abolished. Paralysis is not necessarily absolute and there may be occasional voiding or accidental escape of the urine with any sudden muscular effort.

Incontinence on the other hand may be due to an increased excitability of the nervous mechanism, as in the case of nocturnal enuresis. The causes giving rise to this condition should be looked for. There may be inflammatory irritation from vesical calculi, adhesions of the clitoris, or irritation due to the concentration of a diabetic urine, or ascarides.

COMMENT

Acute and chronic inflammatory diseases of the bladder and urethra can hardly be successfully cared for without local treatment. This comprehends irrigation of the bladder with antiseptic solutions, urethral suppositories, and the correction of any malformations of these organs or abnormalities of the urine itself.

Malignant disease of the bladder is rarely primary. Usually when the bladder is implicated in the malignant process it is secondary to involvement of the cervix. The practical point in connection with malignant disease of this organ to remember is that bladder irritation may be the first symptom of cervical cancer.

Vascular tumors and eversions of the mucous membrane of the urethra not infrequently cause difficult or painful urination (dysuria). These, of course, should be removed surgically and their bases cauterized.

Abnormal positions of the uterus result in dysuria because of direct pressure of the fundus upon the bladder (rare); or, which is the more common condition, inflammatory retraction of the utero-sacral ligaments causes the cervix to be drawn backward, causing tension upon the bladder neck. The treatment here is to correct the malposition of the uterus either by surgical measures or by properly directed massage through the vagina.

Vesical calculi when responsible for dysuria give rise to pain which is always worse when the bladder is empty, the bladder walls collapsing upon the stone or stones. In nearly all instances there will be associated with this condition cystitis with pus in the urine. The practical point to bear in mind is that in dysuria with cystitis, which persists in spite of the recognized treatment for cystitis, the bladder should always be carefully explored for calculi.

Diseases of the *ostium vaginae* give rise to a painful urina-

tion simply because of contact of the irritating urine with the inflamed area. In all instances where the urine irritates the external organs of generation a careful analysis of the urine should be made. Not infrequently, especially in women at or beyond the menopause, there will be found to exist diabetes mellitus.

Other abnormal conditions of the urine responsible for difficult or painful urination, besides those referred to above, are variations in its acidity and alkalinity, in which cases the diet should be carefully regulated. Usually the ingestion of a large quantity of pure, soft water will be found useful in these cases.

Urotropin is so generally used by physicians of all schools of medicine for these abnormal conditions of the urine with cystitis that I desire to call attention to the necessity of care in its administration. Let me quote from Potter: "Ordinary medicinal doses cause no general effects as a rule but in susceptible persons it may cause gastric and renal irritation with hæmaturia, hæmoglobinuria, and albuminuria, also diarrhœa, abdominal pain, measly rash with headache, *tinnitus aurium* and strangury. It is an excellent urinary and intestinal antiseptic and possesses considerable power as a solvent of uric acid, the excretion of which it promotes." I have seen harm result from the administration of five-grain doses of urotropin four times a day for three days in succession. I am inclined to believe that its advantages are greatly over-estimated. For the conditions described by Potter it would, of course, be homœopathic and have to be used in small or substitute doses. I have had no experience with it in such doses. In view, however, of the symptoms produced by full doses its possible advantageous use homœopathically should be borne in mind. We already have a list of homœopathic remedies which will, I think, accomplish all that can be accomplished in the way of specific medication. In such a list I would include as foremost: Cantharis, Belladonna, Terebinthina, Gelsemium, Aconite, Argentum nitricum and Mercurius corrosivus. In specific cases the vaccins may be indicated.

The local treatment in chronic cases is of great importance. A saturated boric acid solution is one of the best irrigating fluids that we have. There are, however, many others that may be useful, among which are permanganate of potash and the silver salts. It is my custom in chronic cases of cystitis first to irrigate the bladder with a boric acid solution and to leave behind an ounce or two of either the permanganate of potash, one per cent. solution, or of argyrol five per cent. solution. If there is much pain a five per cent. ichthyol solution is most serviceable. If the urethral irritation is distressing,

a two-grain ichthyol suppository introduced once or twice a day is most helpful.

Cystocele gives rise to difficult or painful urination because of the residual urine left behind when an effort is made to empty the bladder. This in time become stale and infection results. The only proper treatment is the correction of the cystocele by surgical measures. In elderly women where surgical work is contraindicated, much relief may be afforded by carrying a lamb's wool tampon medicated with glycerin and tannic acid into the vagina. This should not be left in longer than twenty-four hours and after its removal a cleansing douche should be taken.

Urethral strictures are recognized as a frequent cause of painful urination in men. Their evidence in women is, however, not so generally recognized. I have many times cured difficult or painful urination in women by carefully dilating the urethra at regular intervals with graduated sounds medicated with ichthyol. The external meatus should always be thoroughly cleansed with an antiseptic spray before doing this.

Where there is an excessive excretion of urea (azoturia), the diet should be regulated and the amount of bodily fluids increased. It may be necessary to withdraw the meats very largely from the patient's diet list, especially the heavy meats.

In neurotic and hysterical cases the usual stigmata of these conditions will be found and the treatment should be directed accordingly. Gelsemium, I have found to be one of the most useful remedies in their treatment.

In diabetic conditions the treatment is necessarily dietetic and constitutional.

Where there is irritation with incontinence of urine due to relaxation or paralysis of the bladder sphincters, the condition can only be overcome by carefully applied surgical procedures, which comprehends the correction of the cystocele, and the overcoming of the sphincteric paralysis by shortening the muscle.

There is nothing more distressing to a refined patient than the constant wetting of herself because of her inability to hold the urine while walking, straining, laughing or coughing. It keeps her constantly irritated and there is always about such a patient a urinous odor which is extremely disagreeable. There are certain remedies always to be thought of in its treatment. These are Gelsemium, Belladonna, Cantharis and Opium.

When disease of the central nervous system is responsible for incontinence and dribbling, the symptoms of the more serious difficulty will stand out prominently.

In all instances of organic disease of the nerve centers the bladder must be carefully watched for overdilatation.

Finally, care must always be taken to distinguish between *retention* and *suppression* of urine. *In post-surgical conditions when there is dribbling of the urine, a catheter should always be passed to make sure that the bladder is empty.* Indeed, it can be written down as an axiom that dribbling of the urine in one not previously affected in this way means retention. The increased dullness over the hypogastric region will usually determine the distention of the bladder. If, however, there is much tenderness, a catheter had best be passed as a precautionary measure. This rule especially applies to puerperal cases. Following child-birth I have seen the bladder distended almost to the umbilicus and yet the patient was passing or dribbling urine. In all instances where the bladder is thus paralyzed it should be washed out after catheterization with a saturated boric acid solution.

In order to call attention to another cause of frequent and painful urination which is not included in those already enumerated because of its rarity, I desire briefly to record a case operated upon by me on April 24th of this year. The patient is 58 years of age, of English extraction and a resident of the Bermuda Isles. She is a thin, wiry little woman and has had six children and six miscarriages. She began to menstruate at 16, was always regular and never had any pain with that function. Menopause fully established at 49. Two years ago she developed a most distressing dysuria and could hold her urine but a short time. She complained especially of a very distressing bearing down sensation when on her feet, with a desire to empty the bladder. There was a slight cystocele but it was not marked. There was also a slight laceration of the cervix. The pelvic floor was, however, in excellent shape. Except for the distressing dysuria, she enjoyed the very best of health. There was a division of the recti muscles so that they were separated midway between the umbilicus and the pubes for nearly six inches with nothing but the intervening skin and peritoneum to protect her abdominal contents. There was general enteroptosis. The uterus was fixed, there was peritoneal tenderness and a good deal of inflammation. Bladder capacity but five ounces because of the adhesions in and about the uterus. I found upon opening the abdomen that the ovaries had become almost entirely obliterated by the inflammatory process and were not larger than cherry pits. Both had become completely calcified and were therefore removed. I broke up all adhesions, lifted the small senile uterus, together with the bladder, forward and upward, did the internal Alexander operation so as to keep the uterine fundus up and overcame the separation of the recti muscles by splitting and overlapping

their sheaths. I am now distending the bladder and she is already able to hold with reasonable comfort ten ounces of urine.

Summary

1. — Irritable bladder is but a symptom of numerous functional and organic diseases of that organ.
2. — In all instances when the symptoms become distressing a thorough physical exploration should be made, which comprehends an examination of the entire body and especially of the urine. The use of the cystoscope is often called for.
3. — In all cases where there is dribbling of the urine a catheter should be passed.
4. — The homœopathic remedy internally is of great utility in the treatment of the various diseases of the bladder and the conditions responsible for bladder irritation. In most instances, however, local medication should be used to supplement internal medication.
5. — Where the urine is irritating the ingestion of a large quantity of pure, soft water is beneficial. This is especially true if the urine is unduly acid.

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EDITORIAL

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THE DOCTOR'S HYMN

(*Note.* Mrs. Sutherland wrote this hymn almost twenty years ago at the time of the "flag-raising" on the then new laboratory building of Boston University School of Medicine. It had the distinction of being the first flag-raising in Boston at the time of the Spanish-American War, and Dr. Wesley Terrence Lee was orator, as representative of his class (1898), the members of which gave the flag.)

The Hymn is especially appropriate now that so many of our men and women are going to the war front.)

Our Country! — at thy call
 Thy children, one and all,
 Their gifts must bring;
 Statesman, the burning word;
 Soldiers, the naked sword;
 Wealth, gold in coffered hoard;
 Bards, songs to sing.

Ours 'tis, while pain endures,
 To bring the herb that cures;
 The saving steel.
 Others thy wars must fight, —
 We lift by sacred right,
 Beside the hands that smite,
 The hands that heal.

To thy red, white and blue,
 Pledge we our faith anew,
 For gain or loss.
 And 'neath its folds shall fly
 Symbol of service high,
 Lifted to thy free sky,
 HEALING'S RED CROSS!

AVIATION AND THE BARANY TESTS

Military experts have said that the side which could dominate the air on the Western Front in France would control the entire situation.

The steadily increasing rate at which applicants have been appearing in the United States Army Examining Station for Aviators (Boston) during the past two months, suggests that the authorities at Washington have this end in view in their nation-wide appeal for men to train for air service. Candidates for flying are subjected to the strictest physical examination required for any department of military service, with the result that the men finally accepted are of an exceptionally high-grade type. The eye and equilibrium tests are perhaps the most exacting. This is necessarily so because of the nature of the work to be undertaken.

Normally one's equilibrium is controlled by three factors: (1) the eyes; (2) the muscle-sense; (3) the static labyrinths (semicircular canals, saccule and utricle). On going into the air on a rapidly moving, vibrating, and unstable plane, the muscle-sense, to a great extent is eliminated. This is not an important factor because it is known that the equilibrium can still be maintained by any two legs of the tripod just enumerated. As the aviator gets well up in the air and begins his manœuvres, in keeping his machine on an even keel he is unconsciously balancing it against the horizon. If he suddenly enters a fog or cloud (a common occurrence on the Western Front), his horizon is gone and he is lost indeed unless he has an active static apparatus to steady him.

Our Government is the first of the Allied Powers to make use of the Barany methods of examination for testing the equilibrium in aviators and the result should be a great reduction in the number of accidents in the air.

H. L. B.

CLINICAL DEPARTMENT

CASE RECORDS*

(Ante Mortem and Post Mortem) as used in Weekly Clinico-pathological Exercises at the Massachusetts General Hospital, edited for the use of practitioners by Richard C. Cabot, M.D., and Hugh Cabot, M.D.
Autopsy 3082

An Irishman of seventy-one entered February 6 for observation.

F. H. Good.

P. H. He had otitis media in his youth, followed by deafness. At twenty-one he had typhoid fever. Sixteen years ago he had an attack of aural vertigo. He has nycturia, 1.

Habits. Good.

P. I. He has noticed weakness and a considerable loss of weight. Six weeks ago his bowels were badly constipated, not responding to strong cathartics for several days. Since then he has had diarrhoea, with mucus and more or less bright red to black blood. He feels better if he does not eat solid food. He has had attacks of pain from the sacrum, more on the left, down to the rectum and testes, very severe, but only a few seconds in duration.

P. E. shows a slightly emaciated man 5 feet $8\frac{1}{4}$ inches high, weighing $192\frac{3}{4}$ pounds. The apex impulse of the heart is in the 5th space $\frac{5}{5} \mid \frac{11}{11} \frac{1}{1}$. The action is markedly irregular. The sounds are of poor quality. A_2 and P_2 are both faint. The pulses are of poor volume and tension. The artery walls are palpable. The rest of the examination is negative.

T. $96.5^\circ - 99.5^\circ$ until April 9, then occasionally rises to 100° or 101° until May 28. For four weeks beginning April 3 there are daily wide fluctuations. No chart was kept through June and July. August 3-4, $96.4^\circ - 98.1^\circ$. P. not remarkable until April 9, though gradually rising. After April 9, 68-112; after April 27, not below 80. August 2-5, 119-90. R. not remarkable. Urine: Normal amount when recorded. Sp. gr. 1022-1002. Albumin at eight of 11 examinations; rare hyalin and finely granular casts at one; red blood corpuscles at 3; pus cells at 3. Blood: Hgb. 80%. Leukocytes 8,500-14,000. Wassermann negative. X-ray shows no six-hour residue. The bismuth mass reached the middle of the transverse colon in 24 hours, and has not moved beyond this point at the end of 48 hours. The position of the colon is not abnormal. The cæcum is much dilated. Proctoscopy: At the brim of the pelvis there seems to be a narrowing with irregular edges anteriorly. At this

*Published weekly by the Massachusetts General Hospital, Boston, Mass. Dr. F. A. Washburn, Administrator. Subscription, \$5.00 per year.

point fresh blood is seen. The pain is so severe that no attempt is made to get a section. Two surgical consultants advise operation.

The course of the illness was one of repeated bowel movements, with bloody discharge. The patient was kept fairly comfortable with morphia suppositories. The blood stopped for several weeks, but early in April returned. April 5 the urine began to be burning and to show some blood. Urotropin and forced fluids gave some relief. By the end of July the weight had fallen to 160–170. The number of movements increased slowly until there were several each hour. The urine contained much brownish material. He complained of gas in the bladder. There was still severe pain located in the prostate and going through the penis. He grew increasingly weak physically and dull mentally, with intervals of mental wandering. He refused all medication except laudanum. July 30 he became stuporous, then comatose or slightly delirious. August 5 he died.

Discussion by Dr. William H. Smith: The aural vertigo was probably a legacy from his old otitis media.

Weakness and loss of weight at seventy-one are suggestive. In the case we took up last week I said that marked loss of weight at thirty-six or thirty-seven was very suggestive; at seventy-one loss of weight is even more suggestive of malignant disease. An elderly person in whom there is a sudden reversal of bowel habit becomes at once an object of suspicion. It is very difficult to make a diagnosis of malignant disease of the intestinal tract early, but a change from a regular to an irregular habit, constipation, or constipation with diarrhœa, should make it necessary to exclude by the most rigid tests blood in the stools, or by X-ray an early adeno-carcinoma of the intestinal tract. This man's bowels were practically obstructed, his constipation was so severe. Since the strong catharsis there has been diarrhœa with mucus and more or less black to red blood — in other words, since the opening of the bowels by catharsis blood and mucus appeared at once, suggestive of some abnormal intestinal condition.

The attacks of pain would suggest at once the necessity of a rectal examination and a proctoscopic examination. It is an irritated condition apparently.

He can hardly be said to be emaciated.

There is nothing remarkable about the measurements of his heart. Personally I prefer to palpate the apex in the left lateral position, by which procedure a left ventricular hypertrophy is uncovered, rather than to rely on percussion as an index of cardiac enlargement. One would expect a man of seventy-one to have an inefficient heart muscle — weak heart. "Action

irregular" suggests a senile heart with arteriosclerotic coronaries. In other words, at seventy-one arteriosclerosis undoubtedly is present, and undoubtedly there is a degenerated muscle on an arteriosclerotic basis.

So far as we have gone, we have a man with arteriosclerosis and a senile heart, who certainly has symptoms suggesting partial intestinal obstruction. Later there was relief of the partial obstruction, blood and mucus appearing in the stools, and a certain amount of referred pain low down in the sacrum.

It is this type of heart where it is necessary to check up the pulse and the apex beat to be sure of getting the complete heart rate. There is a variable cardiac rhythm, which, if it is the real rhythm, suggests cardiac weakness.

The fact that the urine had a specific gravity of 1022 would make it seem that the degree of kidney destruction based on an arteriosclerosis was not excessive in this case. There is nothing in the urinary examination which might not fit in perfectly well with a moderately sclerotic kidney with a possibility of a slight infection of the pelvis of the kidney or the bladder, perhaps of prostatic origin.

At best there was only a moderate leukocytosis.

The X-ray is difficult to interpret. There is no statement to show that the bismuth mass was blocked by any pathological condition suggesting carcinoma. It seems to me possible that it may have been blocked off by spasm or by faecal impactions. The X-ray plate is unsatisfactory. I shall attempt no interpretation of it. It is pretty difficult to get a good plate in a man weighing a hundred and ninety-odd pounds. If the statement of 48-hour stasis is correct, the inference is that there may be a block in the transverse colon, or a stoppage in the colon which prevents the transmission of bismuth through the gut. It may be irritated by the retention of faeces.

Dr. H. Cabot: Would that account for dilatation of the caecum?

Dr. Smith: No, I think that is probably a later condition. Pressure has produced this caecal dilatation. The point I was trying to make is that there is no direct evidence to place the disease in the transverse colon. I am inclined to think the malignant disease is low down; it is unusual to have two foci in the gut, both malignant. When there is obstruction in the transverse colon it is not impossible to have a dilated caecum, either because of the reversed peristalsis or because of pressure from the ileocaecal region. I should say there was evidence of a pathological condition somewhere in the big gut, not necessarily in the transverse colon.

DIFFERENTIAL DIAGNOSIS

Bloody faecal discharge in a man of seventy-one, with constipation and loss of flesh and weakness, would be more apt to be produced by malignant disease than by ulcerative colitis or sigmoiditis of tuberculosis. I cannot see that any attempt has been made in the stool examination to find any infection in this case. I assume that there has been an ulcerative condition, perhaps started by the vigorous catharsis, the ulcerative condition coming on top of a malignant condition. Gradually with the limitation of food and a more liquid diet and perhaps better attention to the intestinal tract to prevent constipation there was a temporary let-up in the bloody movements, although they later returned. There had been a loss of thirty-two pounds in three or four months. The increased bowel movements show a more irritated condition of the intestinal tract. I have seen patients who had bowel movements every ten or fifteen minutes, and when we investigated the cause of that condition we have often found an ulcerative condition high up in the rectum which has so completely blocked the gut that there was a tremendous retention of faeces behind the obstruction, and until a catheter was inserted and several quarts of fluid faeces withdrawn there was no relief whatever from the bowel movements. This condition is sometimes called spurious diarrhoea. In one case particularly this procedure relieved the frequency of the bowel movements immediately.

The inference is pretty direct that there is some relation between the bladder and the intestine, and the suggestion is that there is an extension of cancer through the gut into the bladder; that really he had a fistula from the gut into the bladder, and was discharging faecal material from the bladder. It is fair to assume that the bladder condition, associated with the marked irritability of the gut and the pain, was due to malignant disease low in the gut rather than high up in the transverse colon as suggested by X-ray. If we disregard that, we have to assume cancer in the region of the rectum and prostate.

I cannot see that there is much for discussion in that case. There is no evidence to suggest colitis, no evidence to suggest sigmoiditis, or tuberculosis. There is no record of any malignant disease of the prostate by examination. The history is suggestive of acute low cancer, and the after history of the case is suggestive of extension into the wall of the bladder.

It is possible in these cases to have fever caused by a localized peritonitis around the ulcerating mass; that would explain the temperature here. It is not necessary to assume peritonitis, because ulcerations of the mass itself will produce the same conditions.

I do not think there is anything difficult about the case provided we take the facts: the age, the loss of flesh and strength, the sudden appearance of acute obstructive symptoms, then blood and mucus, then an irritated condition, then symptoms suggesting gas or pressure, then more blood and mucus, then bladder irritation with the appearance of brownish material suggesting extension through to the bladder. Death from cancer of the intestinal tract, probably low down in the gut.

Diagnosis from proctoscopy: Malignant disease of the sigmoid. Clinical diagnosis (from hospital record): Malignant disease of the colon. Dr. William H. Smith's diagnosis: Cancer of the intestinal tract, probably low down near the rectum. Fistula to the bladder? Arteriosclerosis. Arteriosclerotic kidney. Hypertrophy and dilatation of the heart.

ANATOMICAL DIAGNOSIS

1. Chemical or physical Adeno-carcinoma of the sigmoid origin of fatal illness. with perforation.

- | | | |
|-----------------------------------|---|---|
| 2. Secondary or terminal lesions. | } | General fibrino-purulent peritonitis.
Papilloma of the bladder.
Cystitis.
Ureteritis.
Pyelitis.
Suppurative nephritis.
Arteriosclerosis.
Hypertrophy and dilatation of the heart.
Fatty metamorphosis of the liver.
Oedema of the lower extremities. |
|-----------------------------------|---|---|

- | | | |
|--------------------------|---|---|
| 3. Historical landmarks. | } | Papilloma of the stomach.
Diverticulum of the duodenum.
Meckel's diverticulum.
Cicatrix (?) of the liver.
Chronic appendicitis.
Chronic perisplenitis.
Chronic hepatitis. |
|--------------------------|---|---|

Dr. Richardson: There were no metastases from the tumor. This man had a "diverticulum diathesis" and a "papilloma diathesis." There was a papilloma in the stomach and one in the bladder.

The perisplenitis and perihepatitis are probably to be associated with the chronic appendix.

The tumor in the sigmoid from its character may possibly

have been originally a papillóma. There is always the possibility of malignant growths arising from these papillary tumors in the large intestine. At least we have had cases here where the association seemed very close, not only in the intestine but in the stomach.

Dr. H. Cabot: There was no perforation of the bladder here?

Dr. Richardson: No.

Dr. H. Cabot: Where did the gas come from?

Dr. Richardson: I don't know. The bladder wall was intact, and the tumors had no relation to each other. There was no extension of the tumor growth in the sigmoid into the bladder wall.

Editor's Note: We strongly advise our readers to subscribe for these splendid weekly clinical papers. For one at a distance from the large centers they are invaluable. They may be profitably used in medical meetings as a basis of discussion.

HOMŒOPATHIC PERIODICAL LITERATURE

The Polycrest. July, 1917

1. *Carcinoma of the stomach.* 12. Mellon, R. R.

Review of the subject from the pathologist's point of view.

2. *Tonsils.* 16. Ferres, J. A.

A conservative consideration of enlarged tonsils. The author concludes that:

Every enlarged tonsil is not necessarily a pernicious, but is a suspicious, one; that all cases of tonsillar pathology in all stages cannot be amenable to the same treatment; conclusions should be arrived at from the consideration of the entire picture.

3. *Salpingitis.* 20. Humphrey, W. A.

4. *Pharmacology of *Lycopus virginicus*.* 27. Hinsdale, A. E.

A report based upon provings on human subjects and corroborated by animal experimentation. The chief effects were found to be: 1, a slowing of the pulse rate; 2, a strengthening of the force of the cardiac contractions; 3, a reduction of the systolic blood pressure; 4, a reduction in the pulse pressure; changes in the urinary excretion (decreased amount and urea, increased total solids, acidity, and ammonia); 6, subjective symptoms, being in general backache, headache, præcordial pain and nosebleed. The tincture was used in the provings, and is recommended as the proper strength for therapeutic purposes.

Iowa Homœopathic Journal. May, 1917

5. *Refractive errors and their correction.* 9. Bywater, W. L.

In the first place, a eye without some refractive error is almost inconceivable. The only two classes of patients who require glasses are those whose eye strain is producing symptoms and those who wish their vision improved. The degree of error is no index of the severity of the symptoms; a slight astigmatism may cause marked disturbances, whereas an extreme myopia or hyperopia may be almost symptomless. The need of careful examination and correction of the defect is urged.

6. *Recent observations on the hygiene of the school child.* 14. Sage, F. C.

The Clinique. May, 1917

7. *Consideration of the surgical treatment of exophthalmic goitre.* 227. Clark, P. S.

The author recommends early operation, claiming that the operative risk is much less in the early stage, as then changes have not occurred in the heart, kidneys and nervous system. In the last stages, operation should be preceded by medical treatment as a preparatory measure. The chief contraindications to operation are: extreme irregularity or rapidity of heart action; gastric crises, severe nephritis, acute delirium, diarrhœa, ascites, œdema of the hands and feet, incipient myxœdema and status thymicolymphaticus. The indications for the ligation of the vessels, partial removal of the gland, or the injection of boiling water into the gland are discussed. The average mortality for selected cases is given as 4 per cent. or less.

8. *Summary of the use of actinic rays.* 232. Plank, T. H.

An enthusiastic report of the successful use of the Kromayer (quartz glass) lamp in the treatment of numerous ailments such as tinea barbæ, eczema, post-operative neurasthenia, pulmonary tuberculosis, osteomyelitis, epithelioma, and splenomyelogenous leukæmia. One may possibly question *a priori* the statement that "it makes no difference what form of microorganism one is dealing with, the actinic rays will destroy it if it can be reached by them directly or indirectly." The therapeutic use of the actinic rays certainly merits more attention from physicians.

9. *Exophthalmic goitre.* 245.

An unsigned article, rather interesting in comparison with Clark's paper on the same subject, (see above). The author tells us that "this form of goitre is amenable only to internal remedies. Operation should never be performed." Apparently "you pay your money and take your choice."

The Homœopathic Recorder. June, 1917

10. *Medical treatment of poliomyelitis.* 243. Hawkes, W. J.

A general discussion of several drugs which should prove of value in treating this disease homœopathically. The author makes the point that during our last epidemic our homœopathic institutions failed lamentably to attempt any serious treatment of patients in a homœopathic manner. It is to be hoped that the next epidemic will find a somewhat readier reception at truly homœopathic hands. Now that the much-vaunted serum-therapy, autotherapy, and the rest have been shown to be practically worthless, some of our really interested prescribers may be given an opportunity to select the indicated remedy. The routine use of conium or gelsemium as practiced in our midst is, of course, scarce worthy the name of homœopathy.

11. *Homœopathy versus serum and vaccin treatment.* 251. Lutze, F. H.

An interesting, though painful, example of the anti-scientific attitude so frequently encountered in some homœopathic periodicals, especially, we regret to say, in the *Recorder*. "The observation that patients at times recover from their illness without any treatment led to the belief that in such cases the organism produced within itself an antitoxine to bring about this result. But this is not true. Wherever a spontaneous cure results, it does so, because the patient has inherent strength and vitality enough to throw off the disease *by means of a diarrhœa, by urination, expectoration or perspiration*, and such cases are always accompanied by much loss of strength and tissue." After delivering himself of this bit of Galenic dogmatism, the author bursts into a diatribe against all such "foul mixtures" as sera and vaccins as the causes of innumerable ills (cancer and trachoma *inter alia*) and the cure of none. When our writers can produce case-reports worthy of respect instead of indulging in recriminations and *ex cathedra* statements, we may reasonably look for a modicum of respect from our allœopathic brethren, but not one moment before.

12. *Clinical cases from Washington.* 258. Pompe, A. A.

13. *Gastric affections.* 261. Barber, G. L.

Brief case-reports, giving only a few symptom verifications with remedy and result. Hardly convincing to anyone with any skepticism.

14. *Some facts for the reader to think about.* 263. Jones, E. G.

The usual reminiscences and extreme statements. This time we are told that "fibroid tumors of the uterus, ulceration of *os uteri*, and cancer of the uterus can be cured by medicine.

There is no earthly excuse for a surgical operation in such cases. Surgery in such cases is the last resort of an incompetent physician — any man who would mutilate a woman that way should be prosecuted for malpractice." Also, "the use of instruments at confinement is the cause of 60 000 women in America having cancer of the uterus." Dr. Jones' contributions are always interesting to the psychologist; we congratulate their author on being able to allow his fancy to roam so freely.

15. *Significance of uric acid.* (Specialists' department.) Mitchell notes that since the high price of meat has prevailed there has been a rather marked decrease in uric acid in the urines coming to his attention. This would seem to show that fully half of the uric acid previously found was due to meat-eating.

The British Homœopathic Journal. July, 1917

16. *A symposium on Calcarea Carbonica and Lycopodium:*
 - (1) Characteristics. Tyler, M.
 - (2) On mental depression. Calc. Car. 30. Eccles, C. H.
 - (3) Threatened mesenteric disease. A calcarea case. Cash, M.
 - (4) Abdominal pain. Barlee, H.
 - (5) Psoriasis: a lycopodium case. Ord, W. T.
 - (6) Constitutional glandular enlargement: "Calcarea carbonica." Jagielski, V.

The Homœopathic World. June, 1917

17. *The therapeutics of the internal secretions:* Cases contributed by homœopathic physicians. 258.

The laws which express the therapeutic powers of the internal secretions are:—

(1) Arndt's Law. "Weak stimuli kindle life activity, medium stimuli promote it, strong impede it, and the strongest stop it."

(2) Hallion's Law. "Extracts of an organ exert on the same organ an exciting influence which lasts for a longer or shorter time. When the organ is insufficient, it is conceivable that this influence augments its action; and when it is injured, that it favours its restoration."

(3) Hahnemann's Law. "*Similia similibus curentur.*"

The cases presented comprise myxœdema, goitre, developmental defect, cardiac disease, obesity, Graves' disease, recurrent cancer, alopecia, psoriasis, and Raynaud's disease.

18. *Scopolamin hydrobromid: Proving and verifications.* 270, Hayes, R.E.S.

19. *Homœopathy in Montreal.* Griffiths, A.

The Homœopathic World. July, 1917

20. *Tuberculosis: No exception to the homœopathic law.* 325.
Young C. T.

Dr. Young asserts that the action of crude drugs or low potencies is too short and superficial and weak to produce a curative effect in a disease with such changes of tissues, and function and intensity of action. The case must be very carefully taken and must include the symptoms of the primary cold or pleurisy, etc., together with every suppressed symptom and especially the aggravation of time, position, weather, etc.

The peculiar symptoms of a patient must then be found, as most similarly peculiar in a remedy, in order to make it the unquestioned *simillimum*. Even after the indicated remedy is apparently found, don't rush to give it, but wait while you further review the case and remedy, and let the prior treatment subside until the indications are clear and positive.

The Homœopathic World. August, 1917

This number has no original article.

W. O.

BOOK REVIEWS

The Treatment of Hay Fever. By George F. Laidlaw, M.D., 136 pages. Boericke & Runyon, Publishers, 200 Sixth Avenue, New York City. \$1.00.

Written in the clear and simple style for which the author is well-known in homœopathic medical meetings and in his teaching, this book is well adapted to the layman as well as the physician who wishes a comprehensive view of the disease in small compass. The chapters are short and to the point.

The first five chapters describe the treatment of hay fever by rosin weed, the *silphium laciniatum* of the older homœopathic literature, and also treatment by *ichthyol* and by faradic electricity, as announced by Dr. Laidlaw at the Baltimore meeting of the American Institute of Homœopathy and at the meeting of the United States Hay Fever Association at Bethlehem in the summer of 1916.

There follow short chapters on the author's view of hay fever as a form of urticaria, which he compares with the old but forgotten theory of hay fever as a form of gout and the new theory of anaphylaxis, giving a clear and simple account of that much misunderstood term. Then come chapters on the theory and practice of treating hay fever with pollen extracts and vaccines, old and new ideas of diet, and the little book ends with an entertaining historical sketch of the use of rosin weed in medicine and its pharmacology.

Laidlaw recommends the following dosage of *silphium laciniatum* or rosin weed. Beginning ten days before the expected attack give ten drops of the fluid extract in a little water four times daily, after meals and before retiring. To children give five drops. If the symptoms of hay fever appear, increase the dose to twenty and even thirty drops and continue this dose through the entire hay-fever season. Most patients require this remedy for several seasons; a few are permanently cured in one season.

As an adjuvant Laidlaw recommends that each side of the naso-pharynx be swabbed with pure *ichthyol*. The hyperæsthetic area toward which this treatment is directed is on the upper surface of the soft palate. *Ichthyol* smarts and burns severely for a moment or so.

A solution of menthol and eucalyptol and thymol in liquid albolene applied to the vault of the pharynx or the upper surface of the soft palate every hour or two during the day gives relief to a large number of patients. The oil should be sprayed in through the nostril while the patient is lying flat on his back.

Impotency, Sterility, and Artificial Impregnation. F. P. Davis, Ph.G., M.D., 140 pages. C. V. Mosby Co., St. Louis, Mo. \$1.25.

In this small volume are discussed a few of the phases of the conditions listed in the title.

The use of the drugs which are discussed in connection with the treatment of impotency are recommended on their homœopathic indications and usually in "subphysiological" doses.

Materia Medica and Prescription Writing. O. W. Bethea, M.D., Ph.G., F.C.S., Assistant Professor of Materia Medica and Instructor in Prescription Writing, Tulane University of Indiana. Second revised edition. 562 pages. F. A. Davis Co., Philadelphia.

About three hundred pages of this volume are given over to the materia medica; official and unofficial drugs, their therapeutic action and uses. The rest of the volume is devoted to a very practical and thorough elucidation of the art of prescription writing and some sound advice is given to questions which daily rise in a physician's practice. The particular object of the book is to instruct the physician how to use his knowledge of pharmacology with its relation to pathology, and to state in what form and by what methods pharmaco-therapeutic agents be applied to obtain the best results and how orders for those agents should be written so as to serve best the patient and his associates.

The subject matter is handled in an admirably practical way and the work may be considered a dependable one for everyday use.

PROGRAM AMERICAN ASSOCIATION OF CLINICAL RESEARCH NINTH ANNUAL MEETING

September Thirteen, Fourteen and Fifteen, Nineteen Hundred and Seventeen

Clinics: September Thirteen **Sessions:** September Fourteen and Fifteen
Banquet: September Fifteen

Lecture Hall, Boston Society of Natural History, 234 Berkeley Street, corner Boylston
Boston, Mass.

SESSIONS

10 A.M. to 1 P.M.; 2.30 to 6 P.M.; 8 to 10 P.M.

1. *Call to Order: Friday, September 14, 10 a.m.*
2. *Introduction of the President and the Vice Presidents.*
3. *Opening Address by the President, William A. Pearson, M.D., Philadelphia, Pennsylvania.*
4. *Report of the Secretary and Treasurer.*
5. *Nomination and Election of Officers.*
6. *The Next Place of Meeting.*
7. *New Business.*
8. *Committee Reports:*
 - Research:* Doctors Hunt, Pearson, Nowell.
 - Educational:* Doctors Smith, Massey, McDuffie.
 - Journal:* Doctors McCann, Young, Conklin.
 - Membership:* Doctors Coleman, Gibson, Shadman.
9. *A Mosquito Campaign in the City of San Pedro de Macoris, Salustiano Fanduiz, M.D., San Pedro de Macoris, R.D.*
10. *Medical Education, John Hall Smith, M.D., Boston, Massachusetts.*

11. *Trauma: Consequences and Treatment: Malingering*, Curran Pope, M.D., Louisville, Kentucky.
12. *Infection: Prevention and Treatment*, Marshall William McDuffie, M.D., New York, New York.
13. *The Psychoneuroses*, Joseph A. Weitz, M.D., Montpelier, Ohio.
14. *Chronic Rheumatism*, F. St. Clair Hitchcock, M.D., Greenwich, Connecticut.
15. *Abdominal Adhesions*, Alonzo J. Shadman, M.D., Boston, Massachusetts.
16. *Mechanical Therapeutics*, Doctor R. Kendrick Smith, Boston, Massachusetts.
17. *Practical Applications of Physiological Chemistry*, William A. Pearson, M.D., Philadelphia, Pennsylvania.
18. *Dietetic Principles*, Roger Sherman York, M.D., Boston, Massachusetts.
19. *How to Feed America at War with Waste*, Alfred W. McCann, B.A., New York, New York.
20. *The Effects of the War and Clinical Research*, James Krauss, M.D., Boston, Massachusetts.
21. *Other Papers*.
22. *Clinics: To be announced*.
23. *Report of Executive Committee*, Doctors Pearson, Griswold, Monson, Craig, Krauss.
24. *Unfinished Business*.

Banquet

Saturday, September 15, 1917, 7 P.M.

"War": *One Thousand Calories. Perhaps more. Perhaps less. But no waste.*

"Peace": *Not tabooed.*

"Medicine and Surgery": *To the front.*

"Clinical Research": *Still the Master and Guide.*

Reservations for the Banquet should be made at once.

Members and friends are urged to be present and to signify at once their intention to be present on the morning of Thursday, the 13th, and to stay throughout Saturday, the 15th.

All legally qualified practitioners of medicine and surgery, in good moral and professional standing, may become members of this Association irrespective of their other medical affiliations.

Scientists are welcomed into membership.

Contributors, patrons, donors are welcomed into associate membership.

For applications for membership and other information, address the Permanent Secretary,

JAMES KRAUSS, M.D.

419 Boylston Street,

Boston, Massachusetts.

INSTRUCTIONS TO HOUSEHOLDS IN QUARANTINED DISEASES

The physician in attendance upon a person having, or suspected of having a reportable disease, is expected to notify the Division of Health of such disease, and to instruct the members of the household in measures for preventing its spread. In such as require quarantine, the instructions should be as follows:

- (1) If the patient is not removed at once to a hospital, he shall have a separate bed in a room screened against flies.
- (2) All persons, except those necessary for the care of the patient, shall be excluded from the sick-room.
- (3) All animals shall be excluded from the sick-room.
- (4) The room shall

be kept well aired and clean. It should be freed from unnecessary carpets, draperies, and furniture before the patient is placed in it. Dust should be avoided by frequent moist cleaning of woodwork and floors. (5) The person caring for the patient shall avoid coming into contact with any other person within the household or elsewhere. (6) *The person caring for the patient should, thoroughly wash his hands with soap and water after handling the patient or any object which may be contaminated.* (7) All discharges from the nose and mouth, ears and suppurating glands, shall be burned or disinfected. It is recommended that these discharges be received on pieces of gauze or other soft cloth and be dropped in a paper bag which is conveniently placed. The bag and its contents can be easily burned. (8) Objects which may have been contaminated by the patient shall be disinfected before being removed to any place where they might become possible sources of infection.

In chicken-pox the only essential requirement is ordinary cleanliness and the avoidance of contact with those who have not had the disease.

Disinfection During Disease. Under this heading and that of terminal disinfection, it should be noted that more stress is laid upon the destruction of contaminated materials and objects, and upon those measures employed by the careful housewife to keep her home immaculate, than upon the application of chemical disinfectants, which, to the mind of most people, comprises the whole process of disinfection. The greater stress here laid upon general cleanliness indicates its greater importance. Discharges from the throat, mouth and nose, and any discharge from the eyes, ears or suppurating glands in communicable disease so commonly contain the infectious organisms that they must be given special attention. They should be received on paper napkins, on pieces of gauze (cheesecloth), or on squares of soft cloth made from an old sheet or pillow-case. The napkins and cloths should be burned as soon as soiled. If there is no fire in the sick-room, these cloths may be received in a paper bag which can be removed from the room daily or oftener and burned with its contents. Toys and other objects which may have been contaminated by the patient should be destroyed or be boiled before being removed to any place where they might become possible sources of infection. Eating utensils are also carriers of infection, and unless arrangements can be made to wash them in the sick room itself, they should be washed separately from the other dishes of the family and scalded in boiling water. Soiled clothing, bed linen, towels, *etc.*, should be wrapped in a sheet wet with a disinfectant solution, carried from the room and placed in boiling water without being unwrapped.

The transmission of disease on the hands and clothing is also to be guarded against. *Any one who is permitted to come in close contact with the patient, for example, the physician or nurse, should wash his hands immediately before or after leaving the sick-room,* and in scarlet fever and small-pox should wear a washable outer garment, which should not be removed from the room except as provided for soiled bed linen. The attendants should wear only such clothing as can be washed and boiled, and they should not come in contact with other members of the family, especially children, without first changing the clothing and washing the hands and face.

The discharges from the bowels and bladder should be received in a vessel containing a quart or more of disinfectant solution in cases of infantile paralysis, typhoid fever, dysentery and cholera.

Disinfection to End Quarantine. *Disinfection is of much less importance than the control of persons who harbor the germs of disease,* but a thorough cleaning of the entire area of isolation should be performed whenever a case is released from quarantine. This cleaning should consist in scrubbing with soap and water all woodwork or furniture which can be reached by persons in the room. There is no necessity for washing ceilings or the upper part of high walls. As far as possible, a sick-room should not contain upholstered furniture, carpets and hangings, but if such objects are present in the room, they should either be exposed to the effects of sunlight and drying for several days, or fumigated.

As a protection to those who will carry out the proper cleaning of the sick-room, disinfection with formaldehyde gas, in the presence of water vapor, will be performed by the Division of Health, under certain conditions.

After twelve hours, the room should be opened and aired, and if the remaining formaldehyde gas is oppressive, a little ammonia should be sprayed in the air. The room should then be thoroughly cleaned. Formaldehyde disinfection will be performed by the Division of Health after small-pox and infantile paralysis before the premises are cleaned and released from quarantine. Similar disinfection will be performed after scarlet fever, cerebro-spinal meningitis and diphtheria if the patient dies or is removed from the house during the acute attack, and may be ordered by the Division of Health after scarlet fever, cerebro-spinal meningitis, diphtheria, tuberculosis and erysipelas when conditions make such disinfection advisable.— *Cleveland Medical Journal*.

MODERN WAR AND PROHIBITION

By MAJOR GENERAL WILLIAM HARDING CARTER, U. S. A.

With the declaration of war with Germany, and the enactment of the selective draft law, we have assumed obligations whose ultimate ends no man can foresee. Primarily we have now become responsible for the preparation of hundreds of thousands of young men for the stern duties and hardships of war, and, in the natural order of things, they will constitute the human element available for the nation's defense for many years to come. The nation owes it to the young men who are selected for military training and service that, from the very first, they shall know that the training will be carried on under circumstances above reproach.

The development of minds and bodies to meet the demands of military service in war requires not only the most modern hygienic surroundings but the absence of every form of personal dissipation. Any one who sells or gives intoxicants or drugs of any kind to young men undergoing training for the nation's defense, not only commits a crime against the individual but a treasonable act against the nation.

The experience of European nations has made it clear that to maintain a modern army in the field there must be organized industry at home. Anything that militates against this, by depriving the human element of its normal energy, working under war pressure, must be combatted and if need be destroyed.

The public is far better advised today than ever before, concerning the effects of the habitual use of intoxicants in producing criminal, insane and untrustworthy men and women and degenerate children. Prisons, asylums and public reformatories furnish continuous and abundant evidence along these lines. The increasing undiscipline of Americans has been observed and noted by investigators and students for many years. This is evidenced in lack of respect for parents, for the aged, for the officers of the law and for the law itself. It has also been a uniform observation that these conditions become aggravated whenever and wherever intoxicating liquors are habitually used. Confronted with these facts we are about to undertake the creation of a large army of the people, and to prepare it for participation in the most gigantic struggle in the history of wars.

When the army was reorganized in 1901, following the war with Spain, there was introduced in the Act, prohibitory legislation regarding the sale of wines and beers upon military reservations. There was much resentment on the part of the army at this discriminatory legislation, for while it introduced prohibition on reservations, it encouraged border-line saloons in surrounding territory. The aggravation was grave in states like Kansas, where prohibition was a sham and a public danger, the laws being ignored in the most open and flagrant manner.

In the course of time following the abolition of the sale of beer and wines — alcoholic liquors were previously barred — on military reservations, the naval regulations banished intoxicating drinks from war vessels. Modern battleships, destroyers and submarines had become too complicated to be entrusted in any part to minds beclouded with drink. Efficiency and safety of operation alike demanded the exclusion of liquors from war vessels and it

is certain that if the restoration of the wine mess for the period of the war were put to a vote of naval officers it would be overwhelmingly defeated.

Observing the operations of the so-called anti-canteen law, which stopped the sale of wine and beer at post exchanges or canteens, it was found that for a time the offenses involving drunkenness increased at army posts located in territory where saloons were permitted to exist. This was credited to the fact that men went to considerable distances from barracks for liquor, and, not expecting to repeat the trip soon, indulged in too much for their own good. The statistics of disciplinary action through a number of years seemed to establish that more than fifty per cent. of the cases of desertion and absence without leave were due to drunkenness.

While the current returns of the internal revenue bureau of the treasury make it appear that the income from the manufacture of beer and liquors has steadily increased, there can be no question that the temperance and total abstinence campaigns of the past few years have brought about a marked change in American life. It is no longer fashionable to serve wines and liquors in the lavish way which obtained in former years. That temperance has won a lasting victory is attested by the large increase in territory covered by prohibition laws and in the drastic regulations governing the employment of men in dangerous occupations, when individuals may be and often are responsible for the lives of others. If this applies in the operation of railroads and great industrial establishments, how much more should it apply in the cases of the officers and men called to the colors to uphold the honor of the nation and to defend its material interests.

Of course it is absurd to inaugurate complete prohibition until, as a nation, we are prepared to abandon taxation of manufactured intoxicants. After many years observation of the effects of drink upon our soldiers, it is the unhesitating opinion of the writer that the proceeds of governmental taxation of stills and breweries is, to say the least, no compensation for the misspent lives and stunted brains of those who are addicted to drunkenness. If it requires war time prohibition to insure an absolutely sober and dependable army we should have it, and the sooner the better.

Issued by the Committee of Sixty for Wartime Prohibition, N. Y.

AIR SERVICE IN WAR

Time has fully demonstrated the value of the air service in war, and experts say that many of the great decisive and effective battles of the future will be fought in the air.

This appears to be confirmed by the great activity of the Signal Corps and the passing unanimously by the House and Senate and the signing by the President without delay of the bill appropriating six hundred and forty million dollars for aeronautics.

25 000 Men Required

It has been said that the United States would require, to do its bit in the war, 25 000 masters of aeronautical apparatus,—that is, men capable of flying the airplane and hydroplane, and directing the movements of the "kite" or observation balloon, known as aviators or balloon pilots.

Aviators and Balloon Pilots

The work of the aviator is well known, and the marvelous results of these air-speeders; the work accomplished by them as the eyes of the army is published from time to time in the dispatches from abroad. The fastest machines attain a speed of 140 miles per hour.

The observers in them locate the position of the enemy's armies and guns, and protect cities and towns from attack, although at times the enemy flyers get by the watchfulness of the allied air fleet with disastrous results to humanity and property.

All aviators and balloon pilots become officers in the aviation section of

the Signal Officers' Reserve Corps of the Army immediately upon graduating, being commissioned as first lieutenants with a base salary of \$2 000 annually and additional compensation when in active service at home and abroad.

The "Kite" or Stationary Balloon

The usefulness of the "kite" or stationary balloon is not generally known. One familiar with its employment says that at the balloon schools, an applicant for officer's commission must first qualify as a pilot of spherical balloons. Then they are taught to become pilots and observers in the "kite" balloons.

This balloon is allowed to ascend to a height of about 3 000 feet, with a wire cable attached to it by which it is drawn down when desired by motor power.

In war, these balloons are located from three to five miles from the first line of trenches, and from the basket two men, a pilot and an observer, give the range and result of firing by telephone to the artillery.

On the western front they are placed from one-half to a mile apart, according to conditions, and are provided with parachutes attached to the men in the basket; in event of accident to the balloon the men parachute safely back to the earth.

Qualifications for Officers' Commissions

Men who have not been called for physical examination under the draft, and who have had a college education, may make application for a commission as first lieutenant in the Aviation Section of the Signal Officers' Reserve Corps as aviators or balloon pilots, provided they are not under 19 or over 30 years of age. While college men are preferred, applications from those who have graduated from high school and have exceptionally good qualifications will be considered. If the application is approved, the applicant will be notified to appear before a medical board for examination. If this is satisfactory, he is assigned to school for training.

While at the schools soldiers' pay, rations, and sleeping accommodations are allowed, the officer's pay following graduation and assignment to duty as first lieutenant.

Men having a trade who cannot fill the qualifications required for aviation or balloon pilots, can enter the aviation service by enlistment.

EXCERPTS FROM THE NATIONAL SERVICE HANDBOOK

10. *A war necessity.* None of the great universities contemplates suspending its work, nor would it be wise for them to do so. For the duration of the war and some time thereafter there will be an unprecedented need for men expertly trained in every technical field. One of the severest handicaps the country could experience would be a shortage of doctors, or of chemical, electrical, or mining engineers, once our active participation in the war is well under way.

11. *Medical students.* In regard to physicians and surgeons, this fact has already been recognized. Medical students have been urged by the hospitals to remain at their studies, and under no conditions to enlist in the medical or other branches of the service until their courses were completed. Then, when they will be urgently needed, they can take their places in the Medical Corps, as fully trained doctors.

61. *Teachers, physicians, surgeons, dentists, druggists,* may all serve by continuing their peace-time professions until definitely called to other work. So, too, may many in other professions whose age renders action and field service impossible. We shall need to keep our teaching institutions intact, and doubtless the work of nearly every profession will continue, but the work will have to be done by a smaller number of men. Not alone those who go to the front will sacrifice; those who remain must carry burdens up to the limit of their strength.

136. *General statement.* The Medical Departments of the Army and Navy are confronted with varied and difficult tasks of critical importance in caring for the health of our soldiers and sailors in training and active service, and in aiding our allies in medical work.

From 665 Medical Officers in the Regular Army and 508 in the Navy when war was declared the personnel must be recruited up to at least 21 000 in the Army and 2 000 in the Navy. And this must be done without rendering ineffectual the work of our hospitals, medical schools, and general medical service at home. Not only must men be found, but material must also be provided, and special problems of disease prevention and the training and return to civil life of those injured in the war must be met.

137. *General medical board.* In the solution of these problems the chief medical officers of the Army, Navy, Public Health Service, and the Red Cross are assisted by the committee of the Council of National Defense. This committee includes the general medical board, of which Dr. Franklin Martin is chairman, and a committee on standardization of medical and surgical supplies and equipment, of which Major F. F. Simpson is chairman. It is also represented on the general munitions board of the council. An insight into the close coöperation existing between all the official and civilian medical forces, and the recognition that the country's experts in every branch of medical science are being called into council begets confidence in the Nation's ability to win, as completely as human beings can, the fight against disease and injury.

138. *Requirements.* Physicians, graduates of a reputable medical school, between the ages of 21 and 32 (in the Army the age limit is 34 until Jan. 1, 1918), may apply for examination for a provisional commission in the Medical Corps of the United States Navy. If this and a physical examination are successfully passed, a four months' course at the Naval Medical School, Washington, D.C., is required, and if successfully completed the applicant may be commissioned in the Medical Corps. The same provision is made for Army service, save that the course in the Army Medical School is normally of eight months' duration. This course may be shortened to three or four months for the period of the emergency. Detailed regulations are given in Navy N., Nov. 364, 1917, Army, Form 132, revised Aug. 17, 1916. About 1 500 men are needed for the Regular Army Medical Corps while at the present time only a few are needed for the Regular Navy service. Applications for examination should be made to The Surgeon General, United States Army, or The Surgeon General, United States Navy, Washington, D.C.

139. *Licentiates of the national examining board* who desire to enter the regular service of the Army or Navy may submit an application in proper form, and the Army and Navy examining board at its discretion may accept the papers submitted to the national examining board, provided the candidates conform to the other regulations of service.

140. *The record of the medical service of the Army* is a brilliant one. Through the investigations of its members, yellow fever was conquered, typhoid driven from our own and European countries, beriberi brought under partial control in the Philippines, and hookworm in Porto Rico and pellagra in the South. Experts in medical administration have stated that the work of the medical service of the Navy, if less spectacular, is not less sound, and that the plans for the expansion of the Naval Medical Service represent a complete grasp of the needs of the emergency and an ability amply sufficient to meet them.

MEDICAL DEPARTMENT OF THE ARMY OFFICERS' RESERVE CORPS

142. *Numbers needed.* At the lowest estimate 21 000 men, fully equipped for medical service, are needed for the Medical Reserve Corps. Most of these men must be volunteers, for the number of men who have completed their training, before the age of 31, is negligible. The call comes, "Physicians 31 to 45, come across." On July 25 there were about 5 000 accepted on the Medical Reserve lists, and a total of 11 000 had been recommended for commissions.

143. *Mortality.* Reports have been circulated that 60 000 of the Allies' physicians have already been killed in the war. This is impossible, for there

are not 45 000 registered physicians in all Great Britain and France. The statement is absurd and without foundation. In the three months' battle of the Somme only 50 physicians were reported killed.

Col. T. H. Goodwin, of the British Medical Corps, who has been detailed in a consulting capacity to the office of the Surgeon General of the United States Army, has authoritatively contradicted rumors that have been current regarding the casualties among medical officers in France and Belgium. Having cabled to England for the exact information on this point, the following official reply was received by him:

Total casualties among medical officers on the western front from the beginning of the war to June 25, 1917 are as follows:

Killed.....	195
Wounded.....	707
Total battle casualties.....	<u>902</u>

In addition 62 medical officers have died from sickness.

"All statements to the contrary," says Col. Goodwin, "are false, arising from mistake, natural exaggeration, or from a deliberate and malicious attempt to discourage doctors from entering the medical service of the Army."

144. *Need for full quota.* In the United States there are 90 000 physicians and surgeons of military age, 22 to 55 years. Seven medical men for each thousand enlisted men will be at least 21 000 for the first 3 000 000 men. This is a heavy load, but the medical service makes no greater demand than any other; it asks every man to do his duty, and do it voluntarily. It should be borne in mind that the consideration given to special training will vary with the number of physicians enrolled in the Medical Reserve Corps. If the Surgeon General has large numbers of men at his disposal, he can assign them for duty as their training indicates. If he is hard-pressed for men, then all the physicians in the force will be called on for general work. If the medical work is to reach its highest efficiency, the force, therefore, must be recruited up to not less than 21 000. Physicians by not enrolling prevent the soldiers from receiving expert treatment and rob the members of their own profession of the opportunity to make use of their long-trained talents.

145. *Volunteer system.* At present there is no possible way of filling up the quota save through the volunteer system. If the war is soon to be won, our wounded must be cared for, healed, and returned; if peace is to come with the least possible destruction of human life, our Army hospitals have to be manned. And men *now* well trained must furnish the personnel, for physicians can not be made in three or six or nine months, or even twelve months. Those now practicing must change their offices to the front.

Medical Reserve Corps

146. *The requisites for appointment* are as follows: The applicant must be a reputable physician (doctor of medicine) in good standing in his community, in the active practice of his profession, licensed to practice medicine in the State in which he resides, between 22 and 55 years of age, a citizen of the United States (first papers not sufficient), and physically and professionally qualified. Members of the National Guard are not eligible.

147. *The examination proper* is physical and professional. The physical requirements are stated in G.O. 66, 1910, and Circular No. 2, A.G.O., 1916. The visual requirements are that the applicant have not less than 20 100 vision in each eye, fully correctible by glasses. If the applicant is found physically disqualified, the professional examination need not be proceeded with.

The professional examination is oral, but in case the oral examination is not satisfactory to the examiners the applicant will be given a written examination. In either case the examination will be in the following subjects: (a) Practice of medicine, including ætiology, clinical description, pathology and treatment of diseases; (b) surgery, principles and practice; (c) obstetrics and gynecology; (d) hygiene, personal and general, especially to the prophylaxis of the more prevalent epidemic diseases.

Specialists will be examined in their specialty.

A complete set of papers includes the following:

- (a) Personal history properly filled out and sworn to before a notary public. (Form 149)
- (b) Two testimonials as to citizenship, character, and habits.
- (c) Physical examination report. (Form 138)
- (d) Report of the board as to qualifications of applicant. (Form 150)
- (e) Certificate of license to practice medicine in the State in which the applicant resides.
- (f) Documentary evidence of citizenship if of foreign birth.

148. *The procedure for those applying for commissions* in the Medical Officers' Reserve Corps is as follows: Go to the examining board nearest you (see locations by reference to State lists, pages 203ff) and take with you documents sufficient to satisfy the requirements listed above. The board will examine you and forward your papers to The Surgeon General. If your papers are satisfactory, a commission will be issued. A complete statement of the composition and regulations of the Officers' Reserve Corps is given in Special Regulations 43, March 29, 1917. This may be obtained at local Army headquarters or at The Adjutant General's Office, Washington, D.C.

The regulations specified above, while stated in reference to the Medical Reserve Corps, apply, with the appropriate changes, to the Dental and Veterinary Reserve Corps. The procedure for examination is the same. The dentists will need to fill a quota of 2 000.

149. *Preparedness League of American Dentists.* Dentists continuing at their practice have been organized into the Preparedness League of American Dentists with a membership of 20 000. They have offered to repair the teeth of prospective recruits free of charge. This is a most important service, for many applicants are rejected because of defective teeth.

Similar work is being undertaken by physicians, who are volunteering to treat men rejected for physical defects which will readily yield to treatment.

A Critical Situation

The Government is raising an immense army of volunteers and conscripts to carry on the war to a successful and, we hope, an early termination.

Every army must be supplied with a personnel of medical officers of adequate number and well trained. While provisions have been made to raise the required number of men for the fighting force, it has been left to members of the medical profession of this country to come forward voluntarily, seeking commissions in the Medical Reserve Corps.

Only a few of the total number required have applied for commissions. This means that unless immediate action is taken by the profession voluntarily, the men in the army now being organized will be without sufficient medical care. Such a condition would be more than critical and dangerous for the success of our army and the cause in which we are enlisted. The medical officer plays a most prominent part not only in keeping the army on its feet and physically fit for fighting, but in returning to the ranks a large percentage of those who have been temporarily put out through casualties.

How soon will the medical profession of the United States as a whole wake up and realize that doctors must come forward and volunteer their services to the Government?

In civil life, when great casualties occur, the doctor readily offers his services and usually is the first on the scene to save human life. How much more important is it, then, that in this critical situation, he should come forward and offer his valuable aid to preserve not only human lives, but the life of the nation itself!

Application blanks for commissions in the Medical Reserve Corps are being printed in many medical journals or will be sent to you by the Surgeon General's office or can be secured from members of the Local Board of Examiners.

One-fifth of the active profession of the United States is all that is required to supply the army now being raised. Be a part of the one-fifth!

PERSONAL AND GENERAL ITEMS

Dr. Herbert E. Maynard, of Winchester, Mass., is in Europe serving as surgeon in the military hospitals for a period of six months. At present he is stationed at the Royal Herbert Hospital, Woolwich, England, but expects later to go to France. Word has been received from him to the effect that there is great need of physicians and surgeons in England as well as in France. The wounded are brought directly to England, arriving there within two days from the time they are disabled.

The *Gazette* is glad to announce that Dean Sutherland is gaining strength and health in a most satisfactory manner, and has been at his summer home in Harvard, Massachusetts, since early in August.

Dr. Clarence H. Dobson has given up his practice in Conway, Massachusetts, to enter the Medical Reserve Corps and is now at Fort Benjamin Harrison, Indiana.

Dr. Florence Belyea and Dr. Ralph H. Hopkins, of Marion, Massachusetts, were married on July 30. Both are graduates of Boston University School of Medicine, class of 1915.

Dr. Ray Nathan Randall (B.U.S.M. 1906) was married on July 27 at Hampton, New Hampshire, to Miss Mildred Batchelder. Dr. Randall has been in practice in Lewiston, Maine, since 1908, following a year in Trull Hospital, Biddeford.

Dr. Max Mark Braff (B.U.S.M. 1917) was married on August 3 to Miss Eva Holman of Boston. Dr. Braff is in the Medical Reserve Corps of the United States Navy.

Dr. Chas. A. Sturtevant (class of 1899, B.U.S.M.) has sold his practice in Manchester, New Hampshire, and has received commission as Captain in the R.O.M.C. Dr. Sturtevant served during the Spanish War as Army Contract Surgeon, and during the second and third years of the War was stationed in the Philippines.

The practice which Dr. Sturtevant has sold has been bought by Dr. G. E. Hoffses, formerly of Dedham, Mass.

The Drs. Margaret Cummins and Edwin R. Lewis of Rochester, New York, are rejoicing in the birth, on July 26, of a son. Mrs. Lewis is a graduate of the class of 1916, Boston University School of Medicine, and Dr. Lewis of the class of 1901. The latter has been Superintendent of the Rochester Homœopathic Hospital since December of last year, and is planning and executing some very effective changes and improvements in the plant.

Dr. Angela de Mesquita, who sailed for her home, San Paola, Brazil, in July, writes of her safe arrival there, but she adds that the weather was very bad and that, despite her homœopathic remedies, she was miserably seasick. Dr. de Mesquita graduated from Boston University School of Medicine in June of this year, and she expects to practice in or near her home in Brazil. Her father was a physician before her. She had not until now been back for quite a number of years, as before her medical course she spent a year at Northfield Seminary, following a period of study in Germany and Switzerland. She writes that there are no words to describe the beauty of Rio de Janeiro, a beautiful view of which she sends.

Dr. G. Perry Eldridge of Hartford, Connecticut, has removed from 125 Trumbull St. to the Waverly Building, 721 Main St.

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ORIGINAL COMMUNICATIONS

THE SPIRIT OF INVESTIGATION FUNDAMENTAL TO PROGRESS*

Its Lack in the Homœopathic School

By RALPH R. MELLON, M.D., DR. P. H., Rochester, N. Y.

When Dr. Wesselhoeft tendered me the honor of writing a paper for his Bureau, I was very happy to comply with his wishes for two reasons: First, because I belong among those who believe that much of the good present in homœopathic medication is scientifically demonstrable, and second, because I feel that we should become better aware of our weaknesses in this regard in order that steps may be taken to strengthen them. Permit me to say once for all that I have only admiration for the efforts of those who have worked or are working to that end. What criticisms I have to make are directed toward an organization of which I am one member, and they are intended to be impersonal and without malice.

To one accustomed to the formulated expressions of natural phenomena, our *Materia Medica* as at present constituted appears a most inscrutable and formless assemblage of uncontrolled observations. Those who claim the perspicacity necessary for a sane evaluation of its symptomology need not make personal application of this accusation, yet the tenets of "base necessity" bring us face to face with a startling fact. We are not at present sufficiently impressing either our students, or the intelligent laity, or the scientific world, that we are making tangible progress in the development of the only thing that can possibly justify our existence as a distinct school of medicine. We do not claim to have contributed anything to the advance of the

* Read before the Bureau of Clinical Research, Am. Inst. Homœopathy, Rochester, N. Y. June, 1917. Published simultaneously in *Journ. A. I. H.*

sciences fundamental to an intelligent conception of modern medicine; therefore, if we fail to bring the latent good in our school to the surface, and to eliminate its obvious absurdities, our recreancy is even greater than that of our immediate antecedents.

On the other hand, there is no attitude more reprehensible than the one which seeks to bend every promising thing in the collateral sciences to our own notions. Not only is it reprehensible, but it is often unwise in that some of these discoveries later prove untenable or susceptible of other interpretations. Such opportunism often leads to ridiculous positions, or what is worse, to grave imputations of our motives. To take a purely static position and camp on the ground won by the gladiators of one hundred years ago is equally fatal. It is equivalent to a declaration of "infallibility" in science and is even more narrowing and stultifying than is such a doctrine in religion. He who would justify himself in such a position must be continually resourceful in subterfuge.

That there is a sphere of true art in medicine few would deny, but it is usually so akin to chicanery that the future recipients of medical attention may be thankful that the art of medicine is rapidly giving way to the science of medicine. There are those among us who feel that homœopathy can be justified by science and thus fall in line with progressivism. Its justification by other criteria means that its death can be fixed at the time when the momentum given by its founders shall have ceased. Whether the Law of Similars will in the future deserve a better rating than that of an anachronism depends absolutely on the spirit of investigation developed among its adherents. In the last analysis this is the only spirit furnishing motive power for achievement. Any other emotion which does not imbue one with this spirit falls short of the determining factor in progress.

This spirit is conditioned by the growth of those who possess it, and it develops with all the deliberation connoted by the process. To be sure, an occasional genius may be thus generously endowed, but in most of us it is the resultant of the human will acting on a susceptible intellect in conformity with a high ideal. One who only *feels* and uses up his energy thus will degenerate into a dreamer, but he who brings his will into play may work out what he feels — may develop a view-point and thus realize his aspirations to be classed as true investigator.

It is unfortunate that the exigencies of a material existence often limit the field of investigation to those of independent means or of extraordinary courage. Although it is often true that these same exigencies often form the only means

separation of the dreamer from the true investigator, the fact that this spirit should be supplemented by material means cannot be gainsaid. In contrast the spirit of surgery need not be fostered. Most medical students pass through a phase in their medical life cycle where sanguinary exploits form their *summum bonum*, and it is unfortunate that this phase so often proves a terminal one. No one admires the skill of a great surgeon more than I, but even in this realm he who possesses the true spirit of investigation may prevent many of the sins committed in the name of surgery.

During the past year I have had opportunity to see a clinical result with Echinacea that is pregnant with suggestion. Much as I should desire to discuss this case in detail, the length of my paper dictates that I abridge it. I wish merely to direct your attention to the phases of it which are germane to my theme. Following an operation for appendicular abscess, convalescence from which occupied about six weeks, after an intermittent period of three relatively healthy months the patient developed a fever resembling typhoid. A protracted period of unsuccessful treatment for this disease was followed by a decidedly intermittent type of fever ranging from 95 to 105 degrees. From a thoracic puncture, from the sputum and from the blood, an organism closely resembling a streptothrix was recovered, but which on extended study promises to be *B. fusiformis*.

Operation revealed a perinephritic abscess. The wound steadily discharged very foul pus and soon infected the margins of the incision, producing a sloughing gangrenous type of inflammation which clinically proved very intractable. For many weeks the fever continued practically the same as before operation, with no signs of abatement. As a last resort Dr. Bradstreet — whose case it was — administered Echinacea, five drops *t.i.d.*, with favorable results almost immediately. In about 60 hours the temperature settled to normal and the patient has proceeded to recovery without further incident. Pathologically speaking, the fusiform group of organisms produces what was formerly known as hospital gangrene. The well-known sloughing ulcer of Vincent's angina is typical of the lesion produced. Compare, if you please, the pathogenicity of Echinacea and its application is obvious. I wish to reiterate that I cannot scientifically say that Echinacea cured this case, but I can speak with conviction of the recreancy to duty of a school of medicine that is complacent enough to remain static in the face of such experiences. I tell you, gentlemen, that such things are actually exciting to me because of the train of

suggestion induced, because of the inscrutable dynamic power which *may* be locked up in our own drugs. To use a favorite expression of Dean Hinsdale, "If there is a God in Israel" surely he will not hold a school guiltless who spurns the regenerating influence of such experiences. But in themselves they prove nothing; they are incomplete and uncontrollable.

Simply because electrolytic dissociation predicates the increased carrying power of electrolytes in higher dilution, because a high degree of dispersion of non-electrolytic substances enormously increases their mass action, because the marvellously efficient chemical and bacterial enzymes are substances of this sort, *i.e.*, colloidal solutions, no one is justified in attributing a similar *modus operandi* to various substances applied to diseased processes. Analogy is not enough, and if these things do not quicken us to *real*, concentrated, correlated effort, then indeed are we undergoing molecular death — dry rot; and absolutely regardless of whether the Law of Similars is what we claim it to be, the group which represents it will soon be proved an anachronism and will be eliminated as a factor in the medicine of the future.

The discerning ones of you who have followed closely the progress of the science of immunology may already notice a shift in the view-point of not so many years ago. Until recently the production of antibodies of whatever nature has been held to be the result of the injection of the protein. In a weak sort of way some of us maintained the idea that non-protein compounds, drugs if you please, may produce antibodies. Some suggestive work has been done in this connection by men of the Homœopathic School of Medicine; but despite this fact, he who would make the assertion that drugs do stimulate the production of antibodies in the way we understand the term, would indeed be bold, and his reasoning could but be based on conjecture.

I wish to direct your attention to the fact that at the present time vigorous efforts are being made by the dominant school to find drugs that can be proved to stimulate antibodies *in vivo*. The work of Kolmer, Wright and many others with optochin in pneumonia is pertinent to this theme. This drug, a derivative of quinin, has been shown to have definite pneumotropic powers *in vitro*, although the action *in vivo* is by no means as favorable. Yet the work is an advance and is an outgrowth of clinical evidence, precisely as our clinical evidence with Bryonia in this disease should stimulate our school to demonstrate its value to the world. That the evidence at hand is far from convincing to our own men is shown by the vast number who use antipneumococcus sera.

I merely introduce this citation to show that attempts are being made to demonstrate that immunity even in the imperfect form in which we know it may be induced by more than one class of substances. The work of Jobling showing the protective powers of various lipoids, highly dispersed, introduces an advance in this direction which is tremendous. The work of Bordet, Novy and others, showing in a most convincing way the action of inert substance by virtue of their physico-chemical properties, is also interesting. These investigations along with hosts of others testify to the effect of the processes of absorption, surface tension, *etc.*, upon maintenance of equilibrium in complex biological systems apparently so closely associated with the phenomenon of life.

Another phase of the subject barely touched on experimentally has been tried even less, clinically. I refer to the effect of various inorganic salts, basic, acid and neutral, in complementing known immunological measures. Hektoen for example has shown a wonderful specific hemolysin production when the antigen is combined with sodium iodoxy-benzoate. Cumming and others have shown the result of variation in the concentration of the hydrogen ion as well as inorganic salts in the performance of complement fixation reactions of which the well-known Wassermann test is an example.

It was my privilege to have had a few clinical experiences in this direction that have been extraordinarily suggestive. I recall a patient who suffered from a generalized arthritis and whose joints although suffering but little limitation in motion had already manifested the degenerative changes which initiate a deforming type of arthritis. These changes were shown by the Roentgen-ray. A futile tonsillectomy was performed in the hope of alleviating the symptoms. Streptococcus vaccins, although aggravating the symptoms in small doses, gave no therapeutic results when administered over a period of three months. From the fact that the patient's condition was aggravated so markedly at menstrual periods, and also as a last resort, I determined to give her Radium, 12 x, in accordance with the provings of Dr. Dieffenbach. The relief of her symptoms was so prompt as to cause suspicion on my part of the credibility of her report. The progressive and lasting improvement served to dissipate all doubt on my part, and I was gratified at the end of a year to receive the report that she continued free from rheumatic symptoms. Inasmuch as the patient was so sensitive to the streptococcus which we recognize as the commonest incitor of arthritis, I am at a loss to know whether the radium acted as a desensitizing agent in a manner comparable to the action of certain substances in hay fever, or whether I must

attribute her improvement to be the result of the combined action of vaccin and radium. Hiss long ago believed in the effect of radio-active spring waters in arthritides and gout and showed the metabolic changes in the urine associated with their alleviation or cure.

I wish also to call attention to the fact that I have seen cases of intractable furunculosis respond to a vaccin plus Hepar Sulphur when they failed to respond to either agent alone. Those observations are of course purely clinical and of little value scientifically because adequate control is impossible. However, they suggest avenues of approach to a field that will undoubtedly be cultivated to advantage by some one, since it is a logical extension of our knowledge of immunology.

None need worry regarding the justification of our contention because it is the logical outgrowth of this science. The good it contains will be demonstrated by the devotees of this and allied sciences even as our own organization gently glides to oblivion—ever the deserved haven of complacency. Call this view hypothetical if you will, but its extrapolation is already at hand. Those of you who have read the last number of the *North American Journal of Homœopathy* may have seen the reprinting of an article by an unbiased scientist of the old school who by definite experiments with our own drugs has satisfied his own mind of the validity of the infinitesimals. This in light of the fact that he attempted to prove exactly the opposite contention. The work has been and will be hailed with glee by our men—rather should it cause us to blush with shame and chagrin, when we take proper stock of ourselves.

It has been said that the sole function of our school is to turn out doctors! What mental strabismus is this! Such a program absolutely refuses seriously to countenance turning out men of science in medicine. It makes no provision for the man of exceptional ability who may inadvertently matriculate within its confines. How long will it be before we cease to have such men so matriculate? The course leads as straight to the rocks as the wind can blow anything that wilfully drifts; and why? To believe that we can develop men who will advance medicine when we make no provision for their development and when our rival school makes such provisions increasingly adequate, is the height of naïveté.

The principle of the vicious cycle in cardio-renal disease is applicable here. That mediocrity breeds mediocrity is a cycle, the viciousness of which can be seen in numberless ways. Not least of its expressions is the fact that one by one our hospitals and institutions are slipping from us not nearly so much by virtue of the encroachment of the old school as it is the result

of our own scientific inertia. True, the old school does encroach, but much in the same way that air encroaches on a newly-made vacuum. Our passivity and lukewarmness in our own notions or those of anyone else opens the way for the energetically fit.

This principle of provision for the care of the exceptional man is just as true of the individual allœopathic school as it is of our own school in a collective sense. What determines the greatness of individual allœopathic schools? There is one *sine qua non*: The investigative spirit and investigative ability of its faculty. They are the lodestone whose magnetic radiations inexorably attract money, students, buildings, hospitals, equipment and all other externals which are commonly attributed to other factors such as politics, money or age, working either singly or in combination. Again the time at my disposal precludes copious illustration, but these are facts which any curious person may readily establish to his own satisfaction.

LARYNGEAL DIPHTHERIA

With Report of 217 Cases Treated at the West Department of the Massachusetts Homœopathic Hospital

By SAMUEL A. CLEMENT, M.D., Resident Physician

Judging from the cases referred to the hospital wrongly diagnosed or *in extremis*, laryngeal diphtheria or membranous croup is improperly appreciated by the general practitioner. He does not see enough cases to recognize the importance of the early symptoms, which, if properly treated, ought to result in the saving of life in every case.

This form of diphtheria, as we all know, may originate primarily in the larynx itself or may gradually involve this organ by extension from the nasal cavity, the tonsils or pharynx.

SYMPTOMS

The symptoms vary greatly with the age of the patient. In a baby, the lumen of the larynx is so small that symptoms of stenosis appear very soon, while in older children and adults there may be enough exudate formed to cause complete aphonia and yet there be no signs of stenosis in the respiratory passages. Hoarseness and cough are the first symptoms in case of primary involvement; slight hoarseness gradually increasing with a corresponding croupy, barking, metallic cough, especially when persisting for twenty-four hours or more, is very characteristic of this disease. Just remember that you will not have the toxic symptoms expected to be present in diphtheria when the infection

is so situated, because the larynx is very sparingly supplied with lymphatics, the absorption of toxin is slight and your patient will present symptoms of suffocation before toxæmia. The pulse is usually increased but the temperature is likely to be normal. On account of the lack of constitutional symptoms the patient will play around until the respiration is interfered with. Do not wait for a culture report for it will usually be negative, unless it is taken from the larynx itself, which is a very impracticable procedure, as is the examination of the larynx in a young child.

As the case progresses the hoarseness becomes more and more marked, the croupy cough is gradually changed to a very high pitched shrill sound, until there is inability to cough, speak or cry (complete aphonia). Stethoscopic examination of the larynx reveals a whistling sound with a jerk to the expiration especially, instead of the tubular sound heard over the normal larynx. As the false membrane increases more and more, forming a foreign body surrounding the walls of the larynx, the respiratory passage becomes constricted until it is so small that the volume of air inspired is not sufficient to expand the lungs fully; this results in the formation of a vacuum in the pleural sac which is made evident by recessions above the clavicle on each side, at the suprasternal notch, the false ribs and especially in the epigastrium; normally all these areas should be slightly bulging at the end of inspiration, while in this condition it is the reverse.

Owing to this interference with respiration, the blood gradually becomes insufficiently oxygenated; this results in a progressive asphyxia denoted by the lividity of the skin; the child becomes very restless, cannot sleep, constantly changes its position, the eyes become prominent, the alæ nasi are distended. The child now has to sit up in bed with the head thrown backward and the chest forward making a straight line with the larynx. All the accessory muscles of respiration are gradually brought into play — Nature's method of combatting the forming foreign body obstructing the respiration. The child is now covered with perspiration as a result of the constantly labored breathing and vainly gazes in all directions with an anxious expression, for relief. There probably is not a more pitiable sight than a dear little one suffering from a well developed membranous croup. As we look back, even to before our days of medical knowledge, we can all remember similar circumstances when we were not able to appreciate these well expressed symptoms. I confess to have admitted many cases of this kind to the hospital in the past three years when it was too late even to administer any treatment.

This case, if not relieved, will gradually sink into a deep coma and soon die from suffocation; but if medical attention is called and the case recognized sufficiently early to be admitted to a hospital where it can be under the constant care of experienced observers, a favorable recovery may be hoped for.

Should this case be intubated? No! But, if even suggestive of a possible need for intubation it should *NOT* be left at home for obvious reasons: this patient needs the care of a nurse skilled in the care of such cases and constant medical attention in order that the proper time to operate may be decided.

A very large initial dose of antitoxin, depending upon the severity of the case and the age of the child, will in all cases prevent intubation if given EARLY ENOUGH and will save the life of the child. The dosage in our cases varied from 15 000 to 125 000 units of diphtheria antitoxin given subcutaneously.

If the case is too far advanced and a large amount of antitoxin does not produce the desired effect, the operation of intubation should be carefully considered but should not be attempted until thoroughly indicated and only by one who has had some experience in intubation. It is very important to know how to intubate, but it is equally important to know *WHEN* to intubate.

SYMPTOMS WARRANTING INTUBATION

- (1) Onset symptoms advanced almost to loss of voice.
- (2) Marked restlessness; constant tossing about in bed to find a comfortable position.
- (3) Labored breathing with the above described recessions and a marked jerk to the expiration, even to a jarring of the bed with the respiratory efforts.
- (4) Profuse perspiration due to the labor of respiration.
- (5) Intubation is especially indicated if the child has to sit up in bed with the above described restlessness and with two jerks to the inspiration.
- (6) Progressive asphyxia and asthenia.
- (7) Stethoscopic auscultation of the larynx revealing just a whistling sound with NO peculiar rattling indicative of a loosened membrane.

If all these symptoms are gradually making themselves more pronounced, do not delay the operation one moment, for if the child is too exhausted it may not sustain the strain of the operation.

Always try to excite a coughing spell before attempting to introduce the tube, for many times the child will cough out pieces of membrane, even casts of the larynx, which may re-

lieve the respiration entirely and thereby obviate the grave dangers resulting from intubation.

What are the objections or dangers of intubation, even in the hands of an experienced operator?

(1) The possibility of scraping and packing in the trachea a loosened and almost detached false membrane, necessitating in many cases (especially if the child is small) an emergency tracheotomy, which usually results in death.

(2) The possibility of the tube's producing an abrasion or ulceration of the mucous membrane resulting in cicatricial contraction, leading to permanent stenosis calling for chronic re-intubations, and aphonia.

(3) There is some possibility of introducing the tube into the ventricles of the larynx, thereby producing a foreign passage; this is not likely to occur when the operator has had some experience, and especially if using the O'Dwyer tubes.

(4) Remember that the tube may be too large for the case; in many instances it is far better to introduce a smaller tube than to apply enough force to place the corresponding age tube.

(5) According to Welch and Schamberg it has been found that in a few cases little girls have an abnormally small cricoid ring; here a smaller tube should be used.

(6) Always feel for foreign bodies in the laryngeal opening, for they may be the cause of the stenosis and the tube in attempting to intubate would only make things worse.

Keeping all these dangers in mind do not let them interfere with intubation when it is indicated; in performing the operation never use force and always remember that it is much easier to intubate the œsophagus than the larynx. For the technic I refer the reader to Welch and Schamberg or Holts' *Contagious Diseases*.

Nasal, tonsillar and pharyngeal diphtheria are very frequently the origin of laryngeal involvement. Beware of a chronic excoriating discharge from the nostrils; do not treat it as a simple coryza—it frequently shows the Klebs-Löffler bacillus. I will not attempt to enumerate the symptoms of tonsillar, nasal or pharyngeal diphtheria in this short paper, but will try to give the important conditions that must be differentiated from laryngeal diphtheria.

1. LARYNGISMUS STRIDULUS

	<i>Laryngeal diphtheria</i>	<i>Laryngismus stridulus</i>
Onset	12-72 hrs.	Sudden; minutes only
Height	48 hrs. probably	Few minutes
Ætiology	K. L. + membrane as foreign body	Cold; fright; anger; spasm

Temperature	101 degrees to 102 degrees	No increase
Age	Usually 1 to 5 or 6 yrs.	Infancy; 6 months
Cough	Croupy, metallic; gradually increasing	Spasmodic crowing
Recessions	Epigastric, supraclavicular, with each respiration	Just for a few seconds
Voice	Gradually lost	No hoarseness
Relapse	Rarely	Frequently
Type of patient	Anybody	Usually rachitic child
Duration	8 to 10 days	Few minutes
Parts involved	Upper respiratory tract	Spasm of larynx; no sore throat

2. ŒDEMA OF THE EPIGLOTTIS AND GLOTTIS

The sudden onset with its height in two or three hours, digital and laryngoscopic examination will make a positive diagnosis; it is rare and is very serious.

3. RETROPHARYNGEAL ABSCESS

This condition is diagnosed by feeling a boggy mass in the pharynx, by a septic temperature and an intact voice.

4. FOREIGN BODY

A foreign body may cause acute laryngitis from the œdema and pressure; the condition is diagnosed by digital and laryngoscopic examination and very frequently by the history of the case.

5. MEASLES

The laryngitis of measles occurs much later than that seen with diphtheria; the typical symptoms of measles should be a guide.

6. INFECTIONS

Strepto-, staphylo-, and pneumococci may cause laryngitis simulating diphtheria, but it is rare and the treatment is the same, since *K. L. bacillus* is rarely found in laryngeal diphtheria, and intubation may be necessary.

7. BASILAR MENINGITIS

Basilar meningitis may produce stenosis of the larynx; other symptoms ought to differentiate.

8. SYPHILIS AND TUMORS

Syphilis and tumors occasionally produce a laryngitis which can easily be differentiated.

9. PARALYSIS

Paralysis occasionally produces a peculiar laryngeal condition resembling laryngeal diphtheria, but the cause of the paralysis will differentiate.

10. PSYCHONEUROSIS INVOLVING THE LARYNX

This condition must not be mistaken for a case indicating intubation; remember that there will be no recessions, no change of color from the normal, and taking the attention of the patient will bring back normal breathing and voice; it is a spasmodic condition found in nervous girls especially. The writer remembers very well being called for an emergency intubation to one of the Boston hospitals and found only the condition described above.

11. ACUTE CATARRHAL LARYNGITIS

This is a very difficult condition to differentiate from diphtheria of the larynx; in fact in some instances it is impossible; without enumerating many unsatisfactory differential symptoms, I advise as a rule to treat all cases that show a progressive hoarseness for 24 hours or more, and especially if there is nasal and tonsillar involvement, as diphtheria of those organs; you will never regret it.

PROGNOSIS

The forecast in any form of diphtheria must always be guarded. A mild onset may terminate fatally and a very severe onset may develop into a speedy recovery. There should not be one death PROVIDING the antitoxin is given EARLY enough and in sufficient dosage to counteract all the toxin; no case should need intubation for the same reason. It is in the neglected cases that the dangers of laryngeal diphtheria really arise.

According to Welch and Schamberg, also Dr. Place of the Boston City Hospital:—“Before the days of antitoxin the mortality rate in laryngeal cases was 90 per cent. At present if antitoxin is given early there will not be any symptoms indicating need of intubation, and if given early enough it will prevent its spreading to the surrounding parts and thereby prevent the toxæmia which is a very frequent cause of death. Diphtheria of the larynx only will cause very little prostration.”

The age of the child is very suggestive; in our cases the majority of the fatal cases were between 1.5 and 4 years of age. The average age of the 56 deaths was 2 years and 7 months. As to sex, the males are more susceptible, having a mortality of 59 per cent. against 41 per cent. of the females. The outcome of a tube case depends greatly upon the age; if under 1.5 years it is very hard to get rid of the tube because the normal larynx for that age is so small that the irritation of extubation is enough to cause sufficient œdema to necessitate reintubation; hence, under 1.5 years the prognosis of a tube case is very un-

favorable. A case above 2.5 years with no other involvement or with but slight extension has a fair prognosis if a large amount of antitoxin has been given fairly early.

The mortality in our cases was 41 per cent. (including those cases moribund on admission); excluding these moribund cases which died on, or immediately after, admission, the mortality was 20 per cent.

COMPLICATIONS

When the throat and nose are involved with the larynx the two most frequent complications are toxæmia and bronchopneumonia; in laryngeal tube cases bronchopneumonia and persistent stenosis or stricture are the chief dangers.

Tracheotomy may have to be done when intubation does not produce the desired result; the mortality following this operation is high; those cases not succumbing to pneumonia require a permanent dilating tube or a tracheotomy tube, and rarely does a case recover.

PROPHYLAXIS

With the exception of smallpox, diphtheria is the one contagious disease that really can be prevented entirely—prevented from spreading to surrounding parts and limited in its course.

The definite cases as well as all suspicious cases must be quarantined. Cases that have been exposed must also be isolated and carefully observed until the incubation period has passed. Antitoxin should be given to all suspicious cases regardless of the culture report; it is not always necessary to administer antitoxin to exposed cases before suspicious symptoms appear. Washing, fresh air, sunshine are the best disinfectants; fumigation is useless.

TREATMENT

Antitoxin must be given early and large initial doses are indicated. In our 217 cases the average dose was about 40 000 units given in one dose; repetition of the dose in 6 or 8 hours is indicated when no improvement is seen, giving about 20 000 units at a dose until 80 000 units have been given. The dosage varied in our series from 9 000 to 87 000 units; we have tried to make the initial dose large enough for the given case; it is seldom that we have had to repeat this dose if it was given fairly early. We consider that it is poor judgment on the part of the administrator when the first dose does not suffice. When other parts are involved, as the nose and tonsils or the pharynx, more antitoxin must be given in direct proportion to the extension. The dosage in all our diphtheria cases varied from

6 000 units to 125 000 units. Do not waste valuable time by employing the so-called steam tent treatment when we know that men of the largest experience say "always give too large a dose rather than too small a dose of antitoxin, for it will do no harm."

Anaphylactic Shock

Anaphylactic shock resulting in death is very rare. Dr. Place and the late Dr. McCullan of the Boston City Hospital never have observed one case in 40 000 cases treated there. Sudden death is reported by Osler.* There never has been a case in our department. It is advisable to inquire if the patient has had asthma, especially from "horse or mouse" odors, status lymphaticus, or injections of foreign protein, before administering antitoxin. If the case is suspicious, test their susceptibility by injecting a very small dose and repeat at frequent intervals, watching for a reaction.

Urticaria

Urticaria is an eruption which appears in about 85 per cent. of the cases from the 6th to the 10th day, due to the foreign serum (protein) in the antitoxin. This eruption may be very mild or severe; it may last even a week, with a good deal of constitutional disturbance. Temperature, even to 105 degrees, has been observed; arthralgia, adenopathy and muscular stiffness may be present, but in our experience this condition will render the patient very uncomfortable without any serious effect on life. We know of no satisfactory prophylactic, palliative or curative treatment for this condition.

Medical Treatment

This consists of the indicated homœopathic remedy and in value is next only to antitoxin.

Local Treatment

Mild mouth wash and gargle is the most suitable to the patient and beneficial to the mucous membrane of the infected part. We use chiefly 0.85 per cent. saline solution, boric acid, sodium bicarbonate and Dobell's tablets. Beware of using a solution strong enough to irritate the mucous membrane, for it will do a great deal of HARM. Remember that a solution concentrated enough to destroy bacteria will also destroy the healthy mucous membrane and open fresh avenues for absorption of toxin.

*[*Editor's note.*— Park reports 5 cases in a total of 330 000; none of these had had antitoxin prior to the fatal dose.]

Operative Treatment

Intubation and tracheotomy have been referred to above.

REPORT OF 217 CASES OF LARYNGEAL DIPHTHERIA:

<i>Age</i>	<i>Cases</i>	<i>Age</i>	<i>Cases</i>
6 months	3	8 years	9
8 "	1	9 "	3
9 "	2	11 "	1
1 year	35	13 "	1
2 "	42	14 "	1
3 "	39	12 "	1
4 "	36	23 "	1
5 "	17	24 "	1
6 "	16	28 "	1
7 "	8		

SEX: Males — 119; females — 98.

TYPE OF CASE AND CULTURE:

<i>Type</i>	<i>Number</i>	<i>Culture Negative</i>	<i>Culture Positive</i>
Laryngeal,	115	98	17
Laryngeal and nasal,	16	2	14
" tonsillar, nasal,	20	6	14
" pharyngeal, nasal,	5	2	3
" tonsillar,	34	19	14
" rt. pharyngeal,	1	0	1
" and measles,	5	2	3
" and scarlet fever,	5	2	3
Laryngitis with safety-pin,	1	1	0
Œdema of glottis and epiglottis,	1	1	0
	<hr/> 203	<hr/> 133	<hr/> 69

ANTITOXIN:

The amount of antitoxin given in these cases carried from 9 000 units to 87 000 units:

INTUBATION:

Cases intubated 124: At home 24; on admission 79; varying from $\frac{1}{2}$ to 24 hours after admission — 21.

REINTUBATION:

Number of times the cases were intubated			
<i>Cases</i>	<i>Times</i>	<i>Cases</i>	<i>Times</i>
56	1	1	14
18	2	2	15
15	3	1	19
9	4	1	26
3	5	1	27
6	6	1	30
2	7	1	36
2	9	1	41
1	10	1	48
1	13	1	53
		1	131
		<hr/> 125	<hr/> 733 Intubations

Here let me express my most sincere thanks to Miss Ramstad, our Superintendent of Nurses at this Department, for her very able coöperation in this particular line of contagious work, and especially in the operation of intubation; from her I learned the technic of intubation when I first came to this hospital.

COMPLICATIONS:

The chief complications met with were bronchopneumonia, toxæmia, stenosis of the larynx, and nephritis.

TRACHEOTOMY:

11 cases: 4 recoveries and 7 deaths.

DILATING LARYNGEAL TUBE:

4 cases: 2 still living (with tube); 2 died.

MORTALITY:

Mortality rate on the total number of cases:	
217 cases: 161 recovered; 56 died,	25.8 per cent.
Moribund cases excluded (dying on admission)	
190 cases: 161 recovered; 29 died,	15.2 "
Intubated cases:	
124 cases: 72 recovered; 52 died,	41.9 "
Intubated cases, with moribund excluded:	
91 cases; 72 recovered; 19 died,	20.8 "
Tracheotomy mortality:	
11 cases: 4 recovered; 7 died,	63.6 "
Dilating laryngeal tubes:	
4 cases: 2 recoveries; 2 died,	50 "
The average stay in the hospital for all the cases was 18.3 days; the average stay in the hospital for the 27 moribund cases was 1.8 days.	
The average age of those who died was 2 years and 7 months.	

CONCLUSIONS

(1) The culture report must not be depended upon in laryngeal diphtheria, for a negative culture will be found in about 88 per cent. of the laryngeal cases.

(2) The diagnosis must be established by the cardinal early symptoms.

(3) These cases must be treated at a hospital where the symptoms indicating intubation can be carefully observed and the operation performed only when fully indicated and by an operator expert in its technic who should be within instant call both night and day. Lacking these facilities, no case should be treated at home.

(4) A very large initial dose of antoxin (40 000–50 000 units) must be given EARLY in order to prevent intubation and toxæmia if other parts be involved.

(5) If a tube case, the tube should correspond to the age of the child or a little smaller when first intubated. In chronic

tube cases a gradually increasing size of the tube may be used with the purpose of dilating the larynx.

(6) Prognosis must always be guarded, especially in children under 1.5 years and in neglected cases.

(7) Early treatment in *tube* cases has lowered the mortality rate to 20 per cent., which, in the neglected (moribund) cases is 41 per cent.

ACTUAL EXPERIENCE WITH CONTAGIOUS DISEASES OCCURRING SIMULTANEOUSLY

With Special Reference to Scarlet Fever and Rubeola

S. A. CLEMENT, M.D., Resident Physician, West Department, Massachusetts Homœopathic Hospital

Hebra's teaching that a patient suffering from one infectious disease was, during its course, naturally immune to another, is now known to be erroneous and that the coexistence of two or more diseases is not rare.

In our experience, scarlet fever and diphtheria are very frequently associated; both occurring at the same time or the diphtheria developing during the course of the scarlet fever. Scarlet fever has developed during the first two weeks of diphtheria when cross infection seemed to have been impossible. Varicella has occurred during the course of diphtheria, scarlet fever, rubeola, mumps and pertussis. Scarlet fever, rubeola and rubella — definite, clear-cut pictures of these three diseases have been observed within three weeks' time. Erysipelas has occurred with scarlet fever in two cases.

If you will bring back to mind the different incubation periods of these diseases it will be very easy to realize the occurrence of two or three diseases within a period of three or four weeks; a patient may be exposed to scarlet fever and chickenpox today and will show symptoms of scarlet fever in three days while varicella may not appear for eighteen days or even more. The same applies to measles, which has a very definite incubation period of fourteen days. As a rule when there is a double infection one of the associated diseases either follows or precedes the other by a few days.

Of all these diseases occurring almost at the same time, the occurrence of rubeola and scarlet fever exactly at the same time has created the most interest. When they appear at the same time the diagnosis is very difficult and in some instances almost impossible from the eruption alone.

CASES

(1) B. B. 6 yrs. of age; female (Italian); was referred to the West Department, Dec. 25, 1915, as a case of scarlet fever. The admitting-room examination revealed a very peculiar appearing facies, the eyelids were puffy, the conjunctivæ markedly inflamed; the child was unable to open her eyes in bright light (photophobia); a persistent, barky, irritating cough, with some discharge from the nose of thin, watery character, was present. A peculiar blotchy macular erythema was noted on the forehead, with some pallor about the mouth; the body and extremities presented a very irregular eruption, in some areas it was uniform and punctate, bright red, with marked hæmorrhages in the flexor folds, about the neck, at the bend of the elbows and in the groin; in some areas this eruption was of macular type with areas of healthy skin between the lesions. This eruption was very indefinite but resembled both rubeola and scarlet fever. The mouth showed very marked Koplik's spots on the buccal mucous membrane; the soft palate was highly congested, uniformly, with dark punctate spots; the faucial ring was bright red with angry looking tonsils; the pharynx was also inflamed; the tongue surface was coated and its edges red.

The admission temperature was 105 degrees with a pulse of 140.

A diagnosis of scarlet fever and rubeola was made, and proper precautions taken.

On Dec. 26, the condition was about the same; the eruption was still indefinite and the throat very sore; the tongue was clearing.

Dec. 29 showed the eruption fading and the Koplik's spots nearly all gone; the eyes were a little better and a very clean and typically characteristic scarlet fever tongue was noted.

At the end of two weeks the quarantine for measles was removed and the child placed in the scarlet fever ward; at this time the child was desquamating in typical scarlet fever fashion, yet had some brownish stains due to the measles. This child went through a process of marked desquamation, had some cervical adenitis; was discharged from our scarlet fever ward on the forty-seventh day after admission.

Measles had been present in other members of the family.

(2) James G. Age 5 years; male; was referred to this hospital Jan. 14, 1917, as scarlet fever. The diagnosis of scarlet fever was confirmed in the admitting room on a very characteristic clean, shiny tongue with enlarged papillæ, an enanthem on the soft palate and a red throat with a marked pallor about the mouth, pink cheeks and an irregular eruption on the body.

Koplik's spots were overlooked. The child was put in a scarlet fever ward; the next morning in making rounds marked Koplik's spots were observed with slight conjunctivitis and severe cough, no eruption at all on the face. A diagnosis of measles was now added and the child isolated.

Four days after this boy had left home his brother, who was older and had had measles a few years before and who had slept with the patient before leaving the house, came down with a typical case of scarlet fever alone. (The writer saw this case.) Thirteen days from the time the hospital patient had slept in our ward, five cases developed measles. It is apparent that this boy communicated scarlet fever at home to a brother immune to measles and communicated measles to five cases in our scarlet fever ward. After the regular measles quarantine the patient was removed to the scarlet fever ward; he passed through the regular desquamation stage, which was especially marked on the palms of the hands and the soles of the feet; he also developed a right otitis media and was released on the forty-fourth day after the onset of the disease.

(3) Rose M. Age 7 years; female; was referred to this hospital on April 7, 1917, as a case of scarlet fever. On April 2 the child had catarrhal symptoms, cough, coryza, fever, sore eyes, *etc.* On April 3, she had a macular eruption which started on the face and gradually spread all over the body. A surgeon, a friend of the family, made the diagnosis of measles although he was not able to recognize Koplik's spots. On April 6 the child complained of a sore throat, vomited, and the eruption became more uniform and bright red, so that the surgeon advised consultation with a medical man, who made the diagnosis of scarlet fever — disagreeing with the surgeon.

On admission, April 7, with this history given by the father in the admitting room, the following symptoms were observed: conjunctivitis with marked photophobia, a persistent metallic cough, remains of Koplik's spots; remains of a maculopapular eruption on the face and parts of the body; also a very uniform, bright red eruption on the trunk especially, with bleeding points in the flexor folds and a few miliary vesicles; the tongue was suggestive and the throat and palate very characteristic of scarlet fever, so I agreed with both the surgeon and the medical man and made the diagnosis of measles and scarlet fever; measles occurring about four days previous to the scarlet symptoms.

This child was isolated for two weeks and then removed to the scarlet ward. (In about two weeks from the time the child was admitted to the hospital two children in the family

developed measles and were seen by the writer at home.) At this time the patient was all over the measles except for the stain in the skin and a slight cough; the desquamation was very marked all over the body and especially on the palms of the hands and soles of the feet. The second day after being removed to the scarlet ward she had a mild relapse of scarlet fever; this was of interest because some thought that she might have contracted scarlet fever then and that she did not have it on admission. The typical symptoms on admission and at this time the marked and typical desquamation which persisted confirmed our diagnosis of a relapse of scarlet fever.

AN ANALYSIS OF FIFTY CASES OF MEASLES

By GEORGE F. WORCESTER, M.D., Merrimac, Mass.

The material for this study is based upon a recent epidemic of measles in Merrimac, Mass., which occurred in January and February, 1917. A previous epidemic occurred 26 years ago and showed a mortality of one case out of 138 reported. This year there have been reported to March 1, 118 cases, of which number the author has personally viewed 64, fifty of which are taken in rotation.

Of the fifty, 24 cases were males and 26 females. The ages were from $2\frac{1}{2}$ years to 31. There were 8 cases between the ages of 1 and 5; 27 between 6 and 10; 8 between 11 and 15; 2 between 15 and 20; 4 between 20 and 30; and 1 between 30 and 40.

None of the cases in my own series gives a history of any previous attack, although two of them do confess to attacks of German measles dating back in each case over five years. In almost every instance direct contagion has been the mode of infection and as near as can be determined, every child exposed directly to the disease has contracted it, although in one family where there have been two cases in younger children, one older boy who has never had the disease has remained free from it to date.

Although indirect (that is, through a third person) contagion is rare, I have quarantined all the younger members of the family whether they have or have not had the disease, and have kept them out of school two weeks.

PRODROMAL STAGE

Owing to the fact that there has been an epidemic we have been called in early, so that prodromal symptoms have been

clearly outlined. The incubation period has averaged about eleven or twelve days.

The prodromal symptoms have been present in 42 cases in the series consisting of, in order of frequency:—headache (36); anorexia (34); malaise (34); thirst (22); cough (16); and nausea (2). The classical sneezing, watery eyes, *etc.*, were noticeably absent in most cases until the eruptive stage.

In this stage the temperature was almost always 100–101°F. Koplik's were seen in 18 cases in this stage, not always however on the cheeks but more often on the soft palate in front of the uvula. The throat was inflamed in every case and the tongue almost invariably coated white. The post-cervical glands were palpable in 31 cases. At this stage a very characteristic phase developed in 11 cases, in that the fever was gone the following day and then the rash would appear on the next day or two. The prodromal stage averaged three days.

THE ERUPTIVE STAGE

The rash occurred almost invariably in the morning, usually on the third day, consisting of fine reddened irregular macular spots usually appearing first on the hair line or about the nose and mouth, spreading from here over the entire face and neck, thence downward to the trunk, abdomen, upper and lower extremities. In this stage, mucous surfaces of eyes, nose, and mouth were inflamed and tongue coated a thick white. Dryness, thirst, anorexia and constipation were prominent. The rash varied. In the older cases it was the most profuse, severe, and often gave the face a swollen appearance.

The temperature at the beginning of the eruptive stage averaged, for the 50 cases, 103.3, the lowest being 101.8 and the highest 105. There was a constant morning remission of about 1 degree.

The pulse rose in proportion to the temperature.

The blood pressure was usually low, averaging about 110 systolic.

The leukocyte count in those cases taken (4) was unchanged.

The duration of this stage averaged four days.

One case showed distinct signs of the rash for eight days and one nine days, although in each, all other symptoms of the disease had subsided.

In order of their frequency the following symptoms were noted: Fever, cough, constipation, anorexia, coated tongue, throat and eyes inflamed in all cases; cervical glands enlarged, 37; nausea, 16; pruritis, 14; muscular pains, 8; diarrhoea, 5; suppurative otitis media and bronchopneumonia, 1 each. In the latter two cases the otitis preceded the eruption and the

pneumonia developed in the evening of the third day of the eruptive stage.

Desquamation in three cases was very abundant, particularly in one boy 14 years of age, whose face as well as the scalp was completely covered with flakes.

To date, March 9, 1917, there are no deaths.

TREATMENT

The treatment in most cases was purely symptomatic. A laxative was given in every case. The throat was sprayed, the room was darkened and light clothing used as a covering. The patients were kept in bed one full day after all fever had subsided. Cool drinks, fruit juices and ice-cream were given during the fever. Experience with these cases has shown that during the feverish stage the patients could take but a very small amount of any nourishment. Such simple foods as the broths, gruels, custards or milk were usually not retained.

The most frequently used drugs were belladonna, aconite, and bryonia.

Codein in 0.1 gr. doses was given when the cough became very troublesome.

Under such simple treatment very satisfactory results followed in nearly every case.

SUMMARY

Measles is a highly contagious and infectious disease, attacking young and old alike.

The incubation period is about twelve days.

It has a marked prodromal stage with a well defined remission before the eruptive stage.

It runs a well-defined course in most instances.

In this series, otitis media and bronchopneumonia complicated in two per cent. of cases.

THE ÆTIOLOGY OF PYELITIS.*

By HENRY FISK ADAMS, Boston University School of Medicine.

Pyelitis, as the word indicates, is an inflammation of the mucous membrane of the pelvis of the kidney.

Authors are quite agreed that "as a pathologic entity pyelitis does not exist," or is very infrequent. The majority of cases are associated with infection of the renal parenchyma. Even in cases of apparently uncomplicated pyelitis, it is difficult

*One of the student theses submitted by members of the third year class of B. U. S. M., as part of the course in Hæmatology and Urinary Sediments.

to demonstrate the absence of cortical involvement, so that the term pyelo-nephritis more frequently describes the true condition present.

Concerning predisposing causes, all writers concede that sex is an important factor in the ætiology of pyelitis. Wyman reports 65 cases in children, of which 90 per cent. were females. Weibel, however, states that from his experience, pyelitis is an often overlooked condition in male infants, fifteen of a series of thirty-two cases under observation having been boys. In adults, too, sex exerts a marked influence because of the added factor of pregnancy, the majority of cases in adults under forty years of age occurring in pregnant women (Lauria). It is only at an age when calculus formation and prostatic enlargement begin to act as relatively important causes that pyelitis is found with frequency in males. As has been said, pregnancy is the predisposing cause in most cases occurring in women, and according to Franz the primiparous woman is more susceptible than the multiparous in the ratio of two to one, two-thirds of his cases having occurred in primiparæ. Other predisposing causes are trauma, tuberculosis, calculus, enlarged prostate, stricture of urethra or ureter, movable kidney, hydronephrosis, tumor pressing on the renal pelvis, and general sepsis. Investigators agree with McDonald and Weibel that some degree of hydronephrosis or urinary stasis nearly always exists. One other important fact is the predominance of unilateral right-sided infection, of which more hereafter.

As to the direct ætiology of pyelitis, the vast majority of cases are due to infection by the *bacillus coli communis*. In a series of twenty-two cases in pregnant women Herrick found the colon bacillus in pure culture in nineteen instances, while pneumococci, gonococci and *bacillus proteus* were found respectively in the remaining three cases. Lauria quotes Ward as having found colon bacillus in pure culture forty-four times in a series of fifty-six cases, and von Albeck seventy-six times in ninety-two cases, while Lenhartz reports pure culture of colon bacilli as being found sixty-six times in eighty cases. Pneumococci, gonococci, or *bacillus proteus* are seldom found in pure culture, but are usually accompanied by colon bacilli.

Of possible routes by which the infecting organism may arrive at the renal pelvis, three are worthy of discussion. The first is that of direct extension through urethra, bladder and ureter to kidney — ascending infection. Of the earlier investigators of the subject, Albeck, Fromme, Kehrer, and Opitz are mentioned by Franz as having favored this as the most likely pathway of pelvic infection. The facts, clinical and experimental, which point to ascending infection are as follows:

The greater frequency with which pyelitis affects females is considered to indicate ascending infection because of the ease with which colon bacilli may gain access to and traverse the short female urethra, subsequently entering the kidney *via* bladder and ureter. Further, the frequent association of cystitis with pyelitis in infants has been referred to as an additional factor indicating ascending infection.

Some degree of urinary stasis and ureteral dilatation are considered necessary if infection is to take place in this manner (Brewer, McDonald, Watson). Experiments have shown that ligation of the urethra in dogs and rabbits and injection of various pathogenic microorganisms into the bladder, resulted in infection of the kidney. This, however, was not the case, at least when colon bacilli were injected, unless the resistance of the kidney was previously lowered by direct trauma, and it never occurred in any case unless complete urinary stagnation existed. Weibel's series of thirty-two cases includes almost as many boys as girls, indicating that the longer male urethra affords no protection against pyelitis, and that, given the urinary stasis and ureteral dilatation, males may be as easily infected as females.

Concerning the second point, namely, the frequency of associated cystitis as an argument for the plausibility of the ascending route, it is usually impossible to prove whether this condition is the cause or the sequel of the pyelitis. Again, Aynesworth states that, inasmuch as the symptoms, if any, produced by pyelitis are largely referred to the bladder, an erroneous diagnosis of cystitis is frequently made, especially in infants, so that not only does relation of cause and effect concerning these two diseases remain unsolved but even their alleged frequent coexistence becomes doubtful.

Granting that cystitis is an unnecessary previous or accompanying condition of pyelitis, it is reasonable to expect that the colon bacillus might be encountered in the normal bladder without giving rise to any symptoms. On this point we have the observations of Williams, Wallace and Murray. They state that catheter specimens taken before and after operation in thirty abdominal sections showed organisms of the *bacillus coli* group in every case. These results were obtained in female patients operated on for various abdominal conditions. In a series of twelve urines taken (by the same workers), by puncture of the bladder during abdominal section, only four specimens gave cultural evidence of the presence of coliform organisms. Danforth's results from similar experiments are somewhat different. Catheter specimens were obtained from fifty maternity patients prior to delivery, under the usual aseptic precautions

observed in a modern hospital. Colon bacilli were demonstrated in four of the fifty samples of urine thus obtained. In another series of sixteen cases, the samples were taken under more stringent precautions with a view to excluding all possible contamination of the urine. Aside from the aseptic procedure usually observed, the urinary meatus was cleansed most thoroughly with sterile gauze before passing the catheter, and the urine obtained was collected in a series of sterile flasks; the first portions obtained from each case were discarded, and the second and third portions were subjected to examination for colon bacilli. In none of the samples could these organisms be found. Thus, colon bacilli could be demonstrated in the urines of only four out of a total of sixty pregnant women examined.

Weibel found an unsterile bladder in twenty-five out of one hundred pregnant women prior to delivery. In these twenty-five cases the *bacillus proteus* was found four times, the colon bacillus once, and in the other twenty cases mixed infections of staphylococci and streptococci. The above observations, though too meagre to be conclusive, tend to show that *B. coli* is an infrequent inhabitant of the normal female bladder.

Further, advocates of ascending infection are at a loss to explain the predominance of right-sided infection. Watson, among others, puts forward the explanation that of the two ureters the right is most subject to pressure from the increased size of the uterus and from pressure of the fœtal head during pregnancy. This, however, fails to account for right-sided predominance in infants and adult males. Also, Franz points out that pyelitis gravidarum usually occurs at a time during gestation when the uterus and fœtus are too small to produce pressure symptoms.

Owing to the failure of supporters of ascending infection to explain satisfactorily many phases of the situation, other writers have sought to prove that the infection of the kidney pelvis is of hæmatogenous origin.

In common with the advocates of the ascending route, supporters of the theory of blood-borne infection consider trauma and some degree of hydronephrosis and ureteral dilatation as necessary predisposing causes. McDonald quotes Olhausen and Pollack on this point. In a series of sixteen cases, Olhausen found right-sided pelvic dilatation alone in ten, left-sided alone in two, and bilateral in four. In 135 autopsies, Pollack found pelvic and ureteral dilatation thirty-five times, seventeen right-sided, eighteen bilateral. McDonald gives his own results in four necropsies made on women dying during pregnancy. Right-sided dilatation was noted three times and bilateral once. Franz states that a slight degree of hydronephrosis always exists during

pregnancy because of the narrowing of the ureteral lumen, a result of the physiological hyperæmia of the ureteral and vesicular mucous membrane, commonly found in pregnancy.

Tending to support direct hæmatogenous kidney infection is the observation of Brewer that such infection is frequently associated with septicæmia, empyæma, endocarditis, *etc.* Against this view, Aynesworth states that if renal infections are blood-borne, it is curious that septic foci elsewhere in the body are but rarely found when *B. coli* is the cause of pyelitis. Lauria, arguing by analogy, states that, since the temperature and urinary findings in pyelitis are so similar to conditions observed where cortical involvement exists, a condition brought about by blood infection, he thinks it logical to conclude that colon bacillus infections of the pelvis, too, are brought by that route. Opposed to this are the observations of Weibel and Franz. The former does not concede the possibility of blood infection except in cases of sepsis elsewhere in the body wherein bacteria may be demonstrated in the blood stream; the latter points to the fact that rarely have colon bacilli been found in the blood stream in cases where pyelitis due to that organism existed, but that in the few cases of pyelitis due to pneumococcic infection, these organisms have always been demonstrated in the blood.

As an experimental check upon the possibility of hæmatogenous infection we have the work of Brewer. He produced kidney infection experimentally by ligating the ureter in dogs and injecting pathogenic microorganisms into the veins of the ear. The infection, however, produced general kidney lesions, lesions not localized in the renal pelvis. No lesions were produced in the cases where colon bacilli were used except with the aid of direct trauma.

The infection, therefore, may be of hæmatogenous origin in the few cases of pyelitis due to microorganisms more virulent than *bacillus coli*, but a more plausible route of infection must be sought to account for the vastly more numerous cases due to this bacterium.

Franke has demonstrated lymphatic connection between cæcum and ascending colon and the right kidney and has pointed out that the flow of lymph is from colon to kidney. No such lymphatic connection could be demonstrated between any part of the bowel and the left kidney. Further, by producing an acute and severe constipation in dogs, coliform organisms could, after a few days, be demonstrated in the lymph channels connecting the colon and right kidney—and they were not found in the control animals. If pelvic infection takes place after this manner the predominance of right-sided infection is readily explained. Moreover, as Franz points out, the constipation

usually present in pregnancy would enter as an eminent predisposing cause in the cases of pyelitis gravidarum. Franke is strongly supported in this view by Bloch. Escherich, Mera-beau and Zangemeister are quoted by Franz as having favored the possibility of lymphogenous infection based on purely theoretical anatomical grounds before Franke demonstrated that lymphatic connection actually existed. To summarize, authors are agreed that:

(1) The majority of cases of pyelitis are due to infection by *bacillus coli communis*.

(2) Prominent among predisposing causes are:

- a. Age: infants are susceptible.
- b. Sex: females are most frequently affected.
- c. Hydronephrosis or ureteral dilatation from any cause.
- d. Tuberculosis, septicæmia, or pyæmia, endocarditis, osteomyelitis, *etc.*

(3) The right kidney is more frequently affected, probably because of the close lymphatic connection of the cæcum and ascending colon.

As to the manner in which infection gains access to the renal pelvis, there are three possibilities:

(1) Direct extension through urethra, bladder and ureter. Infection, if by this route, accounts for the greater frequency of the condition in females. It does not account for the frequency of right-sided infection nor do its supporters attempt to explain how this route is possible when colon bacilli are so seldom found in the bladder. It is a possible, but not a frequent, route.

(2) The hæmatogenous route. This would account for those cases occurring with general sepsis, *etc.*, but presupposes septic foci elsewhere and does not explain infection due to colon bacilli wherein these organisms cannot be demonstrated in the general circulation, nor does it explain the frequency of right-sided infection.

(3) The lymphatic route. This route is anatomically possible, the lymphatic connections having been demonstrated. Colon bacilli have been found in these lymph channels. Right-sided infections are best explained by this theory because no lymphatic connection from bowel to left kidney has been demonstrated, but it leaves unexplained the greater frequency of pyelitis in females.

BIBLIOGRAPHY

- (1) Aynesworth, K. H.: *Acute pyelitis, its diagnosis and treatment.* Surg. Gyn. and Obst., 1915, xxi, 124
- (2) Brewer, G. E.: *The present state of our knowledge of acute renal infection.* Jour. A. M. A., 1911, lvii, 179
- (3) Idem: *Acute unilateral hæmatogenous infection of the kidney.* Trans. Amer. Surg. Assn., 1908, xxvi, 344
- (4) Bloch, A.: *Zur sekundären Koli-Infektion des Nierenbeckens.* Deutsche med. Wchnschr., 1914, xl, 276
- (5) Danforth, W. C.: *Pyelitis of pregnancy with special reference to its ætiology.* Surg. Gyn. and Obst., 1916, xxii, 726
- (6) Franke: *Ætiologisches zur Koli-Infektion der Harnwege.* Mitteil. a. d. Grenzgeb. d. Med. u. Chir., 1911, xxii, 628
- (7) Franz, K.: *Pyelitis gravidarum.* Ztschr. f. Urologie., 1914, No. 8, 699
- (8) Herrick, F. C.: *Chronic pyelitis, cause, course, and treatment.* Ohio State Med. Jour. 1915, xi, 221
- (9) Lauria, L.: *Acute hæmatogenous infection of kidney and pyelitis of pregnancy.* New York Med. Jour., 1911, xciii, 1073
- (10) Lenhartz, H.: *Über die akute and chronische Nierenbeckenentzündung.* Münch. med. Wchnschr. 1907, liv, 766
- (11) McDonald: *Pyelitis in pregnancy, its ætiology and cystoscopic diagnosis.* Amer. Med., New Series, 1910, v, 621
- (12) Watson, B. P.: *Pyelitis as a complication of pregnancy.* Canad. Med. Assn. Jour., 1915, v, 192
- (13) Weibel, W.: *Serologisches und klinisches über Schwangerschaftspyelitis.* Arch. für Gyn., 1913-14, ci, 454
- (14) Williams and Wallace: *Coliform organisms in the healthy and infected urinary tract of the female.* Brit. Jour. Obst. and Gyn., 1912, xxii, 68
- (15) Wyman, E. T.: *Pyelitis in infancy and childhood.* Bost. Med. and Surg. Jour., 1914, clxx, 541.

EDITORIAL

BOOKS for review, exchanges and contributions — the latter to be contributed to the GAZETTE only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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A COMPARISON OF THE PHARMACOLOGY OF EMETIN AND THE PATHOLOGY OF AMŒBIC DYSENTERY. THE RELATION OF DRUGS TO IMMUNITY

From time to time and by many individuals it has been pointed out that there exists a striking similarity between our "specific" drugs and the pathology and symptomatology of those diseases in which these drugs are used. Thus, comparisons have been drawn between quinin and malaria; iron and chlorosis; mercury and syphilis; and a host of other drugs and diseases in which the relationship is considered less "specific." These comparisons are worthy of thoughtful consideration and it may not be amiss to bring forward another one.

It has been known for some time that emetin in large doses gives rise to a hæmorrhagic inflammation of the gastrointestinal tract in experimental animals; with the increasing use of emetin in amœbic dysentery there have been published the results of more detailed investigations of the pharmacology of this alkaloid.¹

Kilgore and Liu base their report on experiments which were performed on thirteen dogs to whom repeated doses of emetin were given subcutaneously. Nine of these dogs developed a bloody diarrhœa or showed bloody fluid in the gastro-intestinal canal at necropsy.

The pathology in these dogs was typically hæmorrhagic. All of them showed submucous hæmorrhages which were most

¹ *Amœbic dysentery, clinical and experimental.* Kilgore, A. R., and Liu, J. H., Arch. Int. Med., 1917, xx, 178

The Pharmacology of Emetin. Pellini, E. J., and Wallace, G. B., Am. Jour. Med. Sci., 1916, lii, 325

prominent in the upper enteron and in the first part of the colon. In some instances the intestinal lymphoid patches were hæmorrhagic, in all the dogs the mesenteric glands were enlarged, and seven of them exuded blood on section: The liver was congested, and subcapsular hæmorrhagic areas were found in one instance.

The spleen also showed hæmorrhages, and the kidneys exhibited a moderate degree of congestion. No ulcers were found. With the intensive system of dosage which was followed it would hardly be expected that the ultimate pathologic effects of the drug would be fully developed before death ensued.

Pellini and Wallace report similar findings and, in addition, sharp-walled, round ulcers in the intestine, scattered areas of focal necrosis in the liver and hæmorrhagic œdematous inflammation of the lungs, occasionally with hæmoptysis.*

The pathology² in amœbic dysentery is characteristically one of intense hyperæmia with submucous hæmorrhages and subsequent formation of ulcers, especially in the large intestine. In acute cases the liver is often dark red, congested, enlarged and more friable than normally, and it frequently contains numerous small abscesses. Typical dysenteric abscesses in the liver are usually situated directly beneath the capsule. The kidneys and spleen may show some congestion and cloudy swelling.

Of the diseases for which we have "specifics," three — malaria, syphilis and amœbic dysentery — are definitely known to be infectious. Curiously enough, *imprimis*: each is caused by a protozoön; *zweitens*: as to the *modus operandi* of quinin, mercury and emetin the prevalent theories postulate chiefly a parasitidal action and yet, *troisièmement*: there exists an indisputable parallelism between the subjective and objective pathologic effects of these protozoa and the subjective and objective pharmacologic effects of their respective "specifics."

It cannot be denied that each of these three drugs has a rather remarkable affinity for those microörganisms causing the diseases in which the drugs are used therapeutically; this is the basis of the parasitidal hypothesis. But it is equally certain

² MacCallum, W. G. *A Text Book of Pathology*, 1916

Cattell, H. W. *Post Mortem Pathology*, 1906

* These investigators attempted to explain the former widespread use of emetin in controlling hæmorrhage. They failed to demonstrate that the drug increased the coagulability of the blood in any appreciable degree, and hence assumed that if there be any hæmostatic effect it is probably due to the general relaxation which accompanies the action of emetics when given in doses too small to produce vomiting.

that the same affinity (or better, tissue proclivity) exists between these drugs and the same tissues which in the host, are involved by the microorganisms. This at once suggests that the impact of drug upon tissue may serve to stiffen resistance toward the invasive pathogens.

It is perhaps conceivable that the drug alone may stimulate the formation of circulating or cellular antibody which will be directed against the invader. This possibility, in regard to the circulating antibody, has been investigated and the results have been suggestive but by no means conclusive.³

More plausible is the concept that the drug may increase and perhaps hasten the mobilization of specific antibody by acting as a sort of catalyzer in the antigen-antibody reaction. This hypothesis is readily susceptible of experimental investigation and the establishment of its validity would be a signal advance in our knowledge of immunity and therapeutics.

S. B. H.

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³ Mellon, R. R. *Medical Century*, 1913, xx, 161

Hooker, S. B. *The relation of drugs to immunity*. *Jour. A. I. H.*, 1914, vii, 697; also *N. E. Med. Gaz.*, 1914, xlix, 405

CLINICAL DEPARTMENT

A case of vertigo. The patient was not a strong girl, and had at eighteen years nervous breakdown lasting about two years. She was not seriously ill at this time but fatigued easily and lay about the house, probably from an adolescent, anemic state. She married at twenty-three, but had no conception until four years later. Then she had four healthy children during the next five years. After the fourth child, in 1890, she began to notice a roaring in her right ear. For this a local aurist applied the Politzer apparatus frequently to dilate the Eustachian tube and middle ear. After some months of this treatment she went to a Boston aurist, who diagnosed hemorrhage in the labyrinth and said that the right ear drum was badly stretched. He put on a paper splint, which gave relief and finally overcame the roaring. However, she gradually became deaf in this ear.

She has had several attacks of *la grippe*, and two years ago, following a severe attack of laryngitis, the present nervous breakdown began. It was ushered in by an attack of larygismus stridulus. Before this for two years she had been conscious of occasional light-headedness and slight dizziness. Now these increased. The family doctor pronounced it due to indigestion, and treated her accordingly. About a year ago the symptoms were all worse. Her heart acted badly, she says, and conversation was intolerable. The back of her head felt as if it opened up. She went to bed for some weeks and by Christmas was better, but the exertion of the holiday brought on the vertigo, and she has since been in bed most of the time. At first this vertigo was just a gentle swaying of the bed, sometimes from side to side, but usually endwise. At night it would keep going in one direction, generally forward. It got faster and faster until she thought she would lose consciousness. When she sat up she was still more dizzy. She had a high blood pressure, and lumbar puncture was tried with slight benefit, though there was little pressure of the cerebro-spinal fluid and only a few drops were obtained. The puncture left her with a very sore back, from which she is only just recovering after six months. In July an aurist pronounced her right ear better in that she could hear somewhat by bony conduction, and he found left ear not affected.

At this time she went to a hospital. Blood pressure was found to be 160 mm. systolic, 80 diastolic, and the urine of low specific gravity and urea, but otherwise normal. She said that the bed oscillated forward and backward and that when she walked the floor swayed or seemed to rise up under her

feet. The roar in her ear was present but improving. She has always had a high degree of near-sightedness, for which she has worn glasses, but an excellent oculist could not find any connection between her eye trouble and the vertigo. There was and has been no nausea, although she has had a slight chronic indigestion, with coated tongue and periods of diarrhœa. The heart had a systolic and a rough aorta with accentuated second sound. She was put to bed and given a very light, simple diet, with meat, except chicken, excluded. A bed bath and light massage were given daily, and her back was strapped. An effort was made to find a homœopathic remedy. Tabacum 3x was tried, as was conium, gelsemium and salicylate of soda, all without benefit. Bromid in the form of effervescent tabloids was taken with some benefit, and absolute rest in bed for three months also helped, so that the patient is much improved but still not well enough to be about and attend to her duties.

Dr. Clarence Bartlett of Philadelphia has an excellent article on vertigo in *Goodno's Practice of Medicine* (Vol. 1, page 571). From this discussion the above case should be classed as auditory nerve vertigo or Menière's disease. The only factor being absent is that though deafness has now occurred in the right ear, the vertigo persists. It might, therefore, be right to assume that some other factor is now responsible for the vertigo and this could be the arteriosclerosis.

The pressure has now dropped to 120 mm. systolic, however. It seems fair to assume that this patient has a chronic state which will stay quiescent unless she puts a tax upon her strength either through liberal eating or exercise, which will again send up her blood pressure.

HOMŒOPATHIC PERIODICAL LITERATURE

Journal of the American Institute of Homœopathy. July, 1917

1. *The New Leadership of the American Institute of Homœopathy.* 1. Van Baum, W. W.
2. *Memorial address.* 11. Mann, E. L.
3. *Health service, University of Michigan.* 19. Stouffer, C. B.
4. *Lycopus virginicus — a study in pharmacology based upon human and animal experiments.* 25. Hinsdale, A. E.

At a time when so many prominent physicians are declaring that drugs are of little or no value in the cure of the sick, the work of Dr. Hinsdale is deserving of careful and critical consideration by the profession. His methods are both painstaking and scientific.

5. *Aconitum napellus* — Anterior poliomyelitis. 30. Nesbit, E. L.
6. *Forward and review* — Chairman's address. 34. Collins, C. D.
7. *Public health in the rural schools*. 38. Hopkins, M. M.
8. *Standardization of obstetrical methods: Address by the President*. 45. Loizeaux, L. S.
9. *Muscle Investigation* — three diagnoses and thoughts engendered by them. 48. Williams, E. C.
10. *The physical department as an adjunct to the modern hospital*. 53. Baker, W. F.
11. *Vaginal hysterectomy for procidentia*. 57. Strawn, J. C.
12. *The elements of scientific medicine*. 61. Krauss, J.

August, 1917

1. *The Organization of the medical wards and dispensary and its value to a hospital together with some remarks on case taking*. 117. Bartlett, C.
2. *Obstacles in the way of recovery*. 130. Sutherland, J. P.
3. *Clinics at Rochester*. (Collected and reported by the staff of the Lee Private Hospital.) 138.
4. *Surgical and Gynecological Society, President's Address*. 151. Roberts, G. W.
5. *Hæmorrhage at the menopause*. 153. Wigger, H. H.
6. *Lumbar pain: The clinical significance of lumbar pain as found in genito-urinary practice*. 155. Sprague, E. R.
7. *The present state of massive radium therapy*. 163. Dieffenbach, W. H.
8. *Fraternal and retrospective*. 168. Hedges, S. P.

J. W. H.

The Hahnemannian Monthly. July, 1917

1. *A consideration of the action of iron in chlorosis*. 385. Wesselhoeft, C.

Large doses of iron are less efficacious in the treatment of chlorosis than are smaller ones. In fact, they may aggravate the condition. Wesselhoeft cites four of his cases, one of whom had previously taken large numbers of Blaud's pills and had become gradually worse, but improved under ferrum phosphoricum 3x. One of the cases showed no improvement under various forms of iron therapy but responded rapidly to pulsatilla.

2. *Encysted empyema*. 397. Barker, W. C.
3. *Gynæcological clinic*. 401. Lane, N. F.
4. *What is "Like"?* 404. Keese, J. M.
5. *Address at the commencement of Hahnemann Medical*

College at the Garrick Theatre, Philadelphia, on May 31, 1917.
407. Duane, R.

6. *Environmental origin of mental disease in certain families.*
415. Briggs, L. V.

H. U.

Pacific Coast Journal of Homœopathy. July, 1917

(This issue contains no original articles.)

Fran Homeopatiens Varld. No. 2, 1917

Eat slowly; chew your food long and thoroughly. (At långsamt och tugga födan länge och grundligt.) 20. Thorstenson, B.

An exposition of what may be termed a national "Fletcherism." Stress is laid, not so much on the number of times one chews an individual morsel, as on the importance of not hurrying one's meals.

Introductory address at the homœopathic meeting in Stockholm. 22. Sellden, Hj.

A popular address on the difficulties undergone by homœopathy in Sweden before its final official recognition, now granted.

Iowa Homœopathic Journal. July, 1917

Blood pressure. 9. Schenk, E.

A brief review of the clinical aspects of the subject.

Placenta prævia. 15. Huntoon, G. A.

A consideration of symptoms and treatment. The author recommends emptying the uterus as soon as possible after hæmorrhage occurs, unless the patient is in a hospital under constant observation.

Is the internal remedy sufficient to cure diseases of the skin? 20. McDonough, W. A.

The author answers the question in the affirmative. The article is somewhat unconvincing, as all the evidence adduced consists in *ex cathedra* statements, unaccompanied by any clinical data.

The Clinique. July, 1917

Diagnosis of syphilis. 300. Mitchell, C.

In these brief remarks the author casts some well-merited doubt upon the Wassermann reaction as the final word in diagnosing the presence of active syphilis. He calls attention to the high percentage of positive von Pirquet reactions in persons who are resisting the tuberculous infection to the extent of appearing clinically well. It therefore seems not unlikely, he argues, that a person once infected by the spirochæte may arrest the disease clinically, even though he prevents serological evi-

dences of his infection. At present, of course, the Wassermann reaction is our best means of detecting syphilis, but it is a relief to find a laboratory worker of Dr. Mitchell's standing cautioning against laying too great stress on the value of this reaction in the absence of clinical data. Dr. Mitchell suggests that further researches may reveal a method for the demonstration of active syphilis by means of microscopic study of the blood corpuscles. The suggestion certainly furnishes food for thought.

A few suggestions on perineorrhapy. 316. Boies, W. A.

The aged as surgical risks. 317. Smith, D. T.

The author considers the mere number of years one has lived a less important factor in operations than we are often led to believe. Arteriosclerosis, bronchitis, and low vitality are the main things to be considered in making up one's mind as to the advisability of operating.

Atresia hymenalis. 320. Smethers, A. L.

Report of a case.

Hygiene of the school girl. 324. Cornell, M. C.

The Homœopathic Recorder. July, 1917

Treatment of skin cancer. 299. Jones, O.*

"Cancer is only a product depending upon intestinal stasis (constipation) for its existence." The fermentation of nitrogenous foods in the colon, we are also informed, "produces toxins of the most virulent description." Truly, our author out-Arbuthnots Arbuthnot (Lane)!

The writer finds chlorid of zinc, saturated solution, the most satisfactory for skin cancers. For cancers situated within the mouth he injects a few drops solution of zinc chlorid (strength?) with tincture of Thuja (how much?) directly into the cancer. The rest of the paper is devoted to a discussion of vegetable salts and their effect on the human economy.

Another Kali group. 306. McGeorge, W.

Kali bichromicum, carbonicum, and hydriodicum are considered.

Facts gleaned from everyday practice. 312. Jones, E. G.

August, 1917

Therapeutics of gunpowder. 339. Clarke, J. H.

A few notes in clinical experience with black gunpowder as a remedy. The substance seems to be useful in septic conditions, such as furunculosis, pustular acne, and septicæmia. Herpes facialis is said to have been observed in the only proving recorded. The author employs the 3x and 5x.

* Credit wrongly given in July number to H. L. Baker.

Some random thoughts. 345. Yingling, W. A.

The breasts. 353. Park, M.

And still homœopathy leads. 358. Ray, M. E.

The author apparently confuses isopathy with homœopathy when she refers to Sir Almroth Wright's work as being a "re-discovery of homœopathy." The fact that the typhoid vaccin, for instance, may have a curative effect in typhoid cannot be accepted as *prima facie* evidence that a drug which produces typhoidal symptoms in the healthy will cure those symptoms in the ill.

Homœopathy versus modern therapy. 360. Hermance, A. C.

Freak symptoms. 363. Jones, E. G.

W. O.

DIAGNOSIS AND THERAPEUTICS

Comparison of several methods of specific early treatment of acute anterior poliomyelitis. Ulrich, H. Boston Med. and Surg. Jour., 1917, clxxvii. 78.

A report based on the observation of 120 cases of acute anterior poliomyelitis at the West Dept. of the Massachusetts Homœopathic Hospital last fall. Ulrich divided the cases into six groups, as follows: "Group I was treated with three intraspinal injections of immune serum; Group II was treated similarly with normal serum; cases of Group III were injected with their own spinal fluids (autotherapy-Duncan); Group IV comprised cases on which the effect of simple withdrawal of spinal fluid was tested; Group V received no specific treatment; Group VI includes cases of which one was of doubtful diagnosis, one died of pneumonia, and the others were moribund on admission."

As we know, each of the methods of treatment employed has had its advocates, and from time to time articles have appeared, reporting series of cases (usually inadequately controlled) supposed to demonstrate conclusively the superiority of the author's favorite method. It is therefore a relief to the scientifically minded to see the results of a fairly large number of cases in the same epidemic and under the same hospital conditions, on which the various methods were tried with sufficient controls. The paper, although scientifically very valuable, is somewhat depressing to the therapist. "In conclusion, I would say that not only must the various measures employed in this study be looked upon as useless, at least after the onset of paralysis and under the conditions,—but the manipulation of the sufferers necessarily attendant upon lumbar puncture causes great pain and would seem to be permanently harmful,

in view of the great need of rest during the early stage of the disease."

The caution against indiscriminate lumbar puncture is worth serious consideration.

Protocols of the cases are given, as are a review of the literature and a bibliography. The work done was carried on under the auspices of the Evans Memorial.

W. O.

The occurrence of acidosis with severe diarrhœa. Schloss, O. M., and Stetson, R. E. *Am. Jour. Dis. Children*, 1917, xiii, 218

Infants suffering from severe diarrhœa with toxic symptoms often show the following signs of acidosis: 1, decrease of the carbon dioxid of the blood and alveolar air; 2, decreased carbon dioxid combining power of the blood plasma; 3, high ammonia coefficient in the urine; 4, increased tolerance to sodium bicarbonate; 5, improvement of the symptoms after administration of sodium bicarbonate.

These signs are evident in some cases of diarrhœa before the typical symptoms of intoxication have developed, and serve as a warning and therapeutic indication.

If an infant suffering from severe diarrhœa has hyperpnœa, the diagnosis of acidosis is almost certain. If hyperpnœa is not observed the diagnosis must rest on laboratory evidence.

Thorough and carefully controlled treatment by sodium carbonate usually causes disappearance of the acidosis, but despite this, the infants frequently die from a severe form of malnutrition.

The Schick test in poliomyelitis, scarlet fever, measles and in normal children. Its bearing on the question of natural immunity. Zingher, A. *Ibid.*, 1917, xiii, 247

In a series of 2 700 normal children from the ages of two to sixteen years the Schick test has been found positive in 21.4 per cent. Between the ages of two and four the percentage is 32.2 per cent. In 1 200 scarlet fever patients the Schick test was positive in 45.3 per cent. In 213 measles cases the test was positive in 34.2 per cent. In 1 350 poliomyelitis cases the test was positive in 75.6 per cent. The explanation of this high percentage of positive reactions is still unsettled. Zingher is skeptical of von Behring's explanation that these diseases cause a diminution in the amount of natural antitoxin which normally is responsible for the presence of a negative Schick test. On the other hand, although it is based on rather meagre evidence, he is inclined to think that a susceptibility to one of the

less contagious diseases indicates that the child is also apt to be susceptible to other contagious and infectious diseases.

The Schick test is positive, between one and four years of age, in about 32 per cent. of normal children, in a slightly larger proportion of cases of measles, in twice as many cases of scarlet fever and nearly three times as many cases of poliomyelitis.

Natural immunity reveals interesting problems which can be partly solved by a study with the Schick test in diphtheria immunity.

A uniform technic of making the test, standard solutions of toxin, a uniform interpretation of the test, and a large series of cases are essential in any attempt at making important deductions from the results obtained with the Schick reaction.

The use of the longitudinal sinus for diagnostic and therapeutic measures in infancy. Brown, A., and Smith, G. E. *Ibid.*, 1917, xiii, 501

Technic. The technic employed in entering the sinus is very simple and correspondingly rapid. All that is necessary is a 20 cc. Luer syringe, with an 18 or 20 gauge needle about $1\frac{1}{4}$ inches long. The needle is slightly modified in two respects: first, the bevel is made about 45 degrees, so that the point does not enter the sinus deeply. Second, a guard is placed about $\frac{1}{4}$ inch from the extreme tip of the needle to prevent the latter transfixing the sinus as it passes, sometimes abruptly, through the fibrous layer of the fontanel. It is, therefore, advisable to enter the fontanel at the beginning of the suture just posterior to the fontanel.

Of one hundred cases in which the sinus has been used either for diagnostic or therapeutic measures, in four the sinus was transfixed accidentally without the development of any untoward symptoms, or anatomic signs in two cases which came to necropsy.

The sinus has been used for the administration of diphtheria antitoxin. Fifty-two injections of diarsenol have been given without any accident. Saline injections have been given and blood has been taken for cultures.

A study of ethylhydrocuprein (optochin) in the treatment of acute lobar pneumonia. Moore, H. F., and Chesney, A. M. *Arch. Int. Med.*, 1917, xix, 611

A seventy-two page article giving the results of a thorough investigation into the nature and use of this drug. The following recommendations are made: Optochin is best administered by mouth, preferably in capsules because of its bitter

taste. It should be given in such amounts as will insure the rapid production and more or less constant maintenance in the blood stream of a concentration sufficient to exert a bactericidal action on the pneumococci. These results may be obtained by giving .024 grams, per kilogram of body weight, distributed over twenty-four hours. In order to obtain a rapid appearance of this bactericidal action in the blood stream, the initial dose should be larger than the subsequent ones; the body weight relationship being at all times preserved. Individual doses should be given regularly and the intervals between doses should, in general, not exceed from two to three hours. Specific pneumococidal action appears in the blood stream within a few hours and can be maintained more or less constantly for several days. Pneumococci may acquire a property of more or less complete resistance to the drug. Toxic symptoms such as tinnitus, amblyopia, retinitis or deafness may be observed following the use of this drug in full amounts; they are generally transient. Retinitis, however, may result in a more or less permanent impairment of vision.

Thirty-two cases were studied. Twenty-four were considered to have been adequately treated with optochin and of these the mortality rate was 17 per cent. This drug treatment is not so nearly efficacious as the serum treatment in the pneumonias due to Type I pneumococcus, but since the same treatment in Type II infections has not yet been proved satisfactory it is considered that the use of optochin alone or in combination with the serum treatment may considerably reduce the mortality in this type of infection.

The treatment of syphilis of the central nervous system. A comparison of mercurialized serum and salvarsanized serum. Haller, D. A., *Ibid.*, 997

In the preparation of mercurialized serum, blood is withdrawn from a vein and allowed to clot. The expressed serum is centrifuged in order to free it from cells. The serum is then pipetted into glass tubes in 8 cc. amounts, and to each tube is added 0.001 gm. of mercuric chlorid in a 0.1 per cent. aqueous solution. The fluid is agitated for a few moments in order to insure a thorough mixing. The white ring of precipitated albuminate of mercury quickly redissolves in the excess of the serum, giving a perfectly clear solution. The tubes are plugged and the serum inactivated for thirty minutes at 56 C. They are then stored on ice until needed, when they are warmed to body temperature and the serum is administered.

The amount of serum used has seemed to be of relatively little importance, although excessive amounts probably add to

the immediate reaction. From 6 to 8 cc. has been the amount used in most of the doses given in this series for the reason that about that amount of spinal fluid is usually withdrawn for cell count, globulin and Wassermann tests. The dose of mercuric chlorid has been varied from 0.0005 to 0.002 gm. The degree of immediate reaction is not perceptibly changed by increasing the amount to 0.001 gm., but an increase above this figure has seemed to add materially to the discomfort of the patient. The length of time during which the serum was heated to 56° C has been varied from twenty minutes to two hours without apparently affecting the degree of the reaction. The age of the serum does not perceptibly add to its irritating properties. Several doses kept on ice for eight weeks and more were followed by less disturbance than many which were administered within twenty-four hours after preparation.

The irritating effect in the spinal canal of serum to which mercuric chlorid has been added in the dose of 0.001 gm. is greater than that of 20 cc. of salvarsanized serum separated from blood drawn thirty minutes after a dose of 0.6 gm. of salvarsan. The average effect on the laboratory findings in the spinal fluid from one dose of mercurialized serum is greater than from one dose of salvarsanized serum. Unpleasant symptoms are more common following intraspinal mercurialized serum than following salvarsanized serum.

The greater irritation of the meningitis from mercurialized serum prevents as rapid repetition of dosage as is possible with salvarsanized serum.

Cases of general paresis, meningitis and cerebrospinal syphilis stand intraspinal treatment with mercurialized serum better than do cases of tabes dorsalis. It is particularly in cases of active syphilis of the meninges that the mercurialized serum is useful.

Mercurialized serum has an advantage over salvarsanized serum in ease of preparation and in its keeping qualities. For these reasons it can be used under clinical conditions in which the use of salvarsanized serum is impossible, or at least very much more difficult.

The clinical value of Ambard's coefficient of urea excretion.
Lewis, D. S. *Ibid.*, 1

In this very thorough fifty-two page discussion on this subject Lewis takes up the theory, technic, diagnostic and prognostic value of Ambard's coefficient.

Ambard's three laws were announced in 1910. The first law dealt with the relation of the rate of output of urea to the concentration of urea in the blood. The rate of output was

found to vary directly with the square of the concentration of urea in the blood, if the concentration of urea in the urine remained constant. In other words, if the quantity of urea in the blood were doubled, the amount excreted in a given time would be quadrupled.

According to the second law, the rate of excretion of urea varied inversely with the square root of the concentration of urea in the urine, if the blood urea remained constant. Under these conditions a quadrupling of the concentration would result in a halving of the rate of output.

The third law was a combination of the first and second. If the concentration of the urea in the blood and urine varied simultaneously, then the rate of output would vary directly as the square of the concentration of urea in the blood, and inversely as the square root of that in the urine.

The following formula, used in calculating the coefficient, is derived from the third law by the addition of correction factors for the patient's weight and for a standard urinary concentration of 25 gm. of urea per litre.

$$K = \frac{Ur}{\sqrt{D \times \frac{70}{P} \times \frac{\sqrt{c}}{\sqrt{25}}}}$$

K — coefficient of urea excretion

Ur — grams of urea per litre of blood

D — output of urea in grams per twenty-four hours

P — weight of the patient in kilograms

C — grams of urea per litre of urine

70 — standard weight

25 — standard concentration of urea in the urine

All weights and concentrations are compared to the standards of 70 and 25

The normal value of the constant is from 0.06 to 0.09. With a decreasing kidney efficiency there is a rise in the constant, and with an increasing function the coefficient falls.

The laws of function are not followed with mathematical exactness in young and active individuals, but under the routine conditions they are remarkably accurate. They are correct in principle.

The coefficient of urea excretion is subject to certain variations in normals, but any value below 0.06 or 0.09 should be regarded as abnormal unless the excessive variation can be readily explained.

The coefficient is absolutely independent of the blood urea concentration. Its level is governed by the condition of renal function.

The coefficient is depressed in fever, in hyperthyroidism, in hypertension with early changes in the renal arterioles and in early chronic diffuse nephritis. The depression is an evidence of increased renal activity due to irritation.

The coefficient is raised in myxœdema.

There is an increase in the coefficient in myocardial insufficiency. Opinions are divided as to whether this is the effect of an extrarenal factor (the circulation) or whether there is a definite anatomic lesion in the passively congested kidney.

The coefficient is above normal in nephritis with renal insufficiency. This increase is more evident in chronic diffuse nephritis than in the vascular type, due to the greater frequency of renal insufficiency in the former cases. The coefficient shows an increase long before there is any evidence of nitrogen retention in the blood. The coefficient gives an excellent means of following the changes in renal function and of measuring the rate of progress of the disease.

There is a marked uniformity in the results of the phenol-sulphonphthalein test and the coefficient in all stages of nephritis. In the later stages there is also a close agreement between the nonprotein nitrogen of the blood and the coefficient.

In a few severe cases the coefficient varies without there being any evident change in the clinical condition; the causes of these variations have been discussed.

The prognostic value of the coefficient is considerable. Values above 0.2 are seen only in the severe cases, while constants persistently above 0.3 are found only in persons with a maximal impairment of renal function. A coefficient above 0.2 has a greater import in vascular nephritis than in that of chronic diffuse type.

For an accurate prognosis repeated determinations of the coefficient are of the greatest importance.

S. B. H.

BACTERIOLOGY

The epidemiology of bacillary dysentery. Smillie, W. G. Am. Jour. Dis. Children. 1917, xiii, 337

Bacillary dysentery is not a spectacular disease, but each summer takes heavy toll of the infants in large cities. The case incidence is probably higher than the greatly feared poliomyelitis, and the death rate is equally high.

Bacillary dysentery is a readily communicable disease which may be spread in a community by means of contact with an

acute case or a carrier, by means of food, as milk, condensed milk and ice-cream, by water, and by flies.

The sporadic summer bacillary dysentery of infants may be transmitted to older children or to adults. Though the disease is severe in the infant, it is usually milder in older children or adults. As a general rule, the older the child, the milder the disease.

The dysentery bacilli from the stool of an adult with a mild case of dysentery may produce a rapidly fatal dysentery in infants. Thus the menace of the mild adult case to the community is considerable.

Bacillary dysentery is rarely found in a nursing baby.

Hospital contact cases are not uncommon. The disease is very readily transmissible by direct contact, and no hospital has a right to admit patients with dysentery unless it can make provision for their isolation.

Bacteriologic Studies in Subacute Streptococcus Endocarditis.

Kinsella, R. A. Arch. Int. Med., 1917, xix, 367

A thorough study of twelve cases by means of blood cultures, agglutination and complement fixation reactions, using the patient's serum; the cultural characteristics of the streptococci which were isolated, and their classification on an immunologic basis has led Kinsella to the following conclusions:

Subacute streptococcus endocarditis is a disease of definite bacteriology, each case yielding a constant individual type of organism.

The streptococci belong to the saprophytic types according to Andrews' and Horder's classification and are of low virulence. They are non-hæmolytic and may or may not be green producers. Biochemic and immunologic tests fail to show any constant identity between the individual streptococci concerned in producing the disease.

The patients' blood serums contain agglutinating and complement fixing antibodies. The reduction in the bacteriæmia following transfusion with blood and impure (prepared from water not *freshly* distilled) saline depends on febrile reactions on the part of the patient. If such reactions do not occur, as when saline-free transfusions are used, no reduction in bacteriæmia results. No noticeable benefit accrues in either case.

Bacteriologic Studies in Acute Rheumatic Fever. Swift, H.

F., and Kinsella, R. A. *Ibid.* 381 •

Fifty-eight cases have been studied. Cultures were made from the blood and from the aspirated joint fluids.

Cultures of the exudate aspirated from the joints in acute

rheumatic arthritis have been uniformly sterile. Nonhæmolytic streptococci have been recovered in blood culture from less than ten per cent. of patients suffering from acute rheumatic fever. Similar streptococci have been recovered from the active endocardial lesions in only half of the fatal cases of acute rheumatic fever. From the above results it seems evident that no type of streptococcus has been constantly associated with acute rheumatic fever. We do not feel that the ætiologic relationship between the streptococcus and acute rheumatic fever has been definitely proved, but if the streptococcus is the ætiologic factor in acute rheumatic fever, it is through various members of the viridans group, and hence no one member can be called the *Streptococcus rheumaticus*.

S. B. H.

SOCIETIES

The regular quarterly meeting of the Homœopathic Medical Society of Western Massachusetts was held in Wesson Memorial Hospital, Springfield, on September 19, and was the largest and most successful meeting the Society has ever held. The hospital furnished, at the instance of Dr. J. H. Carmichael, a fine luncheon. The papers were a little off the beaten track, and those who attended the session appeared to enjoy them very much.

The program was as follows:

Contact between Body and Mind as Effecting Adolescence. By George E. Dawson, Ph.D., Director of Physiological Laboratory of Springfield School Board.

Therapeutic and Pedagogic Gymnastics. By Stacy B. Betzler, Professor of Medical Gymnastics, Y. M. C. A. College.

Southern Homœopathic Medical Association Annual Meeting Postponed to November 14, 15, 16

The annual meeting of the Southern Homœopathic Medical Association, called for October 24, 25, 26, is postponed to November 14, 15, 16. A War Congress of the American College of Surgeons was recently called to meet at Chicago during the week of October 22d. Many of our surgeons desire to attend this meeting.

Information from every section of the country indicates that an exceptionally large number of members and others are planning to attend the annual meeting of the Southern Association. After careful consideration of the matter, and with the courteous consent of our prospective hosts at Washington to arrange for the change in date, the Executive Committee decided to postpone the meeting to November 14, 15, 16. This is done to avoid any complication in the meeting time of these two important sessions.

The Executive Committee is making a thorough canvass to bring this meeting to the attention of all, and particularly of members from the South, as matters of unusual importance to the Society and the region which it represents will be considered.

In view of the crowded condition of Washington hotels, the Executive Committee enjoins all who expect to attend, to secure reservations now at Headquarters, the Shoreham Hotel, or elsewhere.

FAMILY ALLOWANCE, INDEMNITY, AND INSURANCE FOR OUR SOLDIERS AND SAILORS — THE DUTY OF A JUST GOVERNMENT

By W. G. McADOO, Secretary of the Treasury

The number of claims for exemption from military duty under the draft law has caused a painful impression in many quarters, but after all, does not the fact that no provision has yet been made by the Government for the support of the wives and children, mothers or fathers, of the men who have been drafted explain many of these claims for exemption?

Under the draft law the Government has the power to require every able-bodied man between 21 and 31 years of age to perform military duty. Thousands of the drafted men are wage-earners who married years ago and are the sole support of dependent families. So long as the Government has made no provision for the care of these dependents, it is natural that such drafted men should seek to protect their loved ones by staying at home. I am sure that if the Congress should promptly enact the pending war insurance bill, which makes definite allowances for the support of the dependent wives and children, fathers or mothers, of our soldiers and sailors, claims for exemption on that score will cease. This is an imperative duty of the Government. We cannot deprive helpless women and children of the support of the wage-earner by forcing him into the military service of the country unless the Government substitutes itself as their support.

Imagine the emotions of the man who is called into the military service of his country with full knowledge that his loved ones are left without means of support and may be reduced to want unless the charity of the community in which they live comes to their relief. It would be nothing less than a crime for a rich and just Government to treat its fighting men so heartlessly and to subject their dependent wives and children, who are unable to fight, to greater suffering than if they could fight.

The morale of an army is as essential to its effective fighting power as guns, ammunition and other instrumentalities of war. Of equal importance is the morale of the civil population which must support the armies in the field. We cannot have this essential morale unless the Nation comforts the men in the ranks with the knowledge that everything possible will be done for them and their families, and renders to the civil population at home the assistance which will make it most effective in upholding the Government and the fighting forces.

The purpose of the war insurance bill now pending in the Congress is to secure the future of America's soldiers and sailors by insuring their lives and providing adequate compensations and indemnities for loss of life and total or partial permanent disability; also to protect their families against poverty and want by providing them with sufficient means of support during the absence of the men at the front.

The nation, having been forced to resort to the draft in order to create quickly an army to save the country, is under a higher obligation to do these things for its fighting forces than if a volunteer army only was created. This great and rich Republic cannot afford to do less, and it must do what is proposed in a spirit of gratitude and not as charity. Every soldier and sailor who serves his country in this war will earn everything the proposed war insurance bill provides; to be a beneficiary of the proposed law will be a badge of honor.

When we draft the wage-earner, we call not only him but the entire family to the flag; the sacrifice entailed is not divisible. The wife and children, the mother, the father, are all involved in the sacrifice—they directly share the burden of defense. They suffer just as much as the soldier, but in a different way, and the Nation must generously discharge as a proud privilege the duty of maintaining them until the soldiers and sailors return from the war and resume the responsibility.

We have drawn the sword to vindicate America's violated rights, to restore peace and justice, and to secure the progress of civilization. We cannot permit our soldiers, while they hold the front, to be stabbed in the

back by uncertainty as to what is being done for their loved ones at home. Our tomorrows are in their hands — theirs in ours. The national conscience will not permit America's soldiers and their dependents to go unprovided with everything that a just, generous and noble people can do to compensate them for the sufferings and sacrifices they make to serve their country.

Aside from the care and protection of their dependents while the soldier is alive, the proposed war insurance act provides for definite compensation for his dependents in case of death, for definite and adequate indemnities in case of total or partial disability, and for reëducation of the maimed and disabled man, so that he may take up a new occupation and make himself a useful member of society. We must restore their efficiency and adjust their still available faculties and functions to suitable trades and vocations, which the injuries of the battlefield have not wholly destroyed. The heavy depletions in man-power resulting from this conflict, which is without precedent in history or imagination, will place new and greater values upon all forms and degrees of human energy, and demand as a first duty of intelligent government that every remaining useful sense and limb of the blind and crippled shall be reclaimed under the benevolent processes of education and reapplied to economic uses for the benefit of society. The millions we shall be called upon to spend to support the dependents of the soldiers while they are in the fighting-line, for indemnities and for reëducation of the crippled, are in the last analysis investments of the best sort; they are sums of capital advanced by the Nation to promote utility, self-respect and economic development. More than all, they are essentially humanitarian and in the highest sense a discharge by the Government of an essential duty to society.

Military service is now obligatory; those who imperil themselves have no election. The insurance companies do not and cannot permit this fact to affect their calculations. They must protect themselves by charging premiums so high that they are secured against loss no matter how severe the rate of mortality may be. Consequently, the very men who are called into the service because their physical condition is of the best and who as civilians would for that reason be able to secure the most favorable insurance rate in peace time, are denied as soldiers the necessary life insurance to enable them to protect their families and dependents. The tremendous rates charged by private insurance companies to protect them against the extra-hazardous risks of war put insurance entirely beyond the reach of the conscripted soldier.

Military necessity has, therefore, subjected the most fit subjects for insurance to an insurmountable discrimination unless the Government itself supplies insurance at cost and upon a peace basis. It would, in fact, be dastardly and undemocratic if the Government should penalize the soldier who is forced to render the highest duty of the citizen by its failure to provide war insurance upon peace terms and at net cost, first, because the pay of the enlisted men in the Army and Navy is less than the wages and salaries generally earned in private life, which reduces their investing capacity; and, second, because Government insurance is an essential war and emergency measure, inaugurated for the specific benefit of our military forces, and cannot and should not be conducted for profit.

Such overhead charges as agents' commissions, advertising, promotion, local rentals, *etc.*, are eliminated. The Government must assume the cost of administering this benevolent agency, just as it bears the cost of administering all other Government agencies established for the benefit of the people.

This legislation will be a great step forward in the recognition of the Republic's duty to its heroes. I consider it the most significant and progressive measure presented to Congress since the declaration of war. It immediately affects the well-being of a greater number of persons than any act with which I am familiar. It deserves the earnest and vigorous support of the country. It provides the broadest and the most liberal protection ever extended by any government to its fighting forces and their dependent families. The United States, the most progressive and prosperous nation on earth, setting an example in the ideals for which enlightened humanity is fighting, should set the highest example of all the nations in the treatment of those who do and die for their country and for world freedom.

We are proposing to expend during the next year more than ten billion dollars to create and maintain the necessary fighting forces to reestablish justice in the world. But justice must begin at home; justice must be done to the men who die and suffer for us on the battlefields and for their wives and children and dependents who sacrifice for us at home. To do justice to them requires only a tithe of the money we are expending for the general objects of the war. Let it not be said that noble America was ignoble in the treatment of her soldiers and sailors and callous to the fate of their dependents in this greatest war of all time.

The pending war insurance bill gives compensation, not pensions; it fixes amounts definitely in advance instead of holding out the mere chance of gratuities after the conclusion of peace. It saves the dependents from want and gives them the necessaries of life which their men are at the front. It deals with its heroes liberally for the sufferings that result from their disablement on the field of battle, and, if they die, it makes just provision for the loved ones who survive them. It fosters the helpless and dependent, the maimed and disabled, and recognizes the immensity of the Nation's debt to the valor and patriotism of her heroic sons.

EXCERPTS FROM THE NATIONAL SERVICE HANDBOOK

150. *Men with training in laboratory work* which is useful for medical practice, but who are not doctors of medicine, cannot, under the present law, be enrolled by the medical forces of the United States Army. Legislation may be altered in this regard, but in any case, a limited number of men will be needed for special duty. Application may be made to Surg. Gen. Rupert Blue, United States Public Health Service, Washington, D. C.; Mr. J. C. Ryan, director of military relief, American Red Cross, Washington, D. C.; General Medical Board, Munsey Building, Washington, D. C.; or the Surgeon General of the Army or Navy.

151. *The women physicians* of this country are anxious to enter the Army medical service, and with this end in view the Medical Women's National Association, 32 North State St., Chicago, Ill., has issued a call for 500 volunteers. No official ruling has yet been given in this matter, but those who are interested should address Dr. Rosalie S. Morton, chairman of the war service committee of the Medical Women's National Association, 701 Madison Ave., New York City.

The women of Great Britain have maintained successful hospitals at the front, and women physicians in France, Russia, Serbia, and Germany have been active in the medical war service.

Whatever decision may be reached regarding the service of women physicians with the Army, they can be of very great assistance in maternity, infant, and child welfare work at home and abroad, and will doubtless be called upon to assist medical examining boards acting for those agencies which demand the services of women.

152. *Base Hospitals.* It has been found useful to organize under the Red Cross at hospitals in various parts of the country hospital units, in which various medical specialists who have worked together in the past are included. These units during the period of their organization are under the Red Cross, but on being called into service automatically become an integral part of the Army, and their connection with the Red Cross then ceases.

These base hospital units have in addition to their medical and nursing personnel 153 enlisted personnel, for which they need ambulance drivers, cooks, wardmen, quartermasters, barbers, and some engineers, all of whom are enrolled for enlistment in the Enlisted Reserve Corps. Some of these units have already gone over seas, and it is expected that other units will follow them before the main body of our own troops is sent over.

153. *Ambulance service.* America has already aided the French in the service of the American ambulance, which has been operating hospitals and field ambulances since the beginning of the war. At the present time a large ambulance corps is being organized as a part of the National Army, and this corps will go to France for service with the French as soon as its

personnel is enlisted and trained. They will be under the command of General Pershing when on French soil. The organization of this ambulance service is in charge of Col. Jefferson H. Kean. The equipment of this ambulance corps will consist of 2 000 ambulances, 100 two-ton trucks, 100 three-fourths-ton trucks, 100 light touring cars, and 100 motorcycles. The personnel of each section will consist of 1 sergeant (first class), 1 corporal, 2 orderlies, 2 clerks, 1 chief mechanic, 2 mechanics, 1 cook, 1 assistant, and 24 motor drivers. Five sections will be placed under a captain, and 20 sections will be commanded by a major. About half of the number will be recruited from college men. Some of the men of this corps have already been placed in training at Allentown, Pa.

154. *Reeducation and rehabilitation.* A phase of medical work that has received great attention from the allies is that having to do with the reeducation and rehabilitation of men who may be maimed and crippled in the war. This problem we too must face, for, whether or not we shall return men from the front to America except when permanently disabled, we know now that we shall need in this country many hospitals to care for those chronically incapacitated and those whose injury robs them of their former usefulness and who must be reeducated as well as rehabilitated. Medical care and teaching must combine to rebuild some of our returned forces into a useful citizenship. Dr. Amar, one of the most noted French authorities, has said, "The time has come for organizing the work of the wounded in such a manner that each man may take his true place in the social machine and contribute according to his ability." At the end of the war we do not want those who have fought and have been permanently injured to feel that they are merely onlookers in our national life. This work of restoration will be considerable. The physicians studying the question have found that of the whole number of crippled men at least 80 per cent., and probably more, can be reeducated or trained to new occupations if their physical defects are given immediate treatment after they have left the Army hospital and their training is given the proper attention. From 70 to 80 per cent. of the wounded returned to Canada have needed reconstruction work. The allied nations have been giving much attention during the latter period of the war to find a proper occupation for the blinded and those who have lost an arm or a leg. Furthermore, much study has been given to the rehabilitation of men whose nerves have been shattered and who have become disheartened from the result of wounds from which they have recovered.

Some of the specific needs in connection with this work will be the early training of medical officers in reeducation work, the arrangement for the treatment of the wounded as early as possible by specialists, the establishment of reconstruction hospitals in this country, as far as possible adapting the existing institutions to the work, and the arrangement for occupational analysis of the wounded. It is interesting in this connection to note that three reconstruction hospitals in this country have already been authorized by the Government. Those who have country places suitable for reconstruction hospitals or convalescent camps are invited to communicate with The Surgeon General of the Army or with the director of military relief, American Red Cross, Washington, D. C., or with the General Medical Board, Council of National Defense, Munsey Building, Washington, D. C.

155. *Home medical service.* In our anxiety to furnish adequate medical attention to our fighting forces we must not forget that we shall not be free from the cares of our home population. Physicians who are acting on the public health service should seriously consider whether entering Federal service will endanger the welfare of their own communities. We shall need to strengthen our lines of health defense at home or we shall be in no position to meet emergencies. This should be noted especially by those physicians on health boards at or near the great Army and Navy training sites. These localities must maintain the highest sanitary standards and the problem will be critically important and difficult. So important is this consideration that there are those who advocate obtaining the medical men needed by our troops through the processes of selective conscription.

It is important that maternal, infant, and child welfare should not be neglected in the present emergency, and physicians whose practice has been

largely along these lines should probably continue in civilian service either at home or abroad.

156. *Nursing needs.* The nursing service in our own country will be severely taxed by reason of the calls made upon it for nurses to go to the front. Those who are fitted by physique, temperament, and education for nursing work should very seriously consider the advisability of going into training schools for nurses connected with our great hospitals and other institutions. We shall need nurses of thorough training now more than ever before, and mere first-aid or nurses-aid training will not fit women for difficult and responsible nursing positions.

157. *Medical students.* From the time war was declared, those in positions of authority have urged men at present enrolled in medical schools to continue their work of preparation. This must be emphasized again. The teaching personnel of our medical and student body must be kept at their present work, for upon them depends the welfare of our army and the community in the years to come. It is a serious question whether medical schools should not continue in session throughout the entire year without the usual interruptions of vacations. The same advice is given to schools for dental surgery and pharmacy. Students who anticipate entering the medical profession and in their college work have made preparation for a medical education should be encouraged to continue in their original intention.

BULLETIN OF THE NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS

Compulsory Hospital Law for New York Passed as War Measure

The Committee on the Prevention of Tuberculosis of the New York State Charities Aid Association was recently successful in getting the County Tuberculosis Hospital Law amended by the 1917 legislature, making the erection of hospitals mandatory in counties having more than 35 000 population.

The amendment was put through as a war measure, so that the state will be prepared to treat cases discovered in examining recruits or found in the army itself.

The new law affects twenty counties, eight of which had previously taken various steps leading to the erection of a hospital, but had not yet let contracts. Of these eight, two have already signed contracts for an institution. Of the twelve which had taken no action previously, eleven have now taken certain definite steps, such as the appointment of committees to secure sites, the advertising for bids, *etc.*

The section of the law relating to the compulsory establishment of hospitals is as follows:

"*Establishment of county hospital for tuberculosis.* The Board of Supervisors of every county in the state containing a population of thirty-five thousand or more, as determined by the latest state census, shall establish, as hereinafter provided, a county hospital for the care and treatment of persons suffering from the disease known as tuberculosis, unless there already exists in such county a hospital or institution provided by the county or other authority and caring for persons suffering from tuberculosis, which is approved by the state commissioner of health. Such county hospital shall be available for patients on or before the first day of July, nineteen hundred and eighteen. If the board of supervisors of any such county shall have failed to secure a site for a county tuberculosis hospital, and to have awarded contracts for the erection of suitable buildings thereon by the first day of January, nineteen hundred and eighteen, it shall be the duty of the state commissioner of health forthwith to proceed to locate, construct and place in operation a tuberculosis hospital in and for such county, the capacity of which shall not exceed the average number of deaths per annum from tuberculosis in such county during the past five years. For such purposes the state commissioner of health shall possess, and it shall be his duty, to exercise all the powers which would have been possessed by the board of supervisors of such county, had such hospital been

established and placed in operation by the board of supervisors thereof. All expenditures incurred by the state commissioner of health for and in connection with the location, construction and operation of such hospital shall be a charge upon the county, and provision shall be made for the payment therefore by the board of supervisors of such county in the same manner as in the case of other charges against the county. At any time after such hospital has been in operation, the board of supervisors in such county may appoint a board of managers for such hospital pursuant to the provisions of this act, and thirty days after the appointment of such board of managers by such board of supervisors, such hospital shall be transferred to such board of managers, and such board of managers shall thereafter possess and exercise all the powers of the board of managers of a county hospital for tuberculosis under this act, and the state commissioner of health shall be relieved from any responsibility therefore except such responsibility as he exercises in regard to all county tuberculosis hospitals under the provisions of this act."

This legislation was drawn up as a result of the report of Dr. Hermann M. Biggs on conditions in France, and also of a report on a visit to Canada by George J. Nelbach, executive secretary of the committee. Mr. Nelbach reported regarding Canada's methods and resources for handling cases of tuberculosis found in the army in the May issue of the *News*, a monthly bulletin issued by his association. He reported two conditions, as follows:

"From the public health point of view, that is, from the standpoint of diminishing infection, two conditions relating to the system of hospitalization of the invalided tuberculous soldiers seriously impair its effectiveness. The first is that the sick soldiers are not compelled to go to and remain in the institutions for care and treatment. They are still enlisted men and subject to military discipline, but public opinion would not now, at least, countenance the compulsory hospitalization of these cases. The country knows that the sick soldiers returned from overseas are longing for the sight of their homes, the prospect of which has sustained them in irksome hours, and are eager to meet their kinsfolk and friends. The public and the press venerate these men who have suffered so grievously for their country. Enforced hospital care of these tuberculous invalids, in the present state of public opinion, would be considered harsh and inhuman, and undoubtedly would not be tolerated.

"Secondly, the institutions are relatively widely scattered and the military districts served by them cover enormous areas, excepting in the case of the three maritime provinces, Nova Scotia, New Brunswick and Prince Edward Island. The policy is to persuade the men to go to the sanatoria in the military districts from which they enlisted. But the districts are so large, with the exceptions noted, that the relatives and friends cannot readily visit the patients. The sick men become homesick; and weakened by disease, their initiative slackened by enforced idleness, their fibre softened by experiences that have been enervating, they waive their right for further care and treatment and return home, taking their disease with them and exposing their households to infection."

New York State, Mr. Nelbach concluded, could draw three important lessons from the experience of Canada. They were:

"(1) Adequate medical examination for tuberculosis of all men considered for the army.

"(2) Sanatorium care for the early cases rejected by the medical examiners should be provided by the state; and hospital care for the moderate and advanced cases thus discovered should be provided by the local communities, cities or counties.

"(3) Soldiers invalided because of tuberculosis should be kept under military discipline and required to go into tuberculosis hospitals for care and treatment. The institutions should be sufficiently numerous throughout the state so that the men may be placed in the hospitals that are close to the localities in which their kinsfolk reside, enabling the latter to see the men frequently, thus promoting contentment and a willingness to cooperate with the hospital authorities in pursuing the course of treatment."

The State Charities Aid Association has issued a pamphlet entitled "A

Compilation of the Laws of the State of New York Relative to County Tuberculosis Hospitals as of June 1, 1917." A copy may be secured from the Association upon request.

RAPID GROWTH OF THE BIRTH REGISTRATION AREA

Congratulations to Maryland, Virginia, and Kentucky, the latest states to be admitted to the Registration Area for Births by the Director of the Census, Sam. L. Rogers.

The Registration Area for Births was established in 1915, and was then composed of ten states and the District of Columbia, representing 10 per cent. of the territorial extent of the United States but containing 31 per cent. of the country's population. For this area the Bureau of the Census has recently issued its first annual report, entitled "Birth Statistics." As the area grows the annual reports will deal with the births in a constantly increasing portion of the country and will, therefore, become of constantly increasing interest and value.

The outlook for a very rapid growth of this Registration Area for Births is so good that a word of cheer to the states outside should be given. The need of complete birth registration is recognized now as never before. The age of the soldier must be known, and so a new argument for birth registration comes to the United States. Since war was declared tests of the completeness of birth registration have been made by special agents of the Census Bureau in Virginia and Kentucky, and both these states secured a rating of over 90 per cent., which represents the degree of completeness required for admission to the area.

Similar tests are now being made in Indiana and New Jersey, and before the year is over will be conducted in North Carolina, Ohio, Utah, and Wisconsin. Several other states are nearly ready to seek admission, and it is by no means a wild prediction that the Birth Registration Area within the next two years will be more than trebled in size and will contain over two-thirds of the population of the United States.

One physician recently became so thoroughly aroused to the desirability of recording births that he reported to the local registrar 450 births which had occurred in his practice since 1900.

Parents and physicians everywhere are awakening to the importance of this matter and the fashion now is to register baby's birth.

CHILDREN IN WAR TIME

Fourth Article: Babies and War

War work for babies which resulted in lowering the infant death rate in Great Britain, France, Belgium, and Germany is described by Dr. Grace L. Meigs of the Children's Bureau of the United States Department of Labor in a paper on Infant Welfare Work in War Time which the bureau has just made available for general distribution.

The special features of the work have varied in the different countries. In England there has been a striking increase in the number of health visitors employed to help and to instruct mothers in the care of their babies and young children. An act providing for Government aid to local agencies had, as it happened, been passed in July, 1914.

"The Local Government Board (the central supervising and administrative body) has taken the stand that in war time, in spite of the general need for economy, no economy should be exercised in this direction. There is evidence that in a good many communities, on account of lack of money and private support, the authorities or voluntary agencies have been slow to increase their work or to undertake new work. These difficulties the Local Government Board has largely overcome. It has gone on with the greatest determination towards its acknowledged goal —

to have systematic supervision through the work of health visitors for all babies born who need care."

The available information for Germany concerns only the first 18 months of the war. Dr. Meigs refers to the emphasis placed on enabling mothers to care for their own children. A special committee of the Red Cross, for example, was organized in Berlin for the care of mothers and infants. The committee had a fund for needy mothers which it used for those mothers who brought their babies regularly to an infant-welfare station and who took care of them in their own homes.

The outstanding feature of the work in Paris seems to be the increased provision for maternity care; and in Belgium, the establishment of canteens for the feeding of mothers and of young children.

Dr. Meigs speaks of the important part played by the military separation allowances which are granted by foreign Governments to the wives of enlisted men, either, as in Great Britain and Canada, to the wives of all soldiers, or, as in France and Germany, to the wives who are in need because the family's wage-earner has been called to the colors.

Furthermore, in each of these countries except Belgium a maternity benefit from Government funds, provided before the war to certain mothers, has now been extended to include either the wives of all enlisted men or all women who are receiving the military separation allowance.

Dr. Meigs bases on the experience of these countries the following practical war-time suggestions for the United States:

The chief preventive measure for protecting babies is to insure their intelligent care and nursing by healthy mothers in their own homes.

Nothing should be considered more important in war time than the strengthening and extending of preventive work already established for infant and maternal welfare. The disorganization of such work through the loss of physicians and nurses especially trained for it should be avoided if possible.

Every effort should be made to enlist a large number of candidates for hospital training courses.

SPIROCHÆTES IN HEALED SYPHILIS

"Between the pathologist and the clinician there is always a certain antagonism of attitude with reference to the curability of any given disease. The clinician is, and naturally must be, more or less optimistic as to the results of therapy. . . . The pathologist . . . becomes pessimistic as to ultimate cure because of his constantly recurring experience of finding evidences of active disease in cases clinically cured."

With this statement Warthin¹ introduces an account of his study of a series of clinically cured cases of syphilis in which he sought the *Treponema pallidum*. He used the original Levaditi method, applying it in 41 autopsy cases which were examined on the pathologic service of the University of Michigan. These cases were divided into three groups: (1) cases in which there was a known history of syphilis, with treatment regarded as adequate and resulting in a cure; (2) cases in which the syphilitic infection was recognized as still active, treatment being continued; (3) cases in which a syphilitic history could not be obtained or was specifically denied by the patient, the clinical diagnosis not including syphilis, and no antisymphilitic treatment given. In group 1, there were 11 cases; in group 2, 5 cases; and in group 3, 25 cases. In all of these, lesions of active syphilis were found and in them the spirochætes were demonstrated. Active luetic lesions were found in the heart in 36 cases, in the aorta in 32, in the testes in 31, in the liver in 4, in the adrenals in 6, in the spleen in 1, in the pancreas in 6, and in the central nervous system in 5. The order of organic infection according to frequency is aorta, heart, testes, adrenal, pancreas, nervous system, liver and spleen. It happens logically, then, that the triad of interstitial myocarditis, aortitis, and orchitis fibrosa may be taken as a pathologic complex indicating the occurrence of a syphilitic infection in the male.

¹ Warthin: Amer. Jour. Med. Sc., 1916, 508.

Warthin's material comes almost without exception from the University Hospital, an institution in which the patients represent the average middle-class population of the State of Michigan, and the forty-one cases he has studied represent about one-third of the adult cases which were subject to post-mortem examination in 1912-1914.

In group 1, there was one positive Wassermann, 5 negative, and in 5 cases a Wassermann was not done. In group 2, there were 4 positive Wassermans, and in 1 no Wassermann was done. In group 3, a Wassermann was not made in 11 cases, was negative in 10, and positive in 4.

It is true, as Warthin says, that the sociologic importance of this is very great. It places latent syphilis upon a plane of importance nearly, if not equally, that of tuberculosis, as a factor opposed to the health and progress of the race. Latent syphilis, Warthin believes, will be found to be the chief factor in the production of myocardial insufficiency and the cardiovascular renal complex, apparently so rapidly increasing—so rapidly, one may add, that an Association has recently been formed to study it and prevent the increase.

From the therapeutic side the lesson is evident, and from the standpoint of serologic reactions, it may be suspected that a negative reaction means nothing.

— P. G. W., *Jour. Lab. and Clin. Med.*

AN UNUSUAL CASE: FLOATING TUMOR

I have practiced medicine since 1857 and this is the first case of a floating tumor I have come across. My patient was about fifty years of age, mother of two children, had been in general good health until a year or so ago. She then complained of a disturbance in the region of the stomach, distress, accumulation of gas and usual symptoms of acute indigestion. I was able to give her only temporary relief. She became discouraged, her husband more so and I not much less so. The outcome of it was that I advised consultation of some other doctor. The doctor consulted diagnosed a tumor in the region of the stomach which I had noticed but attributed to pent-up gas which she often complained of and which had been relieved by carminatives.

On my successor's advice she went to a hospital, where a floating tumor was removed with fibrous cord which connected it with the ovary. I think this tumor must have contained gas or it would not have arisen from its bed to the region of the stomach, giving rise to dyspeptic symptoms. This was undoubtedly an ovarian cyst, but do cysts often exhibit such migratory action? I couldn't imagine a tumor in this region and hence erred in my diagnosis. I was ashamed of my want of discernment, but don't we all make mistakes that we feel ashamed of?

J. H. SHERMAN, M.D.

UNITED STATES FOOD ADMINISTRATION

The United States Food Administration announces the creation of an Advisory Committee on Public Health. This Committee has been created because the Food Administration, realizing that the nutrition of a people and the condition of its food supply bear intimate relations to the general problems of public health, sought the advice of experts in these lines. Dr. Welch has been named as Chairman of the Committee, the personnel of which is as follows: Leonard P. Ayer, Herman Biggs, David T. Edsall, Cary T. Grayson, A. Walter Hewlett, T. T. Janeway, F. G. Novy, Richard M. Pearce, William H. Welch, and H. Gideon Wells.

Dr. Ayer is permanently identified with the school hygiene movement. He has been director of the Department of Child Hygiene, Education, and Statistics of the Russell Sage Foundation during the past ten years; and is the author of books and articles on the educational and statistical phases of health work.

Dr. Biggs is a member of the Rockefeller Institute and an authority on

public health and sanitation. As a representative of the Rockefeller Foundation, Dr. Biggs has recently completed a survey of the health condition of France, with particular reference to tuberculosis.

Dr. Edsall is Professor of Internal Medicine in Harvard University; he has in the past devoted much effort to the investigation of nutritional diseases and within recent years has become identified with research in the general domain of industrial diseases, which bear to nutritional diseases, both in the individual and society, a close relationship.

With the creation of a large army and navy, the public service has a natural relation to the work of food control, and to represent the interests of the armed services of our country, Admiral Cary T. Grayson has been placed upon the Advisory Committee.

Dr. Hewlett is Professor of Internal Medicine in Stanford University and is a recognized authority on the subject of diseases of the circulation and elimination.

Dr. Janeway is Professor of Internal Medicine in Johns Hopkins University; he is the author of books and articles on diseases of circulation and elimination.

Dr. Novy is Professor of Bacteriology in the University of Michigan and through years of active research over the broadest domains of his subject has established himself as an authority upon the subject of general sanitation.

Dr. Pearce is Director of the Department of Research Medicine in the University of Pennsylvania. Dr. Pearce has paid particular attention to the subject of national health and sanitation and has during the past two years, as a representative of the Rockefeller Foundation, completed surveys of the conditions of health and sanitation of Brazil and the Argentine Republic, at the requests of the governments of those countries.

Dr. Welch, Professor of Pathology in Johns Hopkins University, is scientifically and personally regarded universally as the dean of the American medical profession. There are a few departments of pathology to which Dr. Welch has not contributed in research; and there are no departments connected with public health upon which he had not impressed the influence of his wisdom and experience.

Dr. Wells is Director of the Sprague Memorial Institute of the University of Chicago, a research institution devoted to the investigation of diseases of constitutional type. Dr. Wells is the author of a very successful work on chemical pathology, the first of its kind in any language, and has contributed important research to many subdivisions of medical science.

It is believed that through the advice and coöperation of this committee, representing specialized workers in the various correlated departments of medicine, the administration of food control will be enabled always to work for the best interests of the health of the different classes in different sections of our country.

In addition, Dr. Alonzo E. Taylor and Dr. Ray Lyman Wilbur, members of the Food Administration, will be ex-officio members of the Committee.

The United States Food Administration also announces the creation of an Advisory Committee on Alimentation, the purpose of which is to gain the active coöperation of experts in the determination of policies of food control from the standpoint of the science of nutrition. The Committee consists of C. L. Alsberg, Russell H. Chittenden, C. F. Langworthy, Graham Lusk, LaFayette B. Mendel, and E. V. McCollum.

Dr. Alsberg is Chief of the Bureau of Chemistry, Department of Agriculture, and as such is in charge of the administration of the Pure Food Law. Throughout his term of office in this position, six years, the administration of this exceedingly important department has been carried out with distinguished ability, with fidelity to the highest interests of the consumer, and in accordance with a policy of constructive development of the industries devoted to and related to the production of foodstuffs.

Professor Chittenden is director of the Sheffield Scientific School of Yale University and is regarded as the dean of American physiological chemists. Throughout his nearly 40 years of activity in research, Dr. Chittenden has devoted his largest attention to the problems of human nutrition, in particular to the metabolism of protein. His views concerning the adequacy of

smaller amounts of protein in the diet than were customary in Anglo-Saxon countries have gradually received recognition and his recent books on physiological economy in nutrition represent an advance expression of this point of view.

Dr. Langworthy has been for many years the head of the office of Home Economics of the Department of Agriculture. Dr. Langworthy was one of the earlier students of nutrition in our country, having been associated with Atwater in the early days of the history of the calorimeter in the United States, and many of the basal analyses of foodstuffs rest upon his investigations. Dr. Langworthy has carried through and supervised a large number of studies of regional diets through which our knowledge of the food habits of different sections have been greatly enlarged. In recent years Dr. Langworthy has devoted his attention to the development of the utilization of foodstuffs within the home and his name is thus familiar to the majority of American housewives.

Dr. Lusk is Professor of Physiology in Cornell University Medical College, New York City. A product of the school of Voit and Rudner, Dr. Lusk has devoted the past 20 years to the investigation of the fundamental problems of human nutrition, particularly in the relations of food need and work. The facility of Dr. Lusk in the exposition of the intricacies of his subject is well illustrated by the fact that he is at once the author of a successful book written for scientists and an unusually happy presentation of the subject in primer form for the layman.

Dr. McCollum, at present a Professor in the Department of Agriculture in the University of Wisconsin, has accepted a call to Johns Hopkins University to be the first Professor of Biochemistry in a newly established department devoted to that subject. Dr. McCollum has executed within the past 10 years fundamental researches dealing with the relationship, in animals and men, of proteins of different sources and also of the important, though but recently discovered, efficiency factors in nutrition, whose absence results in deficiency diseases that are now the subject of great attention and active research in medicine.

Dr. Mendel is Professor of Physiological Chemistry in Yale University. In association with Osborne of the same university, Dr. Mendel has for years been engaged in a comprehensive research on protein metabolism in its relations to growth and health, carried out under the auspices of the Carnegie Institution of Washington. Dr. Mendel has for a long time officiated in an advisory capacity in the Council of Foods of the American Medical Association and possesses wide knowledge in the practical affairs of nutrition.

In addition, Dr. Alonzo E. Taylor, Dr. Ray Lyman Wilbur and Dr. Vernon Kellogg, members of the Food Administration, are ex-officio members of the Committee on Alimentation.

PHYSICIAN'S LEASES

The Chicago Rotary Club has learned that a great number of physicians, who have enlisted for service during the present war, are embarrassed by unexpired leases. In certain cases, such corporations from whom they rent have refused to cancel leases. It seems to the Chicago Rotary Club that when physicians are so much needed in the United States Army, every effort should be made to relieve them of contracts rightfully binding in times of peace, but which might better be waived in times of national peril.

We all know that the physician giving up an established practice to enlist makes perhaps the biggest sacrifice of us all, because his business depends absolutely on personal contact. The day he leaves, his business ceases. But his lease goes on. Yet our country is calling for more physicians, and many patriotic doctors everywhere are trying to arrange their affairs to go.

It is possible to create a strong public opinion favoring the canceling of leases in such cases. If advisable, the matter can be carried for consideration to Congress. But first, the Physicians' Lease Committee wants figures and facts. We are sending this letter to 20 000 physicians scattered all over the United States. May we ask you personally to help us by promptly

filling out and mailing back to us the enclosed postal-card? Kindly do it today.

Your prompt coöperation will place in the hands of your committee the necessary data for an effective presentation of the facts before proper legislative bodies.

We want to help. We believe, in fairness to all, a great work can be done. We know that you will be glad to mail the card today. When we receive it, you will have our earnest thanks for your coöperation.

CHICAGO ROTARY CLUB,

R. R. DENNY, *Chairman.*

Care Denny's Food Sales Co., Chicago, Ill.

THE LIBERTY LOAN

By W. G. McADOO, Secretary of the Treasury

For the purpose of
 equipping with arms, clothing and food our gallant soldiers who have been called to the field;
 maintaining our Navy and our valiant tars upon the high seas;
 providing the necessary means to pay the wages of our soldiers and sailors and, if the bill now pending in the Congress passes, the monthly allowances for the support of their dependent families and to supply them with life insurance;
 constructing a great fleet of merchant vessels to maintain the line of communication with our brave troops in France, and to keep our commerce afloat upon the high seas in defiance of the German Kaiser and his submarines;
 creating a great fleet of aeroplanes, which will give complete supremacy in the air to the United States and the brave nations fighting with us against the German militarymenace; and for other necessary war purposes,

The Congress of the United States has authorized the Secretary of the Treasury to sell to the American people bonds of the United States bearing four per cent. interest, with valuable tax exemptions, and convertible under certain conditions into other issues of United States bonds that may be authorized by the Congress. The official circular of the Treasury Department gives full details.

There is now offered to the American people a new issue of \$3 000 000 000 of bonds to be known as the Second Liberty Loan. They will be issued in such denominations and upon such terms that every patriotic citizen will have an opportunity to assist the Government by lending his money upon the security of a United States Government bond.

It is essential to the success of the war and to the support of our gallant troops that these loans shall not only be subscribed, but over-subscribed. No one is asked to donate or give his money to the Government; but every one is asked to lend his money to the Government. The loans will be repaid in full with interest at the rate of four per cent. per annum. A Government bond is the safest investment in the world; it is as good as currency and yet better, because the Government bond bears interest and currency does not. No other investment compares with it for safety, ready convertibility into cash, and unquestioned availability as collateral security for loans in any bank in the United States.

People by thousands ask the Treasury constantly how they can help the Government in this war. Through the purchase of Liberty Bonds every one can help. No more patriotic duty can be performed by those who cannot actually fight upon the field of battle than to furnish the Government with the necessary money to enable it to give our brave soldiers and sailors all that they require to make them strong for the fight and capable of winning a swift victory over our enemies.

We fight, first of all, for America's vital rights, the right to the unmolested and unobstructed use of the high seas, so that the surplus products of our farms, our mines and our factories may be carried into the harbors of

every friendly nation in the world. Our welfare and prosperity as a people depend upon our right of peaceful intercourse with all the nations of the earth. To abandon these rights by withdrawing our ships and commerce from the seas upon the order of a military despot in Europe would destroy prosperity and bring disaster and humiliation upon the American people.

We fight to protect our citizens against assassination and murder upon the high seas while in the peaceful exercise of those rights demanded by international law and every instinct and dictate of humanity.

We fight to preserve our democratic institutions and our sovereignty as a nation against the menace of a powerful and ruthless military autocracy headed by the German Kaiser, whose ambition is to dominate the world.

We fight also for the noble ideal of universal democracy and liberty, the right of the smallest and weakest nations equally with the most powerful to live and to govern themselves according to the will of their own people.

We fight for peace, for that just and lasting peace which agonized and tortured humanity craves and which not the sword nor the bayonet of a military despot but the supremacy of vindicated right alone can restore to a distracted world.

To secure these ends I appeal to every man and woman who resides upon the soil of free America and enjoys the blessings of her priceless institutions to join the League of Patriots by purchasing a Liberty Bond.

CANCER DECALOGUE PREPARED BY THE STANDING COMMITTEE ON THE CONTROL OF CANCER OF THE MASSACHUSETTS MEDICAL SOCIETY

1. The classical signs of cancer are the signs of its incurable stages. Do not wait for the classical signs.

2. Early cancer causes no pain. Its symptoms are not distinctive, but should arouse suspicion. Confirm or overthrow this suspicion immediately by a thorough examination and, if necessary, by operation. The advice, "Do not trouble that lump unless it troubles you," has cost countless lives.

3. There is no sharp line between the benign and the malignant. Many benign new growths become malignant and should, therefore, be removed without delay. All specimens should be examined microscopically to confirm the clinical diagnosis.

4. Precancerous stage. Chronic irritation is a source of cancer. The site and the cause of any chronic irritation should be removed. All erosions, ulcerations, and indurations of a chronic character should be *excised*. They are likely to become cancer.

5. Early cancer is usually curable by radical operation. The early operation is the effective one. Do not perform less radical operations on favorable cases than you do on unfavorable ones. The chances for a permanent cure are proportionate to the extent of the first operation. Make wide dissections; incision into cancer tissue in the wound defeats the object of the operation and leads to certain local recurrence.

6. Late cancer is incurable, though not always unrelievable. Radium, X-rays, ligation, cautery, or palliative operations may change distress to comfort and may even prolong life.

7. Cancer of the breast. All chronic lumps in the breast should be removed without delay. Benign tumors can be removed without mutilation. Examine all specimens microscopically. An *immediate* microscopical examination is desirable since, if positive, it permits a radical operation at the same sitting. A radical operation performed ten days after an exploration is almost never successful in curing cancer of the breast.

8. Cancer of the uterus. Any irregular flowing demands thorough investigation. Offensive or even very slight serous flows are especially suspicious. Curette and examine microscopically. Amputate all eroded cervixes which do not yield promptly to treatment. Do not wait for a positive diagnosis.

9. Cancer of the digestive system is difficult of early diagnosis, and therefore unfavorable in prognosis. All persistent and recurring indigestions

(more especially if attended by change of color and loss of weight) and any bleeding or offensive discharges demand prompt and thorough investigation. Do not wait for a positive diagnosis.

10. Cancer of the skin. Any warts, moles, or birthmarks which enlarge, change color, or become irritated should be removed promptly. They are likely to become cancer. Do not wait for a positive diagnosis.

PERSONAL AND GENERAL ITEMS

Dr. Frank C. Richardson has just returned to civilian life, after two months of military duty at the Lynnfield, Boxford and Westfield, Massachusetts, camps, where he examined neurologically several thousand militiamen transferred to Federal service.

The Massachusetts Homœopathic Hospital is to receive \$200 000 as a trust fund from the estate of the late Mrs. Augusta E. Corbin, widow of Chester C. Corbin of Webster, Massachusetts. Boston University receives from the same giver the sum of \$500 000, \$50 000 of which is left in trust to endow a memorial library to be known as the Chester C. Corbin Library Fund. The remainder of the gift, — \$150 000, — is to be used to endow a permanent fund to be called the Chester C. Corbin Fund and to be used for the erection of buildings or the endowment of professorships.

Mrs. Corbin left a very large estate, more than \$1 330 000 of which was left to Massachusetts charitable and educational institutions. Her husband was a former trustee of Boston University.

Dr. Marguerite E. Lichtenthaler (B.U.S.M., 1916) has opened an office in Wellesley Square, Wellesley Hills, Massachusetts.

Dr. Hugh Heaton of Boston has been made Inspector in the Red Cross Foreign Medical Commission, in reconstruction service, child-welfare work.

Dr. A. A. Starbuck (B.U.S.M., 1906) has removed her office from 174 to 182 State St., Springfield, Massachusetts.

Dr. Chas. C. Yerbury (N. Y. Hom. Med. Col., 1915) has located at 744 State St., Springfield, Massachusetts. After his graduation from New York Homœopathic Medical College in 1915, Dr. Yerbury served internships in the Massachusetts Homœopathic Hospital and Albany Homœopathic Hospital. He was married in September to Miss Beatrice Carnes of Albany, New York.

Dr. Chas. A. Sturtevant, late of Manchester, New Hampshire, is another of Boston University's medical graduates now in training at Fort Benjamin Harrison, Indiana.

A REAL TONIC

According to recognized authority a tonic is "a remedy which restores enfeebled function and promotes vigor and a sense of well being." A stimulant, on the other hand, is "a remedy which produces temporary exhilaration and excitement of bodily forces, which is soon followed by a reactionary depression."

In the conditions of debility or malnutrition which accompany nervous diseases, wasting disorders and convalescence, the body always requires more than "temporary exhilaration." It needs support, a reenforcement of function, and a general restoration of tone to assure a return to normal conditions. In such cases medical men have found Gray's Glycerine Tonic Comp. a real tonic which can be depended upon to restore the strength and vitality of the whole organism; every organ shows an increase in functional efficiency which is permanent — not temporary and fleeting. As a consequence, physiological processes throughout the body resume their normal activity, the defensive forces become more effective and health is established, with its "sense of well being." There is no "reactionary depression" following the use of "Gray's." It is a real tonic in every sense of the word.

The friends of Dr. F. S. Eveleth (B.U.S.M., 1889) will be glad to learn that he has recovered from his operation in the Massachusetts Homœopathic Hospital and has returned to his practice in Concord, New Hampshire.

The Gazette has just received word that Dr. Edwin M. Kemp (Class of 1909 B.U.S.M.) died at his parent's home in Cazenovia, N. Y., on September 9th. The letter announcing his death said, "He lived, as he wished, to see his mother's roses again." After graduating Dr. Kemp spent some years as a medical missionary in China but as his health failed he came back to America to die of tuberculosis.

Dr. E. Ullmont Hussey (B.U.S.M., 1917) passed the Maine State Board examinations in July, with an average of 82 per cent. Immediately after his graduation he went to Trull Hospital, Biddeford, Maine, for a year's internship. The Hospital usually has a Boston University graduate as its house physician. Dr. Trull himself is, of course, also a graduate, class of 1894.

Dean Sutherland has received a most interesting letter from Dr. Herbert E. Maynard (class of 1902), who left his practice in Winchester, Massachusetts, in the spring of the present year to serve the Allies. He writes that his first two months were spent in the Royal Herbert Hospital at Woolwich, England, where he had "ample opportunity to see what modern warfare could do to a man," and also "to be of service in helping to bring some of them back to where they could again carry on."

Continuing his letter he says, "From the trenches to convalescence and usefulness is a long, weary journey for many of these men. Starting at the field dressing station, then to casualty clearing station, then the base hospital in France, then the trip across in the hospital ship to land finally in a base hospital here, and after that, convalescence often takes a good many months. And then for some there is the more or less tedious waiting for artificial limbs, *etc.*, and the necessary training in the use of them. . . . The desire to see this thing grows on one every day, and I am only too glad to have the opportunity of doing what little I can to help along toward that end."

Dr. Maynard has been transferred from Woolwich to a Military Hospital in another part of England. He can be reached by addressing letters to him in the care of his wife at Winchester, Massachusetts, and they are sure to be most welcome. He hopes to be sent to France to the active front.

Dr. Howard A. Streeter (B. U. S. M., 1898), formerly of Marblehead, has removed from North Adams to Pittsfield, Massachusetts.

Dr. Chas. R. Bell (B.U.S.M., 1906) has taken the practice and removed to the office of the late Dr. W. N. Emery, 808 Main St., Waltham, Mass.

Dr. R. Agnes Hartley (B.U.S.M., 1899) has removed from 180 to 922 Massachusetts Avenue, Cambridge, Massachusetts.

Dr. Robert Whitmarsh of Providence has joined the Flower Hospital unit of New York. Dr. Whitmarsh is a graduate of New York Homœopathic Medical College and is the son of Dr. Henry A. Whitmarsh.

Dr. Forrest Jay Drury (1912, B.U.S.M.), of Seabrook, New Hampshire, has entered the Medical Reserve Corps of the United States Army.

Dr. Leighton F. Johnson (B.U.S.M., 1915) has given up his practice in Norwood, Massachusetts, and has joined the Medical Reserve Corps of the United States Army, with the rank of Captain.

Dr. R. S. Wilcox of Providence, R. I. (N. Y. Hom. Med., 1900), is another to join the Medical Reserve Corps.

Dr. Frank W. Mitchell (B.U.S.M., 1917) has been accepted in the Medical Reserve Corps and enters with the rank of Captain.

Dr. Harry C. Cheney (B.U.S.M., 1901) has removed from 317 Main St. to 18 Thorndike St., Palmer, Massachusetts.

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ORIGINAL COMMUNICATIONS

NITROUS OXID-OXYGEN ANALGESIA IN OBSTETRICS *

ANTON R. FRIED, M.D., Newtonville, Mass.

From time immemorial, with few exceptions, the trend of humanity has been to live as comfortable a life as conditions would permit. To alleviate the suffering of humankind, many social organizations of national and international character have arisen from time to time. Not only has this been applied to people in general, but it has been extended to the animals most useful and immediately associated with our daily life. Physicians, as a group, have probably contributed more to the alleviation of suffering than any other organized group of men, and it is gratifying to note that they have made progress to such an extent that modern dentistry has lost its anxiety and surgery its terror.

In obstetrics alone have we been somewhat backward or negligent in our efforts to grant the same degree of comfort as in other conditions. The explanation of this probably lies in the fact that here we are confronted with the problem of giving relief from pain over a prolonged period, without interfering with the process of labor. Another obstacle in the way of progress has been the old idea, among patients and physicians alike, that labor is a physiological process and that the practitioner of obstetrics must not in any manner change the old slogan of "let nature take its course" except under extraordinary conditions. If it is true that labor is a physiological process, it should be free from pain, like all other physiological processes.

While labor may have been a painless process in certain tribes of people, if we are to believe the reports of some of the historians, present-day civilization has so changed our character that labor has ceased to be a physiological process, some writers

* Read before the Boston District of the Massachusetts Homœopathic Medical Society October 4, 1917.

even claiming that pregnancy is a disease of nine months duration and that it always terminates in a surgical procedure, namely, labor.

Any single anæsthetic agent which shall prove universally satisfactory in all cases of obstetrics will probably never be found. The ideal agent should have no ill effect, immediate or remote, upon either the mother or the baby. It should relieve all physical pain, prevent psychic trauma, should permit prolonged application without interfering with the process of labor, and at the end present to the obstetrician a patient in a satisfactory condition for correct delivery. Furthermore, it must be practical, simple, and convenient in application.

If we inquire still further into the particular effects that such an anæsthetic must have, it might be well first to investigate the character and the mechanism, nervous and otherwise, of labor pains. Painless labor is abnormal. The degree of pain felt and the endurance to withstand it is also very variable. The pain itself is produced by uterine contractions and resultant bruises. The contractions are intermittent in character, being interspersed by periods of complete relaxations. They are involuntary, and yet may be influenced by higher nervous disturbances, for they may be inhibited or augmented by mental states or nervous shock. The exact nervous mechanism producing labor contractions is somewhat obscure. DeLee, however, states that "a nerve center is believed to exist in the cortex, one in the medulla, in the cerebellum, and in the lumbar enlargement of the cord, because irritation at these points causes uterine contractions. There is an independent nerve center in the uterus because the organ acts when removed from the body."

Mental states may also affect uterine contractions, as strong emotional activities, such as fear, have an inhibitory effect upon them. The brain, however, is not necessary to the nervous mechanism, as is evidenced by the smooth and painless progress of labor possible with patients with transverse lesions of the cord. The sensory impulses are transmitted from the cervix, and the evidence of them is pain. There probably is a reflex center in the cord which is stimulated by the sensory impulses and an afferent impulse is sent back. This would seem to be indicated by the fact that under forcible dilatation there is a tendency for the cervix to contract. Still further, the contractions of isolated uteri seem to indicate that even the reflex cord mechanism is not absolutely essential to labor. Therefore, there seems to be evidence that the uterine contractions, while under the control of higher centers, to some extent are intrinsic within the uterus itself.

The stimuli for contractions seem to come from the distention of the organ by its contents, in which respect it is similar to the action of the stomach. These stimuli are, however, present throughout pregnancy, and explain the contractions during the earlier months of gestation. The agent increasing these normal contractions to such a force as to be sufficient to expel the foetus, or produce such abnormal states as miscarriage or premature delivery, is not entirely clear. It has been suggested that it may be due to an excess of carbon dioxid or the presence of an active hormone, or the lack of an

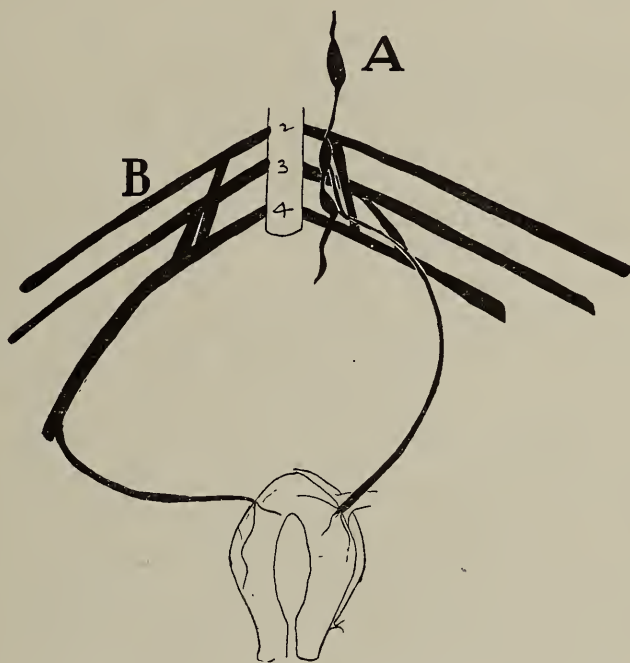


CHART I

antibody in the blood which is supposed to be furnished by the placenta. Whether any, or a combination, of these agents is the exact cause is not known. The following statements can probably be made with safety:

- 1 — The primary stimulus for uterine contractions is probably the uterus itself.
- 2 — The stimuli producing tonicity of the uterus come from the cord and are necessary to proper uterine contractions.
- 3 — The depressor stimuli come from the sympathetic system and have an inhibiting influence upon the uterine muscle.
- 4 — The reflex motor stimuli come from the cord, produce a spastic condition, retard the first stage of labor by forming resistance to dilatation, but are valuable in the control of hemorrhage following delivery.

It is therefore seen if the inhibitory influences, due to the control of the reflex spasm of the soft parts, can be removed, dilatation will be more readily accomplished and labor be shortened.

Any anæsthetic agent which approaches the ideal will have to accomplish three conditions:

(a) It must alleviate pain; (b) inhibit excessive reflex spasm; (c) remove the sympathetic depressor impulses.

To accomplish these three things numerous drugs and anæsthetics have been tried. The ones still in use are the bromids, chloral, morphin, scopolamin, heroin, and eucain in spinal anæsthesia. The ones more commonly used, however, are ether, chloroform and nitrous oxid.

Bromids have a depressant action on the spinal reflexes and therefore answer one of the requirements of a successful anæsthetic. If used at all, they must be given early and in large doses. Their principle disadvantages are that they are slow in action and are somewhat irritative to the kidney and stomach.

Chloral is a depressant of the brain and spinal cord. It reduces pain and excessive reflex spasm, thereby fulfilling two of the objects of the successful anæsthetic. It inhibits pain and accelerates dilatation. Its depressant action, however, is not limited, for it depresses practically all bodily organs except the respiratory system, being similar in its depressive action to chloroform on the heart and blood vessels. The contra-indications to its use are due to its unfavorable action on the circulatory system and its irritant effect upon the kidney.

Morphin is a depressant to all bodily functions, its depressant action being most noticeable on the respiratory system. It accomplishes one great object during confinement, namely, the relief from pain.

Scopolamin is seldom used alone, and as its action in conjunction with morphin has been presented in previous papers I shall dismiss the subject with the statement that it is indicated in obstetrics because of its depressant effect upon the brain, upon the spinal cord, and its effect on the sympathetic nerve terminations in the uterus. It therefore relieves pain and hastens dilatation to some extent. The combination of the two drugs, however, morphin and scopolamin, is somewhat different in its action, for the action of scopolamin is greatly modified by morphin.

Ether and Chloroform alleviate pain because of the paralysis of the nervous system, which usually begins with paralysis of the brain, extending from there to the cord, and last affecting the medulla. They lessen uterine contractions, even when given in small amounts. Chloroform is quicker in action, and not as

disagreeable. It is, however, considered to be three times as depressant to the nervous system and forty times as depressant to the heart as ether. Both irritate the kidneys, both reduce blood pressure and probably lower resistance to infection.

Nitrous oxid is also a depressant to the central nervous system, just as chloroform and ether. It differs from them in that it does not reduce blood pressure and in certain conditions of which I shall speak later it may produce a distinct rise. It has numerous distinct advantages over chloroform and ether, among them being:

- 1 Its relative safety.
- 2 Its ease of induction and control of analgesia and anæsthesia.
- 3 Its ability to lend itself to production of a state of analgesia without the loss of consciousness.
- 4 The ability to change rapidly from a normal to an analgesic state or even an anæsthetic stage in the course of a few minutes.
- 5 The rapid return to consciousness without disturbance of physical functions, such as nausea and vomiting, following the cessation of its administration.

1. Gwathmey states that "when nitrous oxid is given pure or alone, death is always due to oxygen deprivation and asphyxia. The heart continues to beat after respiration has ceased, which proves that death is not due to failure of circulation." Louis Frank is responsible for the following statement, that "Available statistics show that the average mortality from chloroform is one in 3 000, whereas, that of ether is one in about 30 000 administrations. The action of both drugs is through absorption by the lipoids; both produce lower blood pressure, both produce marked depression; in other words, their administration is accompanied with manifestations identical with those recognized as due to shock. . . ." Miller,* on the other hand, states that "The statistics of nitrous oxid vary from one death in 100 000 to one in 750 000 cases." H. C. Wood, who has made a study of statistics, finds that in scopolamin and morphin amnesia "the death rate was one in 250 narcoses. . . ." If these statistics have any value it would seem to indicate that nitrous oxid is at least as safe, when properly administered, as any other anæsthetic.

Guedel states that "Death under nitrous oxid may occur as a result of three conditions: asphyxia, cardiac dilatation, and apoplexy. In the individual of normal cardiovascular system, asphyxia can be the only cause, and death due to accidental

* Jour. A. M. A., 1912, lix, 1847

asphyxia from nitrous oxid can occur only as the result of the greatest carelessness." Cases with diseased cardiovascular system are always poor operative risks, and accident to such patients is less likely during labor under nitrous oxid analgesia than with any other conduct of the case.

Normally, the blood pressure in gas-oxygen is elevated from 6 to 12 mm. if anæsthesia is properly induced. However, it begins to mount rapidly with the occurrence of cyanosis or rapid induction of anæsthesia. This rapid elevation is a severe test to the vascular system, and patients with atheroma or extensive myocarditis may suddenly develop symptoms of cerebral hæmorrhage or acute cardiac dilatation. Aside from these contra-indications it can be applied with benefit to almost any case, obstetrical or operative.

2. The second advantage was the ease of induction and control. Compared with ether and chloroform, gas-oxygen has none of the disturbing elements in the induction of analgesia or anæsthesia. Properly given, the patient can in the course of one minute be carried into a stage of analgesia, and in the course of two or three minutes be carried into the stage of anæsthesia, and with the cessation of the gas return to a normal state within a few minutes. The difference is probably more apparent by a study of the following charts. (II, III, IV.)

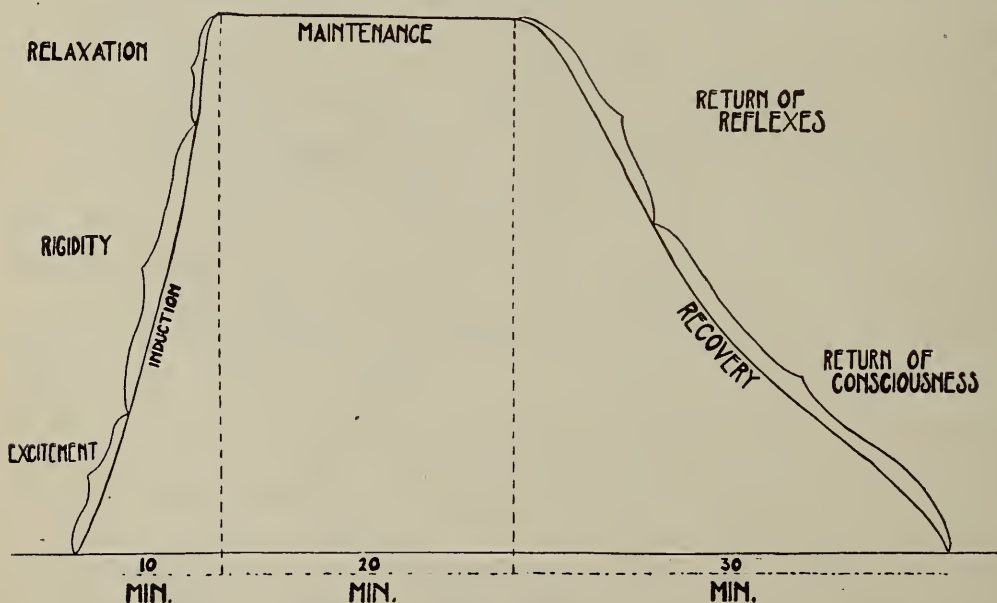


CHART II

It will be seen in chart II that the induction of ether or chloroform anæsthesia usually takes from five to fifteen minutes, that the induction can be divided into a period of excitement followed by a period of rigidity, which in turn is followed by general relaxation. The complete anæsthesia can be maintained for a

limited period, varying from five minutes to two and one-half to three hours. Recovery then takes place by a gradual process extending usually over a period of thirty minutes, beginning with a return of the reflexes and finally a return of consciousness. The curve of an incomplete anæsthesia can be represented by diagram III. It probably would consume about twenty-five minutes. The stages, however, would not be altered. The curve of gas-oxygen anæsthesia, on the other hand, differs from both of these, as seen in the next diagram (Chart IV), induction of analgesia requiring about one minute. Continuing, it immediately carries the patient over to a stage of anæsthesia, the entire induction requiring two or three minutes, at which level it can be maintained indefinitely.

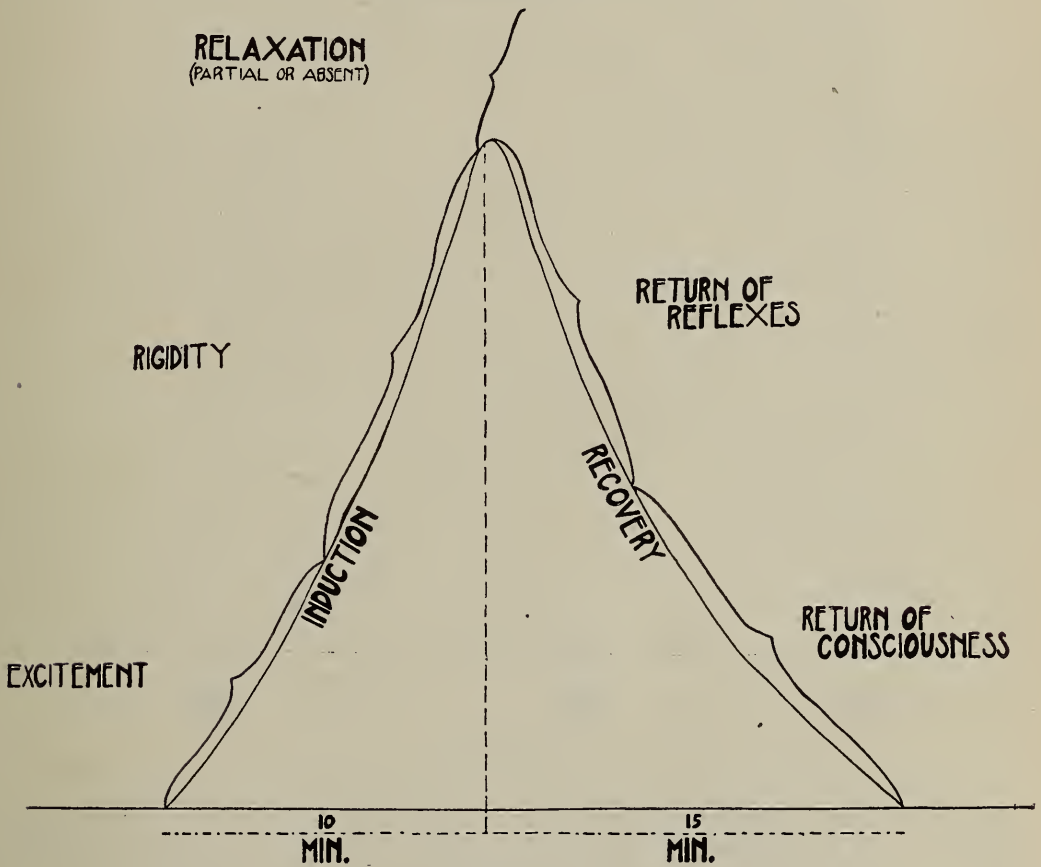


CHART III

Recovery is usually by crisis, taking place in from one to five minutes, without any disturbance of the bodily organism. It is true that occasionally a period of excitement is present during induction if operative procedures are attempted before full anaesthesia is induced. If the anaesthetic is not given properly the patient may be carried beyond the stage of anaesthesia into a stage of asphyxia, which will give rise to numerous disturbances such as a decided change in color, jerking move-

ments of the limbs, arms and entire body, commonly spoken of as jactitation, and other symptoms identical with those of asphyxia. They, however, are never present in a properly conducted anæsthesia or analgesia. It is this ability to change rapidly from a normal state to an analgesic or anæsthetic condition as occasion requires that peculiarly fits gas-oxygen for obstetric use. It can therefore be given in an incomplete form for every separate labor pain. The anæsthetic is given at the first sign of the oncoming uterine contraction, so that the patient is in the stage of analgesia at the time when the contraction is at its height. When the contraction is over the

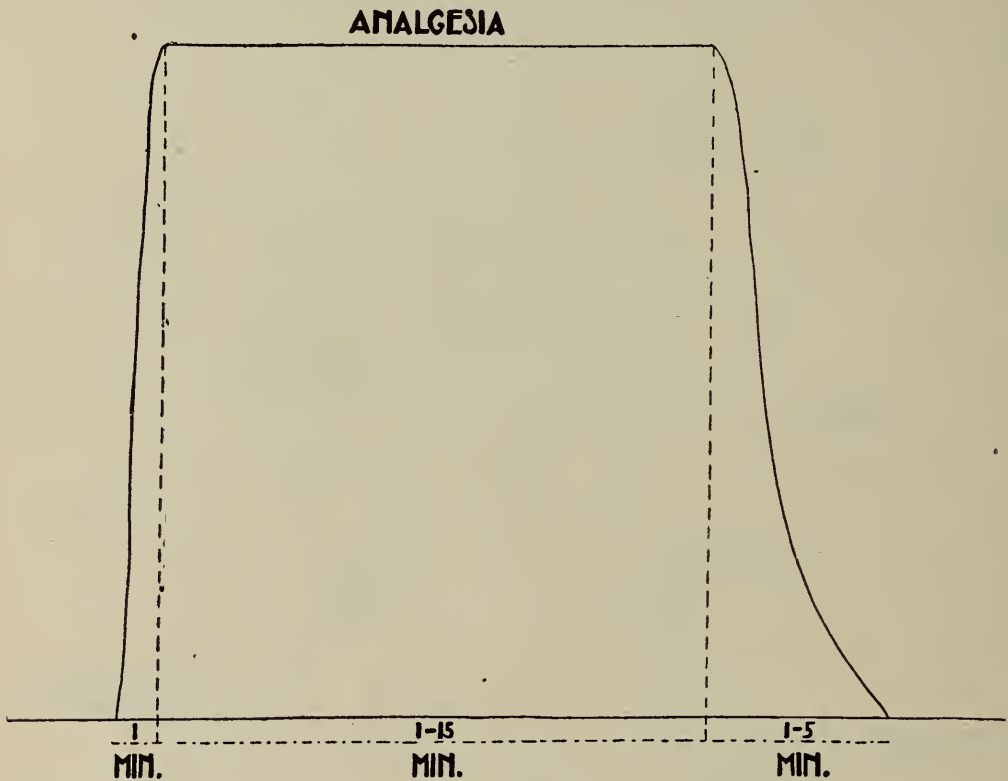


CHART IV

anæsthetic is stopped and the patient returns to normal condition. The following chart (V) will in some measure illustrate the usual method of giving it during a normal contraction. If the anæsthetic is begun too late the contraction may reach its height before the patient arrives in the analgesic stage. This is illustrated on the next chart, VI. If the pains are very severe it may be advisable to continue gas-oxygen analgesia between pains to give more complete relief. Chart VII will illustrate this. Narcotics are ordinarily never given in connection with obstetrical gas-oxygen, as they interfere with the patient's ability to determine the onset of contractions. There is only one condition where it might be advisable to combine a seda-

tive such as morphin, and that is in those cases having an exceedingly irritable uterus, where the contractions are explosive in character, coming without any warning, and reaching their height and most painful stage before the patient is properly prepared to meet them. Without morphin the operator is not able to forestall the rapid contractions and the anæsthetic fails to give the desired relief.

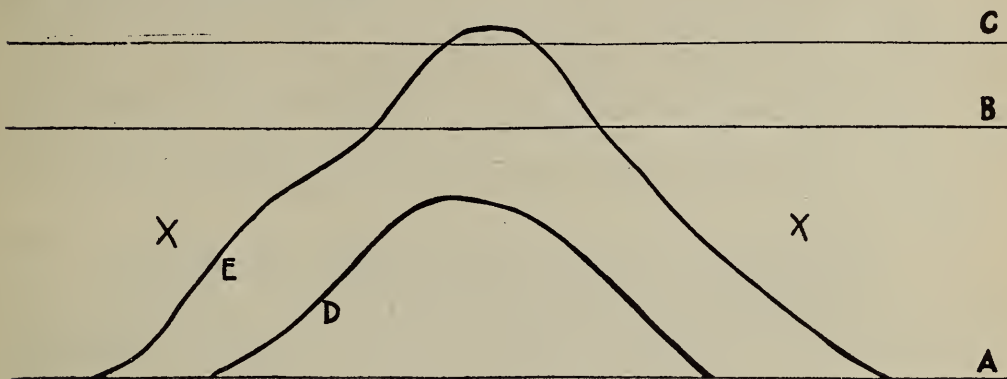


CHART V

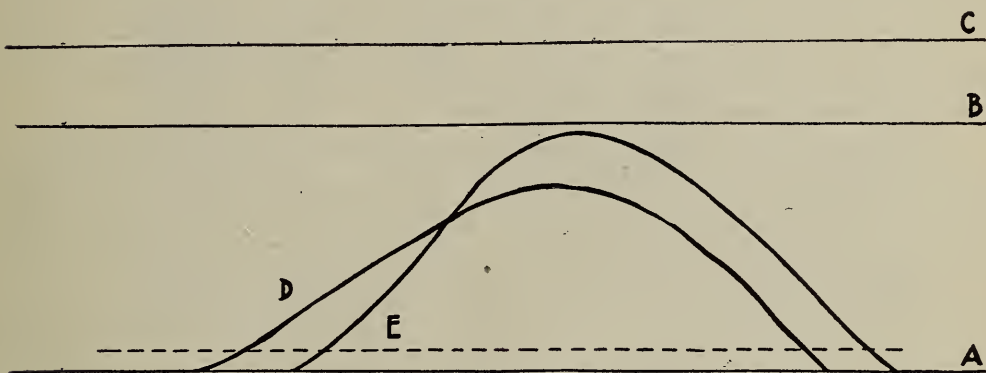


CHART VI

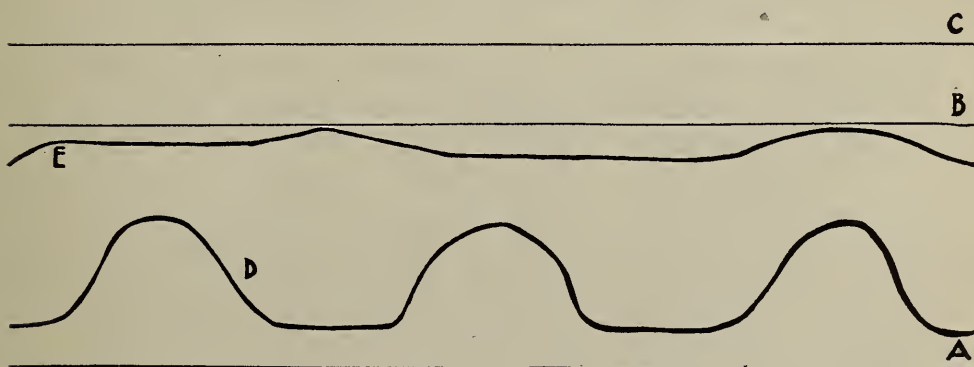


CHART VII

CRITERIA OF THE DEPTH OF NARCOSIS

The guiding signs of gas-oxygen analgesia and anæsthesia indicating the degree of anæsthesia may be classified into four groups, as follows:

1. The respiratory changes.
2. The general muscular reactions.
3. The eye reflexes.
4. The degree of oxygenation, as indicated by the color.

During the induction of anæsthesia *the respiration* is usually quite superficial and regular. As the anæsthesia progresses the expirations are prolonged and in obstetrics there may be a great tendency to hold the breath. With the onset of full anæsthesia the respiration becomes full and machine-like in its regularity. The inspirations and expirations are nearly equal in length and ordinarily there is no phonation such as is present with ether or chloroform.

The muscular system remains quite normal, although there may be a voluntary resistance to movement during the induction of the anæsthesia and the facial expression may be a picture of pain. Under complete anæsthesia the muscles should be immobile and relaxed. If the anæsthetic is carried too far the muscles become rigid and develop a jerking movement beginning with the feet, extending to the arms and later involving the entire body. In other words, we have a complete picture of the muscular reactions during asphyxia.

The eyes: The pupils are quite active in light anæsthesia or analgesia up until the time when full anæsthesia is developed, when they become rather small. The eyeballs roll lazily from side to side during analgesia, usually becoming fixed as full anæsthesia develops. The eyelids during analgesia resist opening, or the patient may move them voluntarily, while in full anæsthesia they are relaxed and slightly open. The conjunctival reflex is present during analgesia but disappears with the deeper states.

The color during the induction of anæsthesia should be entirely normal except in plethorics, in which cases we may have a slight cyanosis. During full anæsthesia the color is a pink to a cyanotic tint. In anæemics a word of caution must be introduced, for those cases show no cyanosis even if the anæsthetic is carried to a stage of profound anæsthesia. On the other hand, plethorics may show considerable signs of cyanosis in a normal anæsthesia. It will be seen from this that during light analgesia such as is used in obstetrics there are practically no changes from the normal condition, either respiration, muscular movements or color. Any decided variation from the normal should be considered as belonging to the stage of profound anæsthesia and the anæsthetic stopped or diluted with oxygen.

Gas-oxygen acts directly on the nervous system, being dissolved in the blood and carried to the nerve tissue, where it

causes its depressant effects upon the nerve cells. Its depressant action is in some degree dependant on the amount of oxygen delivered in combination with it. It therefore becomes a question as to what percentage of gas and oxygen should be administered to induce the various stages of analgesia or anæsthesia. I have made a copy of the chart by Connell, tabulating the zones of anæsthesia and analgesia, indicating the per cent. of nitrous oxid and oxygen required and the depth of anæsthesia which we may expect therefrom. He also has added the degree of asphyxia, relaxation, and the color reactions of the various stages, and suggested the various operations which may be performed during the particular degree of anæsthesia.

The total exclusion of oxygen produces complete anæsthesia,

**· ZONES OF NITROUS OXID & OXYGEN ANAESTHESIA
IN NORMAL MAN WITHOUT SUPPLEMENTAL NARCOSIS ·**

PERCENTAGE IN TIDAL GASES		ZONE	DEPTH OF ANAESTHESIA	DEGREE OF ASPHYXIA	DEGREE OF RELAXATION	COLOR	UTILITY
NITROUS OXID	OXYGEN						
100%	0%	LETHAL	COMPLETE	GREAT TO FATAL	TONIC & CLONIC SPASM	BLUE BLACK	
87%	3%						
95%	5%	PROFOUND	COMPLETE	DANGEROUS	ASPHYXIAL RIGIDITY	DEEP CYANOSIS	
94%	6%	DEEP	COMPLETE	DANGEROUS	PARTIAL	MODERATE CYANOSIS	
92%	8%	MEDIUM	COMPLETE	PARTIAL	PARTIAL	SLIGHT CYANOSIS	INDUCTION
89%	11%	LIGHT	PARTIAL	SLIGHT	SLIGHT	FAINT CYANOSIS	ABDOMINAL SURGERY
88%	14%	VERY LIGHT	PARTIAL			NORMAL	SURFACE SURGERY
84%	16%	SUB-CONSCIOUS	PARTIAL COMPLETE ANALGESIA			NORMAL TO PINK	OBSTETRICS
80%	20%	LIGHT SUB-CONSCIOUS ANALGESIA	ANALGESIA			PINK	
50%	50%	CONSCIOUS ANALGESIA	EQUIL PARTS OF AIR ALLOWED			NORMAL	DENTISTRY

CHART VIII

almost complete asphyxiation, clonic spasms or jactitations of which I have spoken, and a color varying from blue to black. In the chart this is spoken of as the lethal zone. This form of anæsthesia has formerly been used by dentists for the extraction of teeth, incision of abscesses, *etc.* It carries the patient to a point of one to two minutes before death, elevates the blood pressure, and increases the strain on the vascular system. It should be condemned.

A five per cent. mixture of oxygen in a ninety-five per cent. nitrous oxid mixture is in the danger zone. Anæsthesia is com-

plete, some rigidity is present, and there is deep cyanosis. It can be readily seen that to obviate rigidity the remedy is not as with ether or chloroform to increase the amount of nitrous oxid, but is the reverse, namely, giving more oxygen and permitting the patient to return to a lighter anæsthesia. If that does not bring relaxation it must be obtained by the addition of narcotics or ether.

A six per cent. oxygen he considers still dangerous, while an *eight per cent.* is the ideal combination for the induction of anæsthesia.

Eleven per cent. should produce the stage most useful in general abdominal surgery. It will be seen that the relaxation is slight, hence the custom of most anæsthetists of giving a narcotic, usually morphin or a combination of morphin and atropin, to increase relaxation. If that does not produce sufficient relaxation, ether is usually added.

A fourteen per cent. mixture gives a partial anæsthesia with normal color, very little relaxation, and is used for surface surgery.

A sixteen to twenty per cent. mixture gives the analgesic stage, where the patient is either conscious or semiconscious, no asphyxia is present, very little relaxation, and the color is normal to pink. This is the ideal zone of analgesia for the first stage of labor. At the end of the second stage the percentage of the mixture of nitrous oxid must be increased or ether may have to be added. In fact, a great many obstetricians advocate the use of gas-oxygen up to the time of actual delivery, when ether is substituted to give greater relaxation. Several attempts have been made to increase relaxation by combining nitrous oxid analgesia with local anæsthesia in the form of novocain injections into the perineal muscles.

For continuous analgesia the proportion of fifty per cent. oxygen and fifty per cent. nitrous oxid, such as is used in general dental work, is advocated.

In administering the anæsthetic during the first stage of labor most operators suggest one or two inhalations of pure nitrous oxid gas, the third inhalation to contain a five per cent. oxygen, all succeeding inhalations twenty per cent. of oxygen. The pure nitrous oxid hastens the induction of the analgesia and when immediately followed by oxygen it does not reduce its safety. A mixture of nitrous oxid and air can also be used. For further information on this subject I refer the inquirer to Guedel's article on the Use of Nitrous Oxid in Obstetrics in the American Year Book of Anæsthesia and Analgesia, 1916.

Some operators reckon the dosage not in gas percentages but in the rate of gas delivery per hour. It has been estimated

that during major surgery it requires 120 gallons per hour, while in obstetrics the same quantity would last from three to four hours, exceptionally, six hours, especially if rebreathing is practised. Rebreathing, however, is very apt to give rise to a dull headache. If it does occur, the treatment should be a few inhalations of oxygen.

The cost of gas-oxygen is one of its chief objections for hospital use, but I believe that when once the public is awakened to the safety with which partial or entire relief may be obtained that the funds will not be lacking. The question of personal attendance is cleverly overcome by various devices on some of the modern machines whereby the patient can administer the gas with entire safety herself, requiring but general supervision by the nurse.

In this discussion so far I have failed to mention one of the most important factors in the anæsthesia of obstetrics, namely, the baby. The action of the various sedatives and ether and chloroform upon the infant are well-known to you all, and the action of nitrous oxid may be dismissed with this statement: Investigators have failed to find that it has any action whatever on the baby. If improperly given, however, so that the mother is very cyanotic, the baby may show some signs of blueness. It has been claimed, and I believe rightly so, that gas-oxygen analgesia shortens labor, decreases the number of obstetrical operations, and presents a mother with a normal resistance against bacterial infection. Davis, of Chicago, has shown in a series of fifty cases that mothers having gas-oxygen anæsthesia began their lactation earlier, with a consequent increase in the weight of the babies over other babies whose mothers were delivered without the analgesia. Also, that these mothers were less open to bacterial invasion and that they were able to be out of bed from one to two days earlier than those with any other form of anæsthesia. In my own series of about thirty cases the observations in regard to the mothers have been verified. I did not, however, attempt to verify the results on the babies. The fact that mothers may be able to leave the hospital a day or two earlier than they would under any other treatment, might in some measure offset the expense of the anæsthesia in a hospital which is semi-charitable in its character.

The benefits of gas-oxygen, to my mind, can have no other but good effects aside from the fact of giving relief to the mother, in that it will stimulate activities along other lines to create the demand for better and safer obstetrics, for a more wholesome attitude toward parental care resulting in the reduction of our present high infant mortality. Nitrous oxid,

because of its reliability of action, ease of control, and flexibility — permitting rapid change from one stage to another — is at present our most satisfactory agent for the induction and maintenance of useful analgesia. It is therefore safe to predict that it is a permanent addition to the field of obstetrics.

HICCUP AND ITS TREATMENT

N. H. GARRICK, B.S., M.D.

At various times cases of severe and persistent hiccup have been observed. This symptom has proved very trying and at times difficult of control. In the treatment of one distressing case numerous methods were tried on the advice found in Osler's¹ work without avail. Other works were consulted and I was surprised that a symptom that on occasion could cause so much distress received so little attention on the part of writers. For example, in Forchheimer's *Therapeutics of Internal Diseases*,² the only mention made of hiccup is its possibility as a complication in the course of pneumonia, with suggestions for its control.

Gould's *Medical Dictionary* defines Hiccup or Singultus as, "a spasmodic inspiration suddenly arrested by an involuntary closure of the glottis."

The usual interpretation of hiccup is that it is caused by a spasmodic contraction of the diaphragm with a sudden closing of the glottis. The sound produced being caused by the sudden closure of the glottis on the inrushing air.

In normal respiration, as the diaphragm descends to produce inspiration, the glottis is opened through the contraction of the posterior crico-arytenoid muscles. (Nerve supply recurrent laryngeal from vagus.) One writer³ states that this opening of the glottis does not occur, or at least only partially, during hiccup, and suggests that the characteristic noise produced is the result of the impact of the incoming air against the closed or partly closed glottis. The mechanism of the hiccup production seems to involve the afferent impressions to the respiratory center and efferent impulses by way of the phrenic to the diaphragm and through the laryngeal branch of the vagus to the glottis. The motor impulse for the contraction of the diaphragm arises in the respiratory center in the medulla in ordinary respiration and then travels to that portion of the cervical cord giving rise to the phrenic and other nerves of the cervical plexus supplying respiratory muscles. This is what happens during normal respiration. During hiccup the normal function-

ing is so interfered with that there seems to be a lack of co-ordination between the descent of the diaphragm and the opening of the glottis.

Quoting from Howell,⁴ "When the inspiratory center discharges its efferent impulses into the phrenic nerve it also sends impulses by a sort of overflow into the neighboring cardio-inhibitory center. This latter center is thereby partially inhibited, its tonic effect on the heart is diminished and the rate of the heart is increased." Eppinger & Hess⁵ speak of cases of "vago-tony," interpreted to mean abnormal excitability of the inhibitory fibers of the vagus. The cases exhibited hiccup with bradycardia and such cases were promptly relieved by one dose of 1/150 grain of atropin. Does the explanation of some cases rest with the condition of the vagus? Or, is the impulse from the inspiratory center not sufficient to inhibit the cardio-inhibitory center?

The cases of hiccup have been grouped under four headings in Osler's¹ work.

(a) Inflammatory: seen in affections of the abdominal viscera, gastritis, peritonitis, hernia, internal strangulation, appendicitis, suppurative pancreatitis and in the severe forms of typhoid fever.

(b) Irritative: as in direct stimulus to the diaphragm, local disease of the œsophagus near the diaphragm, and many gastric and intestinal disorders, especially those associated with flatus.

(c) Specific, or idiopathic: those cases with no evident cause but frequently associated with gout, diabetes, or chronic nephritis.

(d) Neurotic cases: in which the primary cause is in the nervous system, hysteria, epilepsy, shock, or cerebral tumors. The same writer suggests that the hysterical are perhaps the most obstinate.

Butler follows the same scheme of classification except that he does not differentiate between the inflammatory and irritative causes.

These two writers attempt a classification based on the type of lesion causing the symptom.

Another writer,³ already quoted, divided the cases into classes.

(1) Acute or transient cases. This class includes the greater proportion of all cases exhibiting hiccup as a symptom.

(2) In the second class are grouped the cases in which the spasm is caused by central irritation which may be brought to the medulla by way of the circulation, as in diabetes, uræmia, typhoid fever; cases occurring in hysteria or other functional nervous diseases are also questionably put in this class.

(3) In a third class he places the cases of a more serious nature, as the hiccup complicating surgical or other serious conditions which by its persistence may precipitate a fatal result. He also includes here the cases occurring with lesions throughout the intestinal tract, arteriosclerosis in the neighborhood of the origin of the phrenic nerve and the cases seen with fracture of a rib.

This classification has for its basis the intensity of the symptom, but in only the second class does the author try to show how the symptom is produced, *i.e.*, by some toxic effect on the respiratory center in the medulla. He leaves out conditions in which irritation to some parts of the vagus seems to be the factor producing hiccup; also cases where the cause seems to be increased intracranial pressure, and he does not include cases due to brain tumor.

In a case of transverse myelitis of the cervical region were noted a bradycardia of 20–30, pupillary changes, attacks of dysphagia, dyspnoea and syncope, vomiting and hiccup.⁶ Not all cases of lesion of this type, however, produce hiccup. For example, in a young woman of 18 with sarcoma of the hip, myelitis developed. At autopsy, besides the massive sarcoma of the hip, multiple lesions were found in other parts of the body, including a tumor of the vertebræ that had practically destroyed the cord in the lower cervical region without causing hiccup.

Gas gangrene has been noted as a cause of low tension pulse, vomiting and hiccup, by an observer on service at the front.⁷

In one case of brain tumor observed at the Evans Memorial, a man previously in good health vomited after eating his supper and almost immediately began to hiccup. This symptom became so troublesome that after continuation for twenty-four hours he was removed to the hospital for its control. He later developed other symptoms of multiple brain tumors and died. The tumor first producing noticeable symptoms was situated at the cerebellar-pontine angle as revealed at post mortem examination. It is worthy of note here that during the period of hiccuping there were no symptoms of increased intracranial pressure that could be determined by repeated careful ophthalmoscopic examination or lumbar puncture.

Purves Stewart⁸ states that "paroxysms of yawning or hiccup may be produced by intracranial growths, especially those of the posterior fossa."

Starck⁹ speaks of hiccup and frequent yawning as rarer general symptoms of cerebral tumor, which are the result of irritation of the centers located in the medulla. This irritation may be the result of local mechanical irritation produced by

general brain pressure on a circumscribed area, namely, the floor of the fourth ventricle.

Other writers speak of hiccup as a possible symptom of brain tumor and agree that it is most frequent in tumor in the posterior fossa. In what way is it produced, by localized pressure on the centers in the medulla, direct irritation to these centers by encroachment of the new growth, or is it possible that the localized pressure on that part of the dura supplied by the vagus is responsible? By far the greater number of cases of brain tumor do not present the symptom. Some other factor than an increase of general intracranial pressure must be causative as evidenced by the many recognized cases of increased pressure without hiccup.

If irritation to the vagus is one of the causes of hiccup, it is interesting to note that there are numerous cases of irritation to some parts of the vagus without the appearance of the symptom. For example, in cases of impacted cerumen, irritation thereby may be sufficient to produce reflex coughing, nausea and vomiting, and yet hiccup is rarely, if ever, recorded. Again, in cases of simple goitre, or exophthalmic goitre, where you might expect from the enlargement possible pressure on branches of the vagus or the vagus itself, I have not seen the symptom or reports of it.

We know that at times in aneurysm of the aorta or even cardiac hypertrophy, irritation to the vagus may take place through the left inferior laryngeal as it passes around the arch of the aorta. Hiccup is not a symptom frequent enough in such cases to have attracted attention.

I would like to present briefly a case that offered difficulties in diagnosis. A journalist aged 37, markedly neurotic. One sister has dementia præcox. Except for minor illnesses, very well until June 21, 1916. After a light supper at 9 P.M., undressed for bed, when he was seized with sudden vertigo and dove for his bed. Not unconscious. Diplopia and difficulty in focusing developed and vertigo continued all night. In the morning hiccuped for a few hours. Hiccup returned again in the evening and persisted at four or five-second intervals for three days and then gradually diminished. He was unable to swallow food. X-ray showed spasm of œsophagus at a point opposite the 4th cervical vertebra. This inability to swallow food persisted and necessitated nutrient enemata for one month. Sensation diminished in pharynx and larynx. The vocal cords could not be seen because the larynx was œdematous and filled with frothy fluid. Aponia alternated with nasal and unreliable speech.

Pulse about 80, temperature subnormal nearly all the time. Blood pressure 152/96. Heart negative.

The left pupil was much smaller than the right and could not be dilated with cocain. Fundus of right eye normal in appearance. The external and superior recti and levator palpebræ of the left eye showed paresis. There was no nystagmus. Sensation for heat and cold impaired on right side from costal margin down. Reflexes for upper extremities normal. Cremasteric reflex absent on right. Right knee jerk less lively than on left. No incoördination of the extremities noted. Patient was able to swallow at end of month and in the succeeding seven days made a gain in weight of 20 lbs. At the end of two months the patient was discharged and the only remaining symptoms were a slightly unsteady gait, slight ptosis of the left upper lid, a little difficulty in focusing for near vision and partial thermoanæsthesia of the right lower extremity. Several months later, he was about his work and the only remaining symptom was the thermoanæsthesia.

At first, basal tumor was suspected and lumbar puncture was not attempted. Venereal disease was denied and a blood Wassermann was negative.

In this case we had symptoms involving the 3rd, 6th, 8th, 9th, and 10th cranial nerves, with gradual and clinically almost complete recovery. It brings up the question as to how the hiccup was produced, and to me the question remains unanswered.

TREATMENT

Many times treatment is as unsatisfactory as the attempt to explain the mechanism of the symptom production. The first step is to try to interpret the cause. In the simple cases evidently due to gastric disturbance simple methods will often suffice, such as the holding of the breath for as long a time as possible, or rapidly drinking a glass of water. Either of these simple procedures may hold the diaphragm quiet long enough to overcome the tendency to spasm. Rhythmic traction of the tongue or slow muscular effort such as lifting a heavy weight may accomplish the same result.

Gastric lavage has been used when the cause seemed to be an overloaded stomach, or the use of an emetic may seem advisable.

Kanngieser's¹⁰ method consists of the use of 5 gm. of citric acid in one glass of water and the same amount of sodium bicarbonate in another glass, the object being to promote effervescence in the stomach and cause pressure on the diaphragm. He found this method of service in many cases, but in a later

article, after using this and several other methods, appealed for help in the control of hiccup.

Jödicke¹¹ used flexion of the thighs on the abdomen to produce pressure on diaphragm but this procedure lacks efficacy in many cases.

Marion¹² noted the appearance of hiccup in many post-operative kidney cases, and takes it as a sign of oncoming uræmia. His treatment was the use of a diet free from nitrogenous elements and he endeavored to reduce the irritability of the nervous system.

Hiccup beginning 24 hours after appendectomy and resisting for three days various methods of attack, such as Hoffman's anodyne, ether spray on epigastrium, oil of amber, counter-irritation over diaphragm, holding breath, *etc.*, was promptly cured by passing a stomach tube to dilate the œsophagus at the height of a clonic spasm.

Other mechanical means for hiccup control that may be mentioned as of service in some cases are pressure on the vagus and phrenic nerves in the neck, and galvanism of the phrenic nerve. Rhythmic traction of the tongue has already been spoken of.

A great number of drugs have been used, many without good reason. Morphin, chloral gr. xv, scopolamin hydrobromid gr. 1/200, repeated if needed, and the bromids in ordinary doses may stop the hiccup during the sleep produced, only to have recurrence on awakening. One writer felt elated because the hiccup stopped on the eighth day of its duration following the use of 1/8 gr. of apomorphin. Atropin gr. 1/50 once daily for 8 days resulted in a "cure." The use of this drug, however, in selected cases should be of service, especially where there is excessive vagus activity.

Gelsemium tincture in 15 to 20 drop doses every four hours is another drug suggested, probably for its depressing effect on the respiratory center.

"The nitrites stimulate the respiratory center, so that breathing is deeper and more rapid"¹³ and offer another suggestion for hiccup control.

I have had no experience with the use of homœopathic remedies for this condition and can find little reference to them.

One other method has come to my notice and I shall use it in any cases met with in the future, a case¹⁴ of a young man completely exhausted by incessant hiccup of 25 hours duration who had no relief from bromids and only a slight respite from morphin. The various mechanical measures were futile. Hiccup stopped at once when the eyeballs were compressed as for the oculo-cardiac reflex. The pulse grew slow, hiccup stopped and

the exhausted man went to sleep at once. A return of the symptom the following day was aborted at once by the same proceeding. The same method proved effectual in a case of hiccup from purulent pleurisy.

References

- (1) Osler, Wm.: *Practice of Medicine*, Ed. v. 1903, 1068-9. Appletons, N. Y.
- (2) Forchheimer, F.: *Therapeutics of Internal Diseases*, Ed. I, 1913, ii, 260. Appletons, N. Y.
- (3) Editorial: *Therapeutics*, Jour. A. M. A., 1911, lvii, 396
- (4) Howell, W. H.: Ed. iii, 1909. 643. W. B. Saunders Co., Phil.
- (5) Caffrey, A. J.: Jour. A. M. A., 1913, lx, 1879
- (6) Osler, Wm.: *Practice of Medicine*, 979
- (7) Goodwin, Col. T. H.: *War Surgery*, Mil. Surgeon, Wash., lxi, 284
- (8) Stewart, Purves: *Diagnosis of Nervous Diseases*. Ed. iv, 1916, 465. Treat and Co., N. Y.
- (9) Starck, H.: *Diseases of the Brain*. Curschmann's Text Book of Nervous Diseases, 1915, 606. P. Blakiston & Co., N. Y.
- (10) Kanngiesser, F.: *Persistent hiccup*. Med. Klin., Berlin, March 26, 1911
- (11) Jödicke, P.: Med. Klin., Berlin, May 28, 1911
- (12) Marion, G.: *Postoperative hiccup, sign of uremia*. J. d'Urologie, Paris. 1913, iii. Abstr. Jour. A. M. A., lxi, 193
- (13) Bastedo, W. A.: *Pharmacology and Therapeutics*. 1914, 229. W. B. Saunders Co., Phil.
- (14) Aquino, P. B.: *Rebellious hiccup arrested by compression of the eyeballs*. Semana Med., Buenos Aires, 1917, xxiv, 483. Abstr. Jour. A. M. A., lxi, 159.

ROUTINE WASSERMANN BLOOD TESTS IN A MATERNITY HOSPITAL *

DAVID L. BELDING, M.D.

The Wassermann test at the present time is our best method of discovering latent syphilis, and in no department of medicine is its aid more valuable than in a maternity hospital, when conducted as a routine test. There is much to learn concerning this reaction in the pregnant woman, particularly in the deductions to be drawn from laboratory reports. The results of routine Wassermann tests at the Robinson Memorial Hospital during the first six months of 1917 are given in the following pages.

The percentage of positive reactions varies with the period of the disease. During the first two or three weeks of the primary stage, a negative test usually results. During the secondary stage with symptoms, between 90 per cent. and 100 per cent. of the cases give a positive, while in the tertiary and latent cases, the percentage falls below 75. Likewise, certain febrile diseases, particularly with the cholesterinized antigen, give an occasional false positive.

* Read before the Boston District of the Massachusetts Homœopathic Medical Society, October 4, 1917.

Purpose. — The objects of instituting routine Wassermanns at the Robinson Memorial Hospital were:

(1) The determination of the per cent. of syphilitics entering the hospital, particularly as regards class and race.

(2) Early diagnosis of the condition so as to insure proper treatment, which might save the life of the child. For this reason the blood was taken in the examining room several weeks or months before delivery.

(3) Isolation of patients in that stage of the disease when they are dangerous to nurses or to other patients.

METHODS

Blood. — The blood was taken in as many cases as possible in the examining room, and from the other patients when they entered the hospital. Positive cases received a second test, sometimes a third. In part of the cases blood was also taken from the cord at the time of delivery.

Antigens. — The important consideration in the Wassermann test is the kind of antigen. There is no standard antigen; each laboratory has its own particular kind, which in some measure explains the variation in reports from different laboratories.

The most popular antigens now in use are: (1) cholesterinized alcoholic heart extract; (2) isolated heart lipoids; and (3) plain alcoholic heart extract; the first two being most generally used. The cholesterinized is more delicate than the lipoid, but is more apt to give a false positive, while the lipoid is apt to err in the opposite direction. A slight positive with the lipoid antigen usually indicates syphilis, while a similar reaction with the cholesterinized would be viewed with suspicion as a possible non-specific fixation. Therefore the cholesterinized antigen is of greater value in treated cases than in diagnosis.

At the Robinson these two antigens were used, and the positive reports were made under the two headings (1) Cholesterinized, (2) Lipoid. To simplify the results here presented, the cholesterinized antigen is taken as a working basis and the lipoid used only for comparisons.

Reporting. — Three methods of reporting are in vogue in Wassermann laboratories, which almost universally use the four plus system and its various sub-grades: (1) reduction of the amount of the patient's serum, (2) decreasing the quantity of antigen, and (3) increasing the strength of complement. Presumably the last method gives the most accurate results, but it is the most expensive as regards time and material. Because of the saving of material, the first method (reducing the patient's serum) has been adopted at the Robinson laboratory. For the

same reason the test is run on the basis of one-fifth the original Wassermann volume.

Our system of reporting positive results is slightly different from the method in most general use. Four tubes are used in each case for each antigen, and contain the proportionate original Wassermann equivalent of 0.2; 0.1; 0.05; 0.025 cc. of the patient's serum. Each tube is reported separately in terms of the amount of hemolysis, four plus indicating complete inhibition, as for example:

<i>Serum</i>	<i>Cholesterinized</i>	<i>Lipoid</i>
0.2 cc.	++++	++++
0.1 "	++++	+++
0.05 "	+++	+
0.025 "	++	-

The reason for four tubes rather than the usual first two is the fact that in one per cent. of cases the smaller amounts of serum have given positive results when the larger quantities proved slightly positive or even negative.

RESULTS

Per cent. of Positive Cases.—Seven hundred seventy-five patients entering the Robinson Memorial Hospital between January 1st and July 1st, 1917, gave a total of 89 positives or 11.5 per cent. Of this number 63 or 8.13 per cent. were definitely positive with the cholesterinized antigen (two plus or over in terms of the general adopted four plus notation), as compared with 7.9 per cent. reported from a series of 821 cases in the Kings County Maternity Hospital (Judd, *Am. J. M. Sc.*, 1916, cli). Ten cases which on second test proved negative further lowered the percentage to 7.1 per cent.

Cholesterinized vs. Lipoid Antigen.—In 29 positive cases with the cholesterinized antigen, 9 were negative with the lipoid, 11 doubtful and 9 positive. Of the negative cases but three, and of the doubtful only 4, were three plus and over with the cholesterinized antigen. When positive with both antigens, the cholesterinized was stronger than the lipoid, as is shown by the following table:

<i>Strength of Reaction</i>	<i>Number of Cases</i>	
	<i>Cholesterinized</i>	<i>Lipoid</i>
++++	4	0
+++	4	3
++	1	2
+	0	4

Positive Cases Giving a Subsequent Negative.—Of twenty-two cases tested more than once ten which were positive with the cholesterinized antigen on first trial, on second or third tests gave negative results. So frequent was this occurrence that it is now customary when a positive test is obtained from an examining-room patient, instead of reporting the finding, to request a second or even a third test before a final report is recorded. At least 7 of the 10 cases were over two plus, yet at intervals varying from three days to two months they gave negative reactions. One case, positive before delivery, gave a negative six days after delivery, but the blood from the cord was slightly positive. Another, when absolutely fresh, showed a clear negative but on standing twenty-four hours developed a four plus positive. As a rule the degree of positiveness of a serum is increased by standing, although occasionally the reverse is true.

Allowing for the possibility of error in laboratory procedure, we must conclude that the blood of pregnant women occasionally gives a positive with the cholesterinized antigen which disappears after delivery. The difficult question to decide is whether pregnancy brings out a latent positive, or whether the physiological condition itself gives rise to a false reaction. Unquestionably certain toxæmias of pregnancy and febrile conditions may give a misleading positive. Likewise, women who are carrying a dead foetus, frequently give positive tests which later disappear, and which may be either specific or non-specific.

Anticomplementary Sera.—In the first six months of 1917 from a total of 778 sera 15 or 1.93 per cent. proved anticomplementary, causing the controls to hold up during the test. This condition often results from the length of time between taking the blood and conducting the test. Positive sera are more susceptible in this respect than negative. The proportion of such instances in the maternity patients is much greater than in other classes of hospital cases, and it may be possible that the blood of pregnant women more frequently develops anticomplementary bodies.

Cord.—Blood from the cord at the time of delivery was sent to the laboratory for a comparison with that of the mother, which had been taken some time previously in the examining room. After the cord was severed, from 5 to 10 cc. of blood was squeezed into a sterile glass tube, which was then labelled with the name of the patient and the word "cord." If successful, this method of obtaining blood for routine Wassermanns would prove especially convenient to the physician, and not distressing to the patient. The following results were such as to warrant the abandonment of this method.

	Mother	Cord (child)
Total number	279	279
Positive	16	7
Negative	263	272
Total per cent. of positives	5.77	2.51
Per cent. of positives (++) or over)	4.30	1.08
<i>Analysis of 16 positive maternal cases</i>		
++++	9	1
+++	2	1
++	1	0
+	4	1
±	0	3
<i>Analysis of the seven positive cords</i>		
1.	++++	++++
2.	+++	+++
3.	++++	+
4.	++++	±
5.	++++	±
6.	++++	±
7.	-	++++

Results may be summarized as follows:

- (1) Cord blood is unsatisfactory for routine Wassermann tests.
- (2) Cord blood is negative or doubtful in 82.3 per cent. of positive mothers.
- (3) Cord blood is negative in 58.8 per cent. of positive mothers.
- (4) Infrequently the cord is positive and mother negative.
- (5) A baby may give a subsequent negative when mother and cord blood are both four plus positive.
- (6) Both mother and cord blood may be positive.

CONCLUSIONS

- (1) The routine Wassermann test is the best single method of determining latent syphilis in pregnant women.
- (2) By discovering latent or unsuspected cases at an early date treatment can be given and children saved.
- (3) Too much reliance should not be placed on a single Wassermann test in a pregnant woman unless clinical symptoms are present. At least two tests should be made, and each case should be followed up thoroughly.
- (4) Cholesterinized antigen positives, especially the weak reactions, when the lipid antigen is negative, unless there is definite history clinically, should be considered suspicious rather than a specific positive.

A GROWING DEARTH OF DOCTORS*

By H. M. STEVENSON, M.D.

There is great need for more homœopathic doctors in the South. We should have more laboratory men and specialists in the southern cities, but internists, general practitioners are needed everywhere.

Steadily, year by year, our forces have decreased in this great section. Did we now claim that our numbers total one half of those who practiced here twenty years ago, the estimate would be liberal. This depletion is general, and unless measures are promptly executed to check it, at a not far-distant day our school will have passed in the South.

Fifteen years ago, one great city possessed three homœopathic hospitals. Today it has none. In two other cities the number of homœopathic physicians has decreased to fifty and forty per cent. respectively of those practicing there in 1898. This situation, existing throughout the South, is not because those who labor there are unsuccessful. It is a paradox that this numerical reduction comes at a time when the school of Homœopathy is better established and producing better results than at any time in its history. Other circumstances are responsible.

Fifty years ago, the South was about wrecked by a great war. All industries, all projects were at a low ebb of vitality, but during the past thirty years the South has been rebuilding. In that period many physicians of our school located there, but there was made no adequate provision to maintain their numbers. Homœopathic colleges, in locating, sought the more closely peopled North and West, and their graduates remained to practice in those regions. So, after the wave of emigration southward had passed, there came in the number of our forces a standstill, then a dwindling which has continued ever since.

The school at large would probably have made an effort to prevent this, but about the time a need was showing, our school had thrust upon it a fight for its very existence. Upon both great schools of medicine, involving their educational resources, was placed a handicap, a load of conditions which were unjust as they were impractical. Upon medical students were placed requirements that prohibit many from undertaking the study of medicine. As the net result of this propaganda, the yearly output of doctors soon lessened, and the process continued to a degree that now has brought to the nation a grave situation, which must grow graver still before relief is effected.

When the full truth of all circumstances pertaining to the

present situation becomes known to the people they will give valuable aid and the work of rehabilitation will grow easier. With increasing frequency the lay press now refers wonderingly to the dearth of doctors. Various causes are assigned, but with characteristic persistence and sincerity, the press of this country is casting about for facts. When they are finally obtained the people will be fully informed. When once the truth is understood, the public will do its part. But now, with vision long enough to realize what will come tomorrow, we must lay our plans and accomplish the work of preparation under conditions not so favorable. Without waiting, we must do what is to be done so that in this public effort our school may occupy its rightful place in the forefront, and to develop and utilize capably for it the full benefit of this first, more equal, opportunity to demonstrate before the people the able efficiency of our homœopathic colleges in training doctors, together with the great value to the people of the homœopathic system of treatment.

It truly seems that the circumstances which for a time threatened to crush our school are reacting now to give the best opportunity in its history for wide development through an exceptional chance to inform the people more understandingly regarding its merits. It is the only school which, to help suffering humanity in the diagnosis and treatment of disease, utilizes every measure that a world-wide science offers, and then adds to this the well-proven benefit of the homœopathic *materia medica*, the only *materia medica* which rests upon a scientific foundation. Since ours is, because of these undeniable facts, the broadest of all, it should by every honest, sane reason be the dominant school. And through a clearer understanding of these facts by the people, supported by the capable, united efforts of its adherents, it will become so.

Concerning the situation existing in medical education following the radical régime of the past decade, a reaction is upon us. Sincere, thoughtful members of our profession have long hoped for a change, but recently there have come more emphatic, definite expressions to that effect. At Chicago last February was held a conference of medical educational bodies of both schools, and in that conference about the first public expression of the kind was made. Following are some extracts from a report of that meeting:

“From the Congress of Medical Education, Public Health, and Medical Licensure came a report that will forever be interesting, since these experienced educators and authorities expressed an opinion portentous to the future status of medical education.

“The marked contrast in views over those of other years

regarding medical education, and the general attitude of medical educators and members of state licensing boards toward the mandates of the Council of Education, were interesting to say the least.

“Chairman Bevan presented a study of the graduation age in 76 colleges that showed an average of 26.7 years. In view of this, the Council urges a propaganda toward lessening the time required in educating physicians, to the end that men and women may be able to enter their chosen field two years earlier.

“Non-medical educators discussed Chairman Bevan’s paper and advised re-organization of primary and secondary schools so that students may go from the high school directly into medical college. The report of the National Board of Medical Examiners brought forth a discussion which made clear the function of that body as only advisory, with no legal status.

“The Federation Committee for the classification of medical colleges made a report which does not coincide with that of the Council of the American Medical Association. It was made quite clear that the Council would be regarded only in an advisory capacity and there was evidenced some trend away from the dictates of said Council. From the Association of American Medical Colleges came the conclusion that ‘It would seem wise . . . that a standard be adopted for admission (of colleges) to membership in the Association, since heretofore the only standard has been that of the American Medical Association.’

“A motion passed referred to the inspection of colleges by the Council of the American Medical Association. An assessment of each college in membership was decided upon to cover the expenses of delegates who should accompany the Council on their tours of inspection, to protect the rights of colleges in membership or that expected to become members of the Association. On the whole, the attitude of the various bodies composing the Congress resulted in a situation more favorable to homœopathic colleges.”

The first question which concerns this Association in connection with the present situation is, What may we do to bring more homœopathic physicians to the South? What we do here will help also the school at large. If we can recognize the great need to check the growing depletion in our section, if we can look far enough ahead to realize that unless the depletion is checked this wearing process will in not a long while mean the extermination of our school, at least in the South, then we will be spurred to capable action. If we can see that this growing dearth of doctors affects both schools, is rapidly affecting a vital

interest of the people, that because of this the public will soon recognize more fully the great value of our homœopathic colleges and the work generally of our school, if we consider the situation in a way to include these true circumstances we shall regard it as an exceptional chance to develop the interests and spread the benefits of our School.

At the best, the undertaking is a vast one. It will require the most able brains and every resource that we possess. At this session of the Southern Association we can only make a start in the matter, but that start should be made and be of a kind that during the interval between meetings of the Association will work capably and unremittingly to accomplish the object desired. To expedite the launching of this movement as much as possible through forming a working basis to start from, we wish to offer a specific plan.

(1) Appoint a permanent committee at this annual meeting, with the wide scope of devising and executing means for the up-building of our school in the South.

(2) Compose the committee of representatives from every state under the jurisdiction of this Association, of representatives from every homœopathic college in the country, from the American Institute of Homœopathy, the College Alliance of the American Institute of Homœopathy, the official organ of the Southern Homœopathic Medical Association, the Journal of the American Institute of Homœopathy and every State Society and other homœopathic organization in the South.

(3) Give the committee the power to effect all other details of its organization and to act finally upon all matters that come under its jurisdiction.

(4) Provide financial means at this meeting whereby the committee may carry its work to a point of self-support.

(5) Offer to the committee the following suggestions:

(A) That they make a systematic effort to bring the greatest possible number of homœopathic physicians into membership and active participation with the Southern Association.

(B) To solicit coöperation for their object from all State Societies and other homœopathic organizations in the South.

(C) To study thoroughly the practical needs of medical graduates when entering practice. Consider the highest standard of teaching that may be given them in preparatory schools and medical colleges, that may be coördinated in a way to give the best training and to save the most time, and to make this the basis of an effort to set the average age for beginning work at a practicable degree.

(D) To give the College Alliance of the American Institute of Homœopathy the full support of this Association in every way

its aid may be needed in securing a fair and just classification for our schools.

(E) To demonstrate to the public the value of such institutions as training schools for doctors and as part of the medical educational structure of this country.

(F) To enlist the coöperation of homœopathic doctors in the South in securing students for these colleges.

(G) To inform students in southern preparatory schools concerning the exceptional opportunity just now being offered in the profession of medicine to those who are in earnest and who possess the necessary qualifications. To acquaint them with the reasons why our school in its breadth possesses decided advantages as a system of treatment and, therefore, special advantages to those who practice this school, and that students who are trained in our colleges receive broader training than may be secured in any school.

(H) To make every effort to establish homœopathic colleges in the South, in connection with State Universities, as a part of independent universities that are without a medical department, or, if advisable, when already an allœopathic college is established. Also, to establish an independent college and hospital wherever a favorable location is offered.

(I) To place the full influence of the committee and of this Association behind an effort to secure for homœopathic physicians in the South a proportionate quota of public positions that require professional training. This suggestion is not made to secure positions for our physicians, but because for various reasons our school should be so recognized.

(J) To utilize the press, lay and medical, wherever it is possible in a judicious way to state facts favorable to the homœopathic school, concerning its work generally and the advantages of our colleges.

Some of these suggestions offer a little opportunity for accomplishing the purpose desired, others of them offer more. Thus far the power and influence of this Association have not been enlisted for such a movement, so by making the effort, by utilizing every means available, with the aid and support of the Southern Homœopathic Medical Association, results must surely follow.

The first important consideration is the organization of a committee composed of capable men and women who will see the need for this effort and who will give some of their time to its accomplishment. Organization of the committee should be begun at once, so that during these sessions there will be full opportunity to perfect that organization and to get the work started, since another year will go by before the active members

of this Society are again together. Since writing the above, the lay press more and more frequently is publishing articles regarding the scarcity of doctors, some going so far as to point out the great need for more general practitioners, showing that they are beginning to learn the truth. A better understanding of these matters by the press and people will let them realize more fully the value of our homœopathic colleges as a source of supplying well-trained doctors, as also the good work of our school and its value directly to the people. The future of homœopathy seems to depend upon whether we are now able to look ahead and prepare for this coming era which will afford our school a better chance for development than ever in its history.

RELATIONSHIP OF THE PSYCHIC TO THE PHYSICAL FROM THE STANDPOINT OF THE NEUROLOGIST *

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As a text for my paper I take the 9th paragraph of Wesselhoeft's translation of Hahnemann's *Organon*, which reads as follows:

"During the healthy condition of man this spirit-like force (autocracy), animating the material body (organism), rules supreme as dynamis. By it all parts are maintained wonderfully in harmonious vital process, both in feelings and functions, in order that our intelligent mind may be free to make the living, healthy, bodily medium subservient to the higher purpose of our being."

Sec. 13. Hence disease (not subject to the manual skill of surgery) cannot be considered apart from the life-giving vital force.

Sec. 148. A medicine possessing the power and inclination to produce similar symptoms, or an artificial disease most similar to the natural disease to be cured, exerts its dynamic influence upon the morbidly disturbed vital force.

I want to emphasize —

- 1 — Modern advances in psychology are in the analytic study of the "dynamis" energies of individuals.
- 2 — Drug provings show a related pathology; hence
- 3 — Homœopathic colleges should teach pathology from the standpoint of the homœopathic remedy.

*Read before the Tri-County Society, Swarthmore, Pa., August 27, 1917.

Educators have accepted this idea or they would not have voted for it as an addition to the curricula of old school colleges and universities. A study of Homœopathy after this method outlines and defines the delicate drug action, for symptomatology of pathological conditions varies so little that we ever see the same pathology giving us the same symptomatology; this could never be said of drug effects, which, then, are more selective.

Symptomatology varies with the personality, and pathology varies with the intensity of drug action; to teach the one as opposed to or different from the other leads to confusion.

Professor Hawk of the Jefferson faculty has recently reduced his whole course in Physiological Chemistry to an eye concept, recognizing it to be about 71 per cent. accurate as against a possible 41 per cent. for ear concept alone, and in so doing unconsciously has rendered a service to the homœopathic school that is well worth our while to investigate.

His association of drug effects and pathology, pictured and taught from pictures, gives the student the best method of obtaining a working knowledge of *materia medica*, and, incidentally, if one had the opportunity to study the same he would find a homœopathic harvest, such as comparative study of distilled water and sodium chlorid, studies of zinc chlorid, digitalis, *nux vomica*, nitrate of silver, sodium bicarbonate, egg albumin — all from a pathological standpoint including gastric responses and symptoms, urinary findings, intestinal responses, temperatures, qualitative urine analyses and microscopic examination of tissues.

Psychologically, a man should gain his greatest good from within himself. In so doing he establishes a habit from within, and this habit becomes progressively more dominant. Upon this is based the growth of the mind which enables the doctor to express that habit in the outward service to his profession for the bettering of mankind who is to use the product of his mentally directed dynamic energy. For this reason it is every man's duty to present to his conscious working self the best that is within him, for we calculate that about one-tenth of the ideas received can be produced in the automatic expression of muscular sense. The habits of thinking or acting which deteriorate the mental calibre and character ought to be avoided, for in effect they make up nine-tenths of the influence on the mentality.

The old adage of pure thought leading to pure deeds is now translated into the disturbance of mental automatism. Furthermore, it is a known fact that thoughts centered upon habits so destructive crowd out constructive ones which might lead to a betterment of the automatism.

Following a physical infection the thought world is the first to be influenced, and through this infection the output of the mental sphere is brought down to a lower grade. Should the mentality be observed at this low grade it appears to be, or is apt to be mistaken for, the proper measure of the man. This strongly urges a man to put forth the best that is in him to control systemic infection.

The greatest study of mankind is man. The greatest educational development possible is the development of the individual. In these two thoughts lies the essential element of that which is constructive in medicine from a neurological and psychological standpoint, and fortunately for us Hahnemann pointed out many years ago, as fundamental in homœopathy, that which is now considered advanced psychology.

The homœopathic physician was the first to be instructed that the patient's mental state is an important factor in the prescription, and the more closely the personality is studied, the finer will be his differentiation in the selection of his remedy.

There is no such thought in any other form of therapy associated with drug action, therefore, it is important that the homœopathic physician and student pay especial attention to it.

The bearing or dependence of pathological symptomatology on mental symptomatology is now an accepted fact in medicine.

I feel free in asserting that I care very little for the finality of gross pathology, and within recent years a large part of the great endowments in medicine have been transferred to the study of things psychological, for the reason that in gross pathology very little progress has been made and it was thought wise to study the living in preference to the dead. This brings us back to the dynamis for want of a better term, or a study of the dynamic energy of the living organism for the mental control in the correlating functions of the living organism as expressed in the personality. We hear and read of the "dynamis" of drugs and other remedies — which is just a repetition of what homœopathy has taught for a century with, of course, many of the doubts in the minds of the older writers cleared up by our newer methods of investigations.

We now recognize the expression "dynamic energy," as personality, and our concept of that personality is oftentimes translated into terms of our own standard with consequent misunderstanding of the patient. Hence our failure at times to select the proper remedy.

Recognizing that the proper study of the personality is a correct estimate of the dynamic energy, it is the duty of the physician to estimate the latent or potential energy from the

physical basis — always bearing in mind the fact that it can be altered by psychic control.

Psychologists tell us that only one-tenth of the received mental impulses are capable of being reproduced in an expressed personality; therefore, it follows that the object of education is to enable the individual to assimilate those impressions and coördinate them with the best that has been stored within. This thought gives the patient a constructive, synthetic mentality which will invariably alter symptomatology as seen by the homœopath, simply because his interpretations are different from those of the average mind.

The study and development of these transitional states of personality is the province of the doctor, and not alone of the clergy or cults in teaching.

A constructive mentality of this character will enable the patient to exert a decided force on his dynamis, hence we are not alone dependent for prognosis on our pathology. A case in point of a male adult, 67 years, who came to Philadelphia as a contestant in a six-day-go-as-you-please run. He was debarred by reason of having a double mitral murmur, aortic stenosis and a consolidation in the right apex extending to about the third rib. He insisted on running and covered 117 miles.

To our pathological minds this man ought to have been dead and buried, but to the psychologist he was an active entrant into the physical world, for as he thought so he was.

It is also noted that the majority of men who retire from active business life die within five years of their retirement, no matter what their physical condition may be at the expiration of active business, whereas men who remain in active psychic touch with the business world retain their mental vigor and personality for many years. I have in mind now a man who at the advanced age of 86 refinanced and managed a business proposition to an excessive profit, and while a chronic invalid before attempting this, never experienced a sick day while actively engaged in his work. Therefore, it can be argued that the dynamic force of an individual is to some extent dependent upon the psychic control of the organism. Again this thought argues for the development of the individual in education as against any set rule for culture, and fortunately it was a homœopathic principle of analysis that developed this great psychological truth.

As concomitant treatment after the selection of a homœopathic remedy which will fit the totality of symptoms, I mention four physiological processes:

- 1 — Establishing the normal CO₂ coefficient where possible.
- 2 — Reduction of arterial tension.
- 3 — Construction of dynamic initiative.
- 4 — Repair of waste metabolism.

1 — Many of the cases met in the general practice of medicine are essentially those of autointoxication where the CO₂ coefficient is altered to a point where poisoning results. Here a rhythmical breathing should be instituted, not necessarily forced inspiration, but rhythmical ordinary breathing. To accomplish this takes exertion and persistence, but when once established the constructive domination of the will over the respiratory apparatus is well-defined.

2 — With the control of the breathing comes the next step, relaxation. As rhythmical breathing is established, arterial tension, which in the majority of cases is due to toxæmia, greatly above the normal, can be lowered and elimination of waste increased. This simple experiment can be tried in your wards at any time, and a difference of from 15 mm. to 20 mm. is often noted in the diastolic blood pressure.

3 — The volitional control of many of the functions of the body can be begun with the control of the breathing. The "I will" of the patient adds largely to the relaxation offered to the tense dynamic energy.

4 — The repair of waste by the protein group of foods is perhaps our greatest asset in neurology. There was a time when it was considered good form extensively to use fat foods and fat-producing foods, but we know now that this is not as beneficial as formerly supposed. Where the patient is unable to take large quantities of protein food I immunize that patient by means of protein allergen (how thoroughly homœopathic). Here also I would like to remark that when the protein content of the individual is raised by immunization you will find all your tests with tuberculin negative.

To sum up: It remained for the homœopathic school to point the way to advanced psychology in the sphere of mental symptoms, for what was laid down as a truth years ago is recognized today as advanced research.

The psychic control of that which is physiologic and pathologic enters into the homœopathic treatment of all neurological cases.

The protein content of the body may be indirectly raised by immunization.

The elimination of fear in neurotic persons and the control of the mind are essentials in treatment. The "I should worry" philosophy has cured more neurotics than all neurologists.

EDITORIAL

BOOKS for review, exchanges and contributions — the latter to be contributed to the GAZETTE only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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WORRY

In another part of this number there appears a paper on the relation of "Mind and Body," by Dr. W. Franklin Baker. He ends by a statement not borne out by argument in the body of his paper but none the less a profound truism. He says the "I should worry" philosophy has cured more neurotic persons than all the neurologists.

The tendency of the human mind, in that evolution which the purists like to call its emancipation from the mundane, is to lay greater and greater stress upon the trivial and the unimportant. This is probably in part due to our universal system of limited education in America which teaches us enough to worry, but not enough to single out that which is important from that which is trivial. A German professor who was told that in America we had an adage which said that a little knowledge was a dangerous thing, remarked feelingly, "*Ach mein Gott!* how much in danger we all are." If this is true of the really learned, how much more true is it of the rank and file.

How many of us with our noses "close to the canvas" of our own lives can get perspective enough to discern the high lights and shadows and give them their proper relationships to the main theme of our life picture.

It is just here that the physician, especially if he is a student of modern psychotherapy and sociology, is in a position to aid the neurotic patient in separating the wheat from the

chaff of life and starting the nervously unstable on the road to stability and usefulness, and to teach him to eliminate worry by acquiring a sense of proportion and by placing the right values on his experiences.

There is much to be said in favor of a kind of philosophy which permits the individual to realize that he is justified in assuming that if there are one hundred million persons in the world only that fraction of its care and responsibility is his share. Worry is often said to be the cause of many ills. We believe that in most instances this is placing the cart before the horse and that practically all worry can be shown to have a pathological substratum.

There are persons who seem to have a care-free abandon from childhood, but they are subnormal and rarely a success in life. There are temperaments which from the start seem to sense their responsibilities and shoulder them manfully. This is normal. But there are many who overestimate their obligations and take life and themselves too seriously; their ego is not well balanced and tips the scale to the introspective and morbid side. These persons lack humor; they never get far enough away from their own little sphere to get a perspective and view the world as an onlooker or something apart from themselves. They never feel understood — they are fearful and indecisive. Theirs is the temperament that worries. They need reassurance and some one to lean upon. They are very suggestible and always get help from the positive advice of one who stimulates confidence. If through explanation they can be given the "Ish ka bibble" attitude of mind it is assuredly of great help. And who can better perform this mental surgery than the well-informed physician?

A. H. R.

HOMŒOPATHIC PERIODICAL LITERATURE

Pacific Coast Journal of Homœopathy. August, 1917

1. *The single remedy.* 361. Martin, J. J.
2. *Viscum Album or Mistletoe.* Its pharmacology and therapeutic use. 372.
3. *A materia medica talk at University of California Medical School.* 375. Boericke.

Ingestion of a drop of the lx dilution of glonoin causes, after two or three minutes, "a throbbing headache, an increased pulse, full, bounding, large, rather soft, some 20 to 40 beats more than normal. With this [there is], some giddiness, fullness of head and heart and sense of constriction of throat. This will last from one to four or five hours." In other words,

glonoin "accelerates the pulse, relaxes the arteries, produces a feeling of fullness all over the body, but particularly in the head and temples."

Necropsy of a fatal case revealed hyperæmia of the cerebral membranes and brain substance, and of the posterior regions of the lungs.

For its homœopathic action glonoin should be selected in the treatment of cerebral hyperæmia, when the "fullness is tense; temples and top of head feel as if they would burst; head feels too large and full."

Glonoin is more violent than belladonna, which "is more persistent, regular, deeply anchored in its organic inflammations and tissue changes. Glonoin has more tendency to sudden and violent irregularities of the circulation. . . ." A patient with a glonoin headache "has confusion of ideas; loss of sensation of location is very characteristic; . . ." The face is more livid than that of a belladonna patient.

"Given a patient with surging of blood to the head and heart; bursting sensation, throbbing, every pulsation painful; whole body throbs; brain feels too large, full, bursting; these violent congestive symptoms . . . caused by exposure to sun, heat (hence in sunstroke), or from working under strong gas lights and near furnaces; congestions at climacteric, or from suppressed menstruation or other discharges; such symptoms will always yield to the timely administration of glonoin in minute dosage. Put half a dozen drops of the third or sixth attenuation in a glass of water and [give] spoonful doses every few minutes."

In large doses glonoin is a useful stimulant in cases of sudden collapse from failing heart, acting more quickly than ammonia. Drop doses of the one to five per cent. solution should be given, effects appearing within fifteen minutes.

4. *Some heart remedies and their application.* 393. Casse-day, F.

Bryonia — in tachycardia due to over-exercise, especially when irritability and ill-humor are present.

Convallaria majalis — has some diuretic effect, and is therefore useful in dropsical effusions of cardiac origin.

Digitalis — rarely prescribed homœopathically; given to increase strength of heart action, particularly in auricular fibrillation; does not give permanent relief.

Cactus — valuable for reducing blood pressure, improving general nutrition, and for preserving arterial elasticity.

Spigelia — useful in pure neuroses of the heart and in cardiac involvement following acute polyarthritis.

Aromatic spirits of ammonia — combined with equal parts of a simple syrup — given in teaspoon doses for its stimulating action; no depression follows its use.

Adrenalin — in extreme cases, dropped in the eyes or given hypodermically or *per rectum*.

Conium — irregular, intermittent heart action, and pulse beats of unequal length.

5. *The psora theory of Hahnemann*. 399. Cowperthwaite, A. C.

September, 1917

6. *Iritis and glaucoma*. 414. Buffum, J. H.

7. *The physiological and pathological bases of drug action*. 421. Brooks, J.

8. *The relationship of the physical structure to pathology*. 426. Crutcher, L. P.

9. *Treatment of ivy poisoning*. 428. Dieffenbach, W. H.

10. *Some remarks on vascular tension: its importance in pathology and therapeutics*. 432. Cartier, F.

11. *Medical military service*. 439. Cowperthwaite, A. C.

The North American Journal of Homœopathy. July, 1917

12. *Cardiac impairments*. 393. Broughton, L. D.

Any examination of the heart cannot be considered complete without stimulating the heart to more active motion. To accomplish this, stand with feet close together and arms extended above the head; bend body backward and then, bringing arms and body forward, touch floor with finger tips. This exercise must be done with swinging motion so as to bring a large number of muscles into play. The number of times depends upon the result, but usually five or six such active swingings of the body will run the number of heart beats above one hundred to the minute, and the defects that are perfectly compensated at rest will become apparent.

In persons with thick chest walls and large abdomen, whose heart sounds are indistinct, the writer depends upon the amount of dyspnœa caused by the bending exercises.

13. *The folly of the "first born" theory*. 403. Redfield, C. L.

14. *Compulsory health insurance — some conclusions and practical suggestions*. 407. Hoffmann, F. L.

15. *An epitome of comparisons in homœopathic materia medica and therapeutics*. 423. McMichael, A. R.

This installation of the epitome includes a consideration of

symptoms and differentiating characteristics of *arsenicum album*, *aranaea*, *apis*, *cedron*, *capsicum*, *eupatorium perfoliatum*, *gelsemium*, *ignatia*, *ipecac*, *natrum muriaticum*, *nux vomica*, and *quinin* in the treatment of intermittent fever; of *phosphorus*, *creosote* and *lachesis* in hæmorrhage; of *hyoscyamus*, *nux vomica*, *ranunculus bulbosus*, *sulphuric acid*, *stramonium*, *agaricus*, *arsenicum album*, *capsicum*, *cannabis indica*, *coffea cruda*, *lachesis*, *lac caninum*, *ledum*, *opium*, *phosphorus*, *spiritus glandium quercus* and *strophanthus* in alcoholism; and of *bryonia* and *sulphur* in "early morning diarrhœa."

16. *Infinitesimals*. 430. Guild-Leggett, S. L.

August, 1917

17. *Diseases of the colon and their etiological relation to other diseases of the body*. 465. Ireland, D. V.

18. *The pathology of pneumonia*. 470. Liebau, J.

19. *Bio-dynamo-chromatic diagnosis; discovery and development*. 471. White, G. S.

20. *Food, its use and abuse in the human body*. 474. Sales, I. J.

21. *Non-toxic vaccins*. 488. Wood, F. M.

September, 1917

22. *Concussion*. 509. Bond, S. E.

23. *Physical methods in the treatment of stomach disorders*. Wells, H. O.

24. *Indications for reshaping cæcum and colon*. 518. Guild, W.

25. *The prevention of cancer*. 519. Perdue, E. M.

26. *Results following homœopathic prescribing*. 523. Johnson, M.

27. *Let surgery remarry its divorcee, medicine*. 525. Hings-ton, J. W.

28. *Reasons why more of the sick are not healed*. Antisdale, E. S.

29. *Some remarkable results with ultra violet rays*. 537. Plank, T. H.

30. *What I did and what she did*. 540. Romer, J. F.

Forsooth, a charming title; it stimulates imaginative faculties. Perhaps, it is cruel to explain that the article deals with a case of tuberculous arthritis in a young woman treated "in the dark room twice each day, half an hour each time, under the ruby flashlight, breathing oxyolene vapor. . . ." This and a few other measures wrought great improvement. Should

you doubt this, R. promises to let you determine how flexible the patient's ankle is "when next you see her in the garage, for she is now the *Gasoline Girl*."

31. *Homœopathic indications in pneumonia*. 542. Grimmer, A. H.

The following remedies are considered: *aconite*, *belladonna*, *veratrum viride*, *bryonia alba*, *ipêcac*, *antimonium tartaricum* and *phosphorus*.

H. U.

The Hahnemannian Monthly. June, 1917

32. *Syphilis a medical disease*. 321. Bartlett, C.

"In diagnostic work, I have long since recognized that when examining a case of unusual difficulties, the chances are all in favor of the condition under investigation being one of the following pathological states: 1. tuberculosis, 2. malignant disease (carcinoma), 3. interstitial nephritis, 4. arterio-sclerosis, 5. hysteria, 6. neurasthenia, 7. SYPHILIS."

In the ætiology of heart lesions syphilis is operative more frequently than clinical experience suggests. A large share of the late lesions of syphilis are based upon arterial changes. Aortic aneurysm is, perhaps, always of syphilitic origin. Angina pectoris is probably frequently due to syphilis.

Syphilis of the stomach is not as rare as was previously believed; it may simulate carcinoma or ulcer.

In the liver syphilis may produce pericellular cirrhosis, gummata or interstitial hepatitis.

"With the exception of certain diseases possessing a well defined symptomatology, and peculiar to early life, as Friedreich's ataxia, epilepsy, poliomyelitis anterior, chorea, *etc.*, fully 80 per cent. of all organic diseases of the nervous system occurring prior to the fiftieth year of life are of syphilitic origin."

33. *Focal infection*. 349. Hillegas, W. M.

34. *The diagnostic value of the Schick test for immunity to diphtheria*. 355. Hopp, G. A.

The technic of the test is given. The test is useful as a determinant of immunity to diphtheria, and valuable, therefore, in culling cases that do not need prophylactic antitoxin injections.

35. *Abnormal folds of peritoneum about the ileo-colic junction*. 361. Hammond, W. N.

36. *Methods prescribing*. 364. Van Denberg, W. W.

37. *Keratitis. The value of dionin in the treatment of pathological conditions of cornea*. 367. Shute, A. C.

38. *Present status of trachoma*. 371. Gowens, H. L.

39. *Gall-bladder disease*. 373. Roberts, F. W.

August, 1917

40. *The intrinsic value of the homœopathic materia medica.*
 449. Guernsey, J. C.
 41. *Comparative value of internal homœopathic and local treatment in some diseases of the eye.* 459. Hillegas, W. M.
 42. *The clinical significance of lumbar pain as found in genito-urinary practice.* 463. Sprague, E. R.
 43. *Life and reminiscences of Dr. Constantine Hering.*
 472. Eastman, A. M.

Homœopathic Recorder. May, 1917

44. *Know the homœopathic remedy.* 195. Rauterburg, L. E.

Discusses a few remedies, with illustrative cases. Apparently little or no attempt is made to individualize the cases, *conium* being recommended for tumors of the breast (nature not specified), *lactuca* for deficient flow of milk, and *arnica* for all results, remote or immediate, of injury. A more complete presentation of the ætiology, pathology, and characteristic symptoms would make the article somewhat more convincing and serviceable.

45. *Early diagnosis of tuberculosis.* 202. McElwee, L. C.
 A review of the subject, with a description of tuberculin therapy.

46. *Excerpt of unintentional provings of arsenic.* 211. Baker, W. F.

A rather sketchy outline of the results observed in 60 cases of industrial arsenic poisoning.

47. *A case of splenomyelogenous leukæmia.* 212. Faris, R. S.

A fairly typical case, in which treatment with benzol, *chininum arsenicosum* 2x, and the Roentgen-ray resulted in a reduction of the total number of leukocytes from a maximum of 577 400 to 32 000 per cmm. in seven months. The omission of differential counts detracts considerably from the value of the report.

48. *Two cases of acute mastoiditis.* 216. Boynton, W. E.

One case showed on operation a serious destructive process in the mastoid, yet had no symptoms of mastoid involvement (was recovering from otitis media) until twelve hours before operation. The other case presented the picture of an extensive mastoiditis, with involvement of the neck tissues, yet recovered completely after refusing operation.

49. *On the firing line.* 217. Jones, E. G.

The characteristic rambling remarks on various subjects,

medical and otherwise. *Phytolacca* is lauded as a cure for cancer of the breast (no individualizing symptoms given). Also, for "spinal irritation," the following treatment is recommended: *Tr. belladonna gtt. v* every three hours; *quinin gr. ii* before breakfast, and dialyzed iron, *gtt. xv* after dinner and supper. The title of the article suggests a most appropriate place to send this brand of homœopathy; if it does not perish, we may hope at least that a few of its encumbering excrescences may be shot away.

The Chironian. May, 1917

This is the Commencement Number, and is devoted to the history and prophecy of the Class of 1917 of the New York Homœopathic Medical College, together with biographies of the members of the class, and several humorous articles.

June, 1917

50. *Treatment of diabetes.* 459. Boynton, L. R.

A review of the subject, stress being quite properly placed on the importance of diet.

51. *The teaching of urology at Flower Hospital.* 463. Jouard, F.

Chemical urinalysis and urinary microscopy are taught by one chair in one year. The advantages of this correlation are explained.

52. *Some cases from the Rectal Clinic at Flower Hospital.* 472. von Bonnewitz, O. R., and Ferguson, F. C.

53. *Fever occurring during the puerperium from a clinical standpoint.* 480. Voorhees, W. D.

In addition to septicæmia, sapræmia, and pyæmia are mentioned as causes of fever: tuberculosis, neurosis, tonsillitis, influenza, malaria, lactation, mammary infection, and intestinal putrefaction. The treatment and differential diagnosis of these various conditions are discussed.

w. o.

IMMUNOLOGY

Toxin and antitoxin of and protective inoculation against bacillus Welchii. Bull, C. J., and Pritchett, I. J. *Exper. M.*, 1917, xxv, 119

The prophylactic and therapeutic properties of the antitoxin of the bacillus Welchii. Bull, C. J. *Ibid.*, 603

As a result of thorough studies on five strains of *B. Welchii* the above authors have demonstrated that this bacillus, which is responsible for gaseous gangrene, produces a "true," or "soluble" exotoxin, which corresponds in all essentials to the

toxins produced by *B. diphtheriæ* and *B. tetani*. Successive injections of carefully graded doses of this toxin in pigeons and rabbits give rise to active immunity. The serum of immunized animals neutralizes the toxin *in vivo* and *in vitro* in multiple proportions.

In the later studies it has been demonstrated that it is possible to confer upon guinea-pigs a passive immunity of about two weeks duration to *B. Welchii* toxin by means of a prophylactic administration of the antitoxin. Guinea-pigs which have received prophylactic doses show pronounced resistance to infection with the various bacilli for a period of twelve days. Established infections in guinea-pigs with *B. Welchii* have been arrested and controlled by means of the antitoxin. Bull's opinion is that it will be possible to prevent *B. Welchii* infection in man by the prophylactic use of the antitoxin, and developed cases of the infection may be controlled by therapeutic injections of the same agent.

Although passive immunity is of only about two weeks duration, this will be sufficient in the majority of cases, since only sporadic instances of *B. Welchii* infection arise later than the tenth day after the injury, and the greater number occur within forty-eight hours of that time. The indications are that early infectious cases can be readily arrested and the advanced and severe ones ameliorated if not wholly checked, so that surgical interference may be resorted to with greater effectiveness. In man, the antitoxin should be administered intravenously and probably locally, about the wound, as well.

Intracutaneous reactions in infectious diarrhœa. Baker, H. M. J. Immunol. 1917, ii, 453

Intracutaneous tests were done on thirty-three cases of diarrhœa and on thirteen control cases. The antigen used was glycerolated extract of dried bacterial protein of the Shiga, Flexner, Strong and Hiss Y types. The intracutaneous reactions gave 100 per cent. negative results in the control cases. In those with infectious diarrhœa, positive reactions were obtained in 85 per cent.

The organism of the infectious diarrhœa group was isolated in 55 per cent. of the cases. Of the remainder, 12 per cent. showed agglutinins, and 25 per cent. showed characteristic Gram-stained smears with typical history. Differentiation of the type of *B. dysenteriæ* was not possible by means of the intracutaneous reaction; but positive or negative results are shown in from six to eighteen hours whereas it frequently takes from one to five days for the bacteriologic examination to be completed.

The value of the von Pirquet test as controlled by necropsy findings. Knox, J. H. M. Am. J. Dis. Child. 1917, xiv, 47

Knox concludes from the study of sixty-eight cases that the von Pirquet cutaneous test with tuberculin is a most valuable aid in the detection of tuberculosis in children; that a positive reaction invariably indicates a tuberculous focus in the body, and that a persistently negative reaction shows that there is no tuberculous lesion except in those extremely ill patients where the presence of tuberculosis can readily be detected by physical examination.

Further studies with the Schick test. Zingher, A. Arch. Int. Med. 1917, xx, 398

The low percentages of non-immunes among children over five years of age explain the relative infrequency of diphtheria outbreaks in many institutions. They also represent, however, an encouraging factor in greatly limiting the total number of children that would need to be actively immunized against diphtheria.

If an outbreak of diphtheria occurs in such an institution, the non-immunes can be easily selected by the Schick test for passive immunization. A considerable saving of antitoxin can thus be effected and the unnecessary sensitization of a large number of children, with the frequently disagreeable after-effects, avoided.

The number of pseudoreactions varies in different age groups, but is considerable after the eighth year of life.

The intensity of the pseudoreaction varies from a simple redness to a reaction showing marked redness and infiltration.

For accurate work, or where the test is to be read at the end of thirty-six to forty-eight hours, the control test with heated toxin is important.

The antitoxin immunity which an infant derives from its mother lasts for about six months after birth. The Schick test illustrates in a very definite way the protection against diphtheria which an infant enjoys during the first half year of life.

Where the mother gives a positive Schick test, her infant will also generally show a positive test during the first six months of life. Where the mother gives a pseudoreaction, the infant, if young enough, will as a rule show a negative and not a pseudoreaction. The susceptibility of the tissue cells to the bacillus protein, which gives the pseudoreactions, is not transmitted from the mother to offspring.

The largest number of positive Schick reactions is found in children between six and eighteen months of age. This is therefore the best time, not only to test the children, but also

actively to immunize with toxin-antitoxin those who show a positive reaction.

A study of poliomyelitis. A report of the work of the meningitis division of the research laboratory New York Health Department in the 1916 epidemic. Neal, J. B., and Abramson, H. L. Arch. Int. Med., 1917, xx, 341

Fifty pages are given over to a consideration of the clinical and laboratory work, to studies in pathology and to research work. There are forty-six references to valuable literature on this subject.

The research work includes studies on the gold-chlorid test, quantitative chemical tests in spinal fluids, animal inoculation experiments and serum therapy in experimental poliomyelitis.

The utilization of the immune response in renal tuberculosis. Bonime, E. Am. J. M. Sci., 1917, cliv, 469

In a philosophic treatise on this subject, confined mostly to generalizations, Bonime makes the following comment:

As a general rule renal tuberculosis is diagnosed only after considerable extension of the process when permanent damage has resulted. An early diagnosis is essential in the production of a permanent cure. One of the best methods of making an early diagnosis is by means of eliciting a focal reaction by a subcutaneous injection of tuberculin. This can be done by three or four inoculations, forty-eight hours apart, beginning with 0.0001 cc. of O. T. and increasing each succeeding dose to about five times the last dose until a temperature of one degree, or as little as possible above that, is produced. The final dose of 0.001 of O. T. if negative will determine the test. However, the diagnostic feature of a tuberculin test is not a local reaction at the point of inoculation; it is not in the rise in temperature; but it is the focal manifestations that occur during the constitutional reaction. The focal reaction consists of a hyperæmia around the active lesion wherever that may happen to be, with the consequent exaggeration of symptoms that go with the organ in which the lesion occurs. Being in the kidney the focal manifestations will lead to a marked increase in frequency of micturition, any pain or discomfort will be exaggerated and very frequently tubercle bacilli will appear in the urine during the constitutional reaction when repeated examinations previous to the test failed to demonstrate them.

Immunotherapy in the past has been applied to cases that are practically hopeless to begin with and hence has been unjustifiably discredited. Patients with renal tuberculosis which

has been diagnosed early are usually in good physical condition and the orthodox hygienic, dietetic, and climatic treatment theoretically can offer but little aid in a cure. In these cases exists a combination of circumstances all of which are already favorable to the production of a natural immune-response against the tubercle bacilli except that the mechanism producing the immune response is faulty. The stimulation of this mechanism with tuberculin remains the only logical early treatment.

Another feature which has tended to hinder the favorable results of tuberculin treatment is the frequent presence of mixed infection which by itself is often capable of keeping up the pathologic process. Bonime recommends inoculations with stock vaccin of *B. coli*; streptococcus, and *staphylococcus albus*. [It would seem far more logical to determine precisely the type of organism responsible for the secondary infection by culturing a catheterized specimen of urine, then to prepare and administer an autogenous vaccin.]

The treatment of bronchial asthma by vaccination, with a report of cases. Sicard, M. H. Am. J. M. Sci., 1917, cliii, 856

A large group of cases is considered to be due to the presence of bacteria; primarily, *Streptococcus viridans*, and *Streptococcus hæmolyticus* secondarily, *Micrococcus catarrhalis*. These cases occur with bronchitis and sometimes run an acute course with fever, cough, and sputum. An autogenous vaccin is best given twice a week in constantly increasing strength for from twelve to twenty injections. It is much better to give such dosage that a local reaction occurs. Usually the first dose of streptococcus is 100 000 000. This is increased to 1 000 000 000 and sometimes in obstinate cases to 2 000 000 000 or even 3 000 000 000. *Micrococcus catarrhalis* is considered to be a mouth infection in asthma, and vaccination with this organism seems to have had very little action on the asthmatic attacks when mixed infection is present. Sixteen cases are reported; six cleared up after the first or second injection, four improved progressively, one improved but had occasional short relapses. One was finally cured after two years, and one improved. The case with tuberculosis remained unimproved. The case histories and details of inoculation are given.

The treatment of circulatory failure in acute infections. Goodridge, M. *Ibid.*, 107

Goodridge discusses the results obtained by thirty-four observers and comes to the following conclusions:

There is neither clinical or experimental evidence to support

the belief that failure of the vasomotor center is the cause of the symptoms of circulatory failure which occur in acute infectious disease.

While it has been experimentally shown that the heart is not exhausted in animals dying of acute infectious diseases, there is no positive proof that the myocardium is wholly efficient in its effect to maintain the circulation in the body of the living animal under such circumstances.

The hypothesis which suggests the existence of a third centre controlling the flow of blood is important even though it is not yet proved.

Alcohol and strychnin are absolutely worthless drugs in the treatment of circulatory failure.

Epinephrin and pituitary extract are useful in the treatment of sudden circulatory collapse, but their action is not a sustained one.

The nitrites are valuable additions to our therapeutic armamentarium in the treatment of pulmonary œdema under certain circumstances, because of their selective action in constricting the pulmonary arteries.

Caffein increases the flow of blood when the supply to the heart is "inadequate," probably by an action on some mechanism outside of the heart.

One of the most important contributions of recent times on the action of digitalis is the proof electrocardiographically that it exerts the same effect on the heart in febrile conditions that it exercises in non-febrile states, whether the rhythm is initiated in the normal pacemaker or not.

How closely do the Wassermann reaction and the placental histology agree in the diagnosis of syphilis? Slemons, J. M. *Ibid*, 212

The comparative study of the Wassermann reaction and the placental findings in three hundred and sixty consecutive confinements indicates that the tests agree absolutely in 95 per cent. of obstetric patients. The chief source of confusion lies in the presence of toxæmia of pregnancy which may be responsible for the faintly positive reaction. In these circumstances the fixation should not be taken to indicate syphilis. Accepting that interpretation, the serologic test and the placenta agree in 99 per cent. If the contradictory cases are judged in the light of subsequent serologic tests upon the mother, of facts in her history, and of the results of clinical or pathological examination of the foetus, they may be properly classified.

S. B. H.

Complement fixation in tuberculosis. Complement fixation as an aid to the clinical diagnosis of active cases of tuberculosis is discussed by S. A. Petroff, Trudeau, New York, in an article in the *American Review of Tuberculosis*. He himself worked with three antigens, a polyvalent potato broth filtrate, a sodium hydrate extraction of dried pulverized tubercle bacilli and a methyl alcohol extract. The usual hæmolytic system was used, the sera of patients were inactivated and the bacteriolytic system incubated for one and a half hours. By using different antigens for each patient he obtained positive reaction in 199 out of 212 clinically active cases, in 89 out of 158 quiescent cases, in 5 out of 58 cases apparently cured for more than two years, in 3 out of 78 normal individuals, in 65 out of 166 suspected cases of whom some developed tuberculosis later, and in 6 out of 41 patients suffering from other diseases, one of whom showed recent tuberculosis at autopsy. Complement fixation did not parallel the tuberculin reaction until the patient became moribund.

Guinea-pigs inoculated with a virulent strain of human tubercle bacilli first gave a positive complement fixation test on the fifth or sixth day after inoculation, which persisted for about two weeks and then gradually decreased. When a bacillus of low virulence was used producing only a localized tuberculosis, the positive reaction persisted for a longer time. Rabbits, inoculated first with human and subsequently with bovine tubercle bacilli, gave strong positive complement fixation reactions with the methyl alcohol extract antigen, while those inoculated with only the bovine strain usually gave a negative reaction with this antigen. A tuberculous cow gave a strongly positive complement fixation test at the height of general tuberculin reactions. After a lapse of five months the complement fixation test was negative and 1.5 c.c. of concentrated O. T. subcutaneously injected did not cause tuberculin reaction. The animal was then repeatedly injected intravenously with sodium hydrate antigen with the gradual development of a strongly positive complement fixation test.

Of 376 cases giving a positive complement fixation test for tuberculosis, Wassermann reactions were obtained in 82 with cholesterinized heart extract antigen, while only nine reacted to crude alcoholic and acetone precipitate antigens. These nine gave a history of syphilis.

DIAGNOSIS AND THERAPEUTICS

Acute pericarditis. Robey, W. H. Am. J. M. Sci., 1917, cliii, 529

In an analysis of seventy-eight necropsies and of a literature embracing ninety-one titles, Robey has drawn the following conclusions:

Acute pericarditis is a secondary infection. Several other lesions were found in every case in the seventy-eight necropsies.

The extension of adjacent structures is probably uncommon, the vast majority of cases occurring from infection of the sac through the blood stream.

Pain in the præcordial area is not as common as is supposed. A good many mild cases pass unnoticed because there is neither pain nor distress. In rheumatism with an acute heart the pain and arrhythmia may be noticeable at first, but later when all structures of the heart are involved the picture is one of general cardiac and circulatory embarrassment. Pain is so much more common in pleuritis, and pneumonia plays such a factor in pericarditis, that it is often difficult to separate the two.

The difficulty in diagnosis is illustrated by the fact that acute pericarditis was recognized clinically only 100 times in 34 467 cases and 12 times in 78 necropsies at the Boston City Hospital. Pneumonia is the chief agent in the production of purulent and of fatal pericarditis. Rheumatism may cause a greater number of cases of all types, but the figures are open to doubt, as they include all grades of severity, and many can be studied from their inception, while in a rapidly progressing infection like pneumonia the changes in the heart may be masked by adjacent physical signs and the cardiac and respiratory distress of the patient. Rheumatic pericarditis should always be thought of, especially in young adults, when the signs of cardiac failure are out of proportion to the other cardiac physical findings. Pneumococcus pericarditis or myocarditis, or both, should be considered, especially in young or middle-aged adults, when the heart shows failure of compensation before the crisis or after it when there is fever and delayed convalescence.

The prognosis in acute pericarditis following acute arthritis is generally favorable to life; the extent of the damage to the subsequent function of the heart cannot be determined, of course, immediately. In the clinical protocols of this series, acute arthritis was not found once. Pneumococcus pericarditis is grave at any stage. Tuberculous pericarditis is not common, and is usually a late involvement in an advanced case.

In mild cases of fibrinous pericarditis or of moderate effu-

sion, especially when an accompaniment of acute arthritis, treatment of the infection and local application to the præcordia will often suffice. When the progress is unsatisfactory, the physical signs increasing and the diagnosis is doubtful, paracentesis is imperative.

Frequent examinations during the infection and for some time after are very important. A thorough search for and the eradication of foci should be conducted in every case.

The effect of anæsthesia and operation on kidney function as shown by the phenolsulphonphthalein test and urinary analysis. Colp, R. *Ibid.*, 868

Upon the whole, the average case after thirty-six hours postoperative shows very little change in kidney function as demonstrated by the phenolsulphonphthalein test, although 25 per cent. showed urinary changes, which in ten days time were again negative.

The functional activity of the kidney is depressed as the length of anæsthesia is increased; in short anæsthesias the kidney might even appear to be stimulated to a slight degree.

As age increases the threshold activity of the kidney is lessened. Nervous patients, anæmic, obese, and arteriosclerotic patients as a rule, show some effect of their physical or psychic state on kidney function.

Preëxisting conditions of albuminuria have a tendency to decreased phthalein excretion, and those cases which have a decreased phthalein excretion, in the majority of cases, show effects of kidney depression as evidenced by careful urinary analysis, although these effects are only temporary.

For long anæsthesias and apparently for nervous patients, gas and oxygen as an anæsthetic seems to have the least irritating effect on kidney function, as demonstrated especially by urine examination.

The phenolsulphonphthalein elimination in infants and young children. Gittings, J. C., and Mitchell, A. G. *Am. J. Dis. Child.*, 1917, xiv, 174

The observation is confirmed that the elimination of phenolsulphonphthalein is not markedly decreased in any disease other than renal.

Even the youngest infants and children show about the same capacity for phthalein elimination as do adults.

Preliminary catheterization in the absence of retention of urine is unnecessary.

For purposes of comparison, a uniform technic should be adopted and maintained.

We believe that in children a single collection exactly two hours after the injection into the lumbar muscles of 6 mgm. of phthalein, should be the method of choice. The necessity for continuous or repeated catheterization thereby would be avoided.

An entirely different standard must be used for the accelerated output resulting from intravenous injections. The latter need only be employed when local conditions, such as marked œdema, prevent the use of the intramuscular route.

A study of renal function in patients convalescing from acute fevers. Bookman, A. Arch., Int. Med., 1917, xx, 112

Renal functional tests carried out on a series of patients after acute fevers led to the following conclusions:

Without other signs of nephritis, most of them showed distinctly impaired function.

The greatest disturbance was shown by the phenolsulphonphthalein test.

Nocturnal polyuria was also frequent, though usually slight.

In interpreting the results of functional renal tests, the influence of a preceding febrile disease must always be considered.

Because of the fact that severe functional impairment may be transitory or dependent on extrarenal factors it is necessary, in order to obtain prognostic information, to repeat functional tests during and after convalescence. The absence of albumin in cases after fever is by no means a guarantee that the kidneys are normal.

Phthisis pulmonalis and other forms of intrathoracic tuberculosis. Gekler, W. A. *Ibid.*, 32

Gekler's work is based on Roentgenographic examinations of over 600 patients with all forms of tuberculosis and clinical and laboratory observations of over 2 500 such cases. He summarizes his studies as follows:

The primary tuberculosis of children is the result of direct inoculation by inhalation of either dried bacilli or droplets containing bacilli. The primary lesion is usually small and very often near the surface of the lung. The regional bronchial gland tuberculosis of the adult may be a flaring up of a latent process which dates back to childhood, or may be the result of the infection of an adult who has never before come in contact with tuberculosis. Here again the symptoms are caused by the glandular disease.

Phthisis pulmonalis is a bronchogenic metastasis from a

diseased gland. In rare instances it may be caused by the reinfection from without of an already infected individual.

Pleural tuberculosis is a hæmatogenous metastasis which also very often comes from a bronchial gland. This hæmatogenous metastasis may be such as to result in a general miliary tuberculosis, or in an abortive miliary tuberculosis with local manifestations in the kidneys, joints, *etc.*

Lymphangitis tuberculosis as a clinical entity is a rather uncommon condition, in our experience, and is the true tuberculosis granuloma of the lungs, and presents a very different type of disease than any of the others. It is usually benign, with a good prognosis.

In many instances — we might say, in the majority of instances — tuberculosis is a cryptogenic disease, and the organic manifestations are due to bronchogenic or hæmatogenous metastasis. From the standpoint of therapy it is of immense importance, just as in other cryptogenic processes, to discover the crypts and use such treatment as will inhibit metastasis, rather than try to treat the metastatic disease after it has once manifested itself. Particular stress should be laid on the diagnosis of bronchial gland tuberculosis before the development of metastasis with its very uncertain outcome.

S. B. H.

Renal function in tuberculosis. Funk, E. H. Am. Rev. Tub., 1917, iii, 145

Funk describes the relation of renal function to prognosis in pulmonary tuberculosis. The phenolsulphonephthalein test of Rowntree and Geraghty was used because of its simplicity and general utility in a large series of observations. The ordinary chemical and microscopical urinalysis and a phtalein test were made on admission and at intervals afterward, and in a few cases these observations were followed to autopsy. Twenty-four patients with incipient and one hundred and fourteen with advanced tuberculous lesions in the lungs were selected. Among the former structural changes could not be demonstrated and the eliminative power was apparently normal. Among the latter structural changes were present in a large number and among these the mortality was high. Impairment of renal function was not marked in the average case. Structural changes in the kidney at autopsy were frequently demonstrable. The author confirms the findings of Walsh in the frequency of cases showing acute parenchymatous nephritis, chronic nephritis, amyloid degeneration, cloudy swelling, passive congestion, and hyperæmia. His conclusions are as follows:

1. The renal function in incipient pulmonary tuberculosis is good.

2. The renal function in advanced cases of pulmonary tuberculosis is reduced only when there is evidence of structural damage to the kidney. The impairment of function is not such as to be of itself of serious prognostic import.

3. The presence of albumin and casts in the urine with the consequently graver prognosis suggests that the kidney is participating in a generalized destructive process involving the anatomical integrity of the tissues of the body and that in spite of this the functional efficiency is maintained to a fair degree to the last days of life.

4. Death due to renal insufficiency is rare in pulmonary tuberculosis in spite of the frequent structural changes in the kidney in the last six months of life.

5. Our studies with regard to diet have shown no reason why all types of tuberculous patients should not be abundantly fed. However, when evidences of a renal lesion were present and the function at the minimum normal point, or slightly below, we have reduced the protein intake and increased correspondingly the carbohydrates and fats. Certainly protein excesses (as one occasionally sees in the giving of many eggs) should be avoided.

What Massachusetts is doing to prevent and control tuberculosis. Hawes, J. B. ii. *Ibid.*, 157

In 1898 the Rutland State Sanatorium, the first of its kind, was opened. Only incipient cases were admitted. Little progress was made until 1907, when a commission with Dr. Arthur Tracey Cabot as chairman was appointed to build three new sanatoria. They were opened in 1910 and admitted patients in the curable stages, though too far advanced for Rutland. Incurables with bacilli in the sputum were also taken and thus segregated. Provision for the advanced progressive consumptive was still inadequate. An attempt was made to meet this need by the passage of an act in 1910 directing cities to build tuberculosis hospitals and in other ways make adequate provisions. Thirty out of forty-four cities are now provided with accommodations, though inadequate, for their advanced and urgent cases of consumption. For smaller cities and towns the care per patient for the smaller number of patients is heavy and for this reason county hospitals are about to be erected for patients from towns and villages not already provided for.

The present situation demands two things: first, that the incipient consumptives be recognized and placed under proper treatment, and, second, that the public and medical profession

be made to realize that advanced and dying consumptives should be sent to nearby hospitals instead of the state sanatoria. "Tuberculosis dispensaries" are proving their value in discovering early cases and the various forms of welfare work of occupational supervision and examination now being carried on by many large business concerns are of increasing assistance in this task. The care of the discharged sanatorium patient is a great problem gradually being solved as local dispensaries and boards of health realize and accept their responsibility in this matter.

Death rate has fallen from 150 per 100 000 in 1906 to 130 per 100 000 at the present time. There are 3 000 beds, and the number is increasing. The medical profession is improving in its ability to recognize tuberculosis in its early stages. The general public is coming to realize that the incipient consumptive must be recognized and treated, the advanced consumptive segregated and cared for, and that the careless and incorrigible consumptive is a grave menace to public health and must be treated as such.

This author concludes with suggestions for the future as follows:

Open-air schools for all children, instead of waiting as we do now until the child gets sick before we give him the fresh air he needs. The stupid policy to which we still adhere in this regard I trust in ten years will be looked upon as a relic of barbarism.

A proper system of medical inspection and supervision of employees. Although a few broad-minded and far-sighted men now realize that the human machine is like any other machine in that it runs better and accomplishes more if kept in good condition, and that to keep it in good condition it must be periodically overhauled and inspected, far too many can see in this work only a foolish fad.

A proper workmen's compensation law, combined with some form of health insurance which will do justice to the physician, adequately protect the workingman, and allow the insurance company a legitimate profit.

Tenement house laws and housing regulations which amount to more than mere words on a printed page and which are backed up and enforced by courageous and honest officials and supported by public opinion.

Laws, so framed that they can be enforced, to control the careless, ignorant, and incorrigible consumptive. We have plenty of laws at present, but they cannot be enforced, so are useless. To make them effective, the public must be educated to realize the need and justice of such laws and to demand that they are enforced.

Experimental investigations of tuberculous peritonitis and the effect of pneumoperitoneum. Pechman, R. G., and Corper, H. J. *Ibid.*, 165

Pechman and Corper, of Chicago, report in the American Review of Tuberculosis experimental investigations of tuberculous peritonitis and the effect of pneumoperitoneum. Their observations fall into three groups; two on experimental animals and one on patients. In the first series, groups of rats were injected intraperitoneally with air alone, with dead tubercle bacilli alone, and with dead tubercle bacilli followed immediately and at intervals by injections of air. Injection of air alone produced no alterations of significance in the peritoneal cavity. Dead tubercle bacilli injected alone were found well walled off by the omentum near the stomach and spleen. When the injection of bacilli was followed by that of air the bacilli were markedly disseminated. In the second series, rats were injected with air alone, with dead tubercle bacilli and followed by air injections after four months and with dead tubercle bacilli followed immediately and subsequently at intervals by air injections. The absorption of air was watched by means of x-ray examinations and showed no difference in rate at any time during the four months of inflation. The third series consisted in observations on patients with pulmonary tuberculosis and pneumothorax of the rate of absorption from the pleural cavity of air and of a crystalloid (methylene blue). As the time of persistence of the pneumothorax increased the rate of air absorption decreased, whether or not due to fibrosis of the lung during collapse is uncertain. The absorption rate of methylene blue was not affected. The cause of the discrepancy between the absorption rates of air from the peritoneal and pleural cavities is unexplained.

Preliminary report on several cases of lateral ventricle injections of mercury for the optic atrophy in tabes and general paresis.

Dr. George F. Suker thought it was necessary to reconstruct the generally accepted conception of so-called primary tabetic optic atrophy in so far that the process of atrophy is not an ascending one, originating in the retina and then proceeding into the nerve, but that it virtually is a typical secondary optic atrophy, starting as a neuritic process somewhere in the nerve and then descending to the disc. He stated that up to the present time every form of treatment of the atrophic process had been an utter failure; that experimentally on the lower animals it had been conclusively proven that intraspinal injections never reach the optic nerve to be of any intrinsic merit in treating optic nerve lesions, but that the

subarachnoid or intraventricular injection had been proven experimentally to reach the optic nerve, and had given up to date the most promising results, it having been shown by numerous cases that repeated injections could be made into the subarachnoid spaces without entailing untoward after-effects, provided the injections were made with good judgment. He said the number of cases treated up to the present time was not sufficiently large to warrant the dictum that it is the *sine qua non* method, but he considered it a method worthy of further trial in selected cases. He reported seven cases which he had treated by this method and exhibited photographs showing the method of procedure. Each of the cases had had a series of five to six injections ranging from 1/100 to 1/20 gr. of bichlorid; the interval between injections varied from ten to fourteen days and two had been at intervals of one month. All cases were treated in addition with mercurial rubs and iodids. From 5 to 40 c.c. of ventricular fluid were abstracted and one-half the amount with the addition of the bichlorid was slowly reinjected into the ventricle. The first injection was made under general anæsthesia and the subsequent ones under local. They were always made on the right side of the brain into the right lateral ventricle so as to damage as little as possible any of the functioning brain centers. He emphasized the fact that care should be exercised not to pass the needle through any of the dural vessels. He said if the ventricle was not reached upon the first insertion of the needle, the same with obturator in, has been raised and lowered each time withdrawing the fluid with syringe, but to wait several days or a week before attempting the insertion again, in this way avoiding undue traumatization of the brain tissue and thwarting cortical and subcortical irritation. He stated that blood-stained serum must not be reinjected with the mercury as it was certain to invite trouble, but that so far all annoying symptoms which had appeared subsequent to the injection have never remained permanent nor continued longer than three weeks. Caution must be observed when the serum is reinjected to have the inserted needle filled with fluid, so that it drips, in order not to force air into any of the ventricles.

D. W. W.

BOOK REVIEWS

Disorders of the Sexual Function. By Max Huhner, M.D., Chief of Clinic, Genito-urinary Department, Mount Sinai Hospital Dispensary, New York City, etc. Published by F. A. Davis Company, Philadelphia, Pa. Price \$3.00 net.

This book is a pleasant relief from the deluge of Freudian literature which attributes all our woes to faulty emotional and psychic mechanisms, especially in the sexual sphere.

Dr. Huhner not only gives us tangible reasons for believing that many sexual errors are due to definite organic changes but tells us how these pathologic conditions may be treated, thus curing many supposed moral obliquities such as masturbation by purely physical means, and yet not neglecting the neurosis in this sphere. He has spent much time in the neurological clinic and his presentation of this side of the subject shows a good grasp of the neurologist's point of view, but he rightly points out that the neurologist is not justified in laying much stress upon the mental factor until a thorough examination of the genito-urinary organs by a competent specialist in this department has eliminated all pathological conditions which might act reflexly as causative factors. The chapter headings are 1 — Masturbation. 2 — Masturbation in the adult male. 3 — Masturbation in the adult female. 4 — Impotence in the male. 5 — Functional impotence. 6 — Psychic impotence. 7 — Pollutions in the male. 8 — Priapism. 9 — Satyriasis. 10 — Nymphomania. 11 — Frigidity. 12 — Vaginismus. 13 — Dyspareunia. 14 — Absence of orgasm in the female during coitus. 15 — Enuresis. 16 — The evil consequences of withdrawal. 17 — Continence. 18 — Some unusual forms of sexual neurosis.

Blunt as these headings are, the subject matter is handled in a straightforward and wholesome manner. The book is very readable and offers many practical points in treatment.

It is well printed and sub-headed and contains an excellent index.

A. H. R.

Man's Unconscious Conflict. By Wilfrid Lay, Ph.D. "A popular exposition of psychoanalysis and its helpfulness in solving the perplexing problems of human existence." Dodd, Mead and Company, New York. Price \$1.50.

This little book of about three hundred pages gives in a simple and readable form an outline of the whole subject of psychoanalysis. As its title suggests the author emphasizes the importance of the unconscious, "that is the unknown but not the unknowing part of the mind," and shows how our conflicts go on in this unconscious mind and are thus unknown to consciousness. They are in our latent or potential memories, but rarely become part of our kinetic awareness. He refers to the Titan in us all, meaning the primordial vital force as opposed to the force of organized society, and shows how most of our conflicts and unhappiness grow out of the friction betwixt these two great forces. The latter part of the book is devoted to the application of the psychoanalytic principals applied to education. The chapter headings are, 1 — Introduction. 2 — The unknown element in action. 3 — The Oedipus myth. 4 — The foreconscious. 5 and 6 — The unconscious. 7 — The individual Psyche. 8 — Dreams. 9 — Two kinds of thinking. 10 — Everyday life. 11 — Psychotherapy. 12 — Educational applications. 13 — Conclusions. There is an index which however could have been amplified to advantage. The author has stated his subject matter in such an extremely easy and pleasing manner that unlike most Freudian literature it can be read understandingly and without offence even to the prudish.

The book is done in good type and spacing and on a light paper which makes it pleasant to hold. We wish it could have had a darker cover, less liable to be soiled, since each copy is apt to be handed around and get much re-reading, it is so well worth while and interesting. Most of us spend much thought in trying to understand ourselves and the motives of our friends; here is a book that will help us much in this endeavor.

A. H. R.

CAMPAIGN AGAINST RATS

It is interesting to note that in connection with Mr. Hoover's work for food conservation a nation-wide campaign against rats is to be undertaken, directed by the Bureau of Biological Survey. The public safety committees in the various States have been called upon to aid in this very important work of the extermination of rats. Not only is the creature dangerous to health, but in these days of conservation and "Hooverizing" of food and foodstuffs it is most important that waste through destruction by the rodent should be eliminated just as far as it is possible to do so.

CHILDREN IN WAR TIME

Fifth Article: Provisions for Soldiers' Children

How other countries provide from Government funds for the wives and children of their soldiers in active service, while the United States makes no such allowances, is described in the latest report by the Children's Bureau of the U. S. Department of Labor.

Separation allowances are granted not only in European countries where the pay of the private soldier of the lowest rank runs from 39 cents to \$7.30 a month, but in Canada and Australia, which pay him \$33 and \$43.80 while he is engaged in foreign service. In addition to the soldier's pay the wife and children of the Canadian soldier receive from the Government \$20 a month; and the allowance to the family of the Australian soldier varies according to the number of children up to a maximum of nearly \$30 a month.

The pensions allowed by law to wives and children of soldiers killed in service are shown to be considerably higher also in Great Britain and the British dominions than in the United States. And the report describes various ways in which foreign Governments are making an effort to meet the special needs of individual families.

In presenting this report to the Secretary of Labor, the chief of the Children's Bureau speaks of the general study of child welfare in the warring countries which is being conducted by the Children's Bureau and says:

"The relation of all these questions of child welfare to the living conditions behind the lines is clear. It is also plain that the living conditions in large measure depend upon the provisions made by the respective Governments for soldiers and their dependents. And since the withdrawal of men from the ordinary walks of life to form a large army must create similar problems here, the question of what countries offer important suggestions for a system of soldiers' compensation in this country becomes at once basic to the consideration of child welfare in war time.

"The material contained in the accompanying report, together with the earlier report upon the Care of Dependents of Enlisted Men in Canada, has been already utilized in drafting a proposed measure for soldiers' compensation in the United States by the Hon. Julian W. Mack, chairman of a special committee appointed by the committee on labor of the Council of National Defense for that purpose."

The American measure to which this refers has been endorsed by the President and by Secretary McAdoo. It has already passed the House of Representatives and is now pending in the Senate.

This bill would provide separation allowances to families of men in active service and would revise the scale of compensation to disabled men and their families and to the widows and children of men killed in service. It contemplates the organization of an effective system of reeducation under Government direction based upon the experience of Canada and of Europe.

It also includes a provision, suggested by the Canadian municipal insurance, whereby the Government would sell life insurance at rates based on the cost of insurance in time of peace, the Government itself carrying the added cost of the war hazard. The maximum amount of insurance which could be purchased by one person would be \$10 000 and the privileges of the

insurance would be open on the same terms to officers, enlisted men, and members of the Female Nurse Corps. It is expected that the rate for a maximum policy will be such that any enlisted man could easily meet the premiums from his military pay.

GOITER

An Analysis of 125 Cases with a Note on the Treatment. Watson, L. F. N. Y. Med. Jour., 1917, cvi, 549.

The author reviews the records of 125 goiter patients, considering the cause, age at onset, and effect of previous operations in certain cases. He illustrates by tables the degree of enlargement, and reports the results following quinin and urea injection.

In 43 per cent. no exciting cause could be elicited; in the remaining 57 per cent. the onset could be ascribed to a definite exciting cause. Of the 125 cases, 15 per cent. were caused by worry; parturition was responsible for 11 per cent., and in 9 per cent. the condition was due to puberty. Twenty per cent. gave a family history of goiter and 11 per cent. of nervousness; 19 per cent. had had tonsillitis. Forty-five per cent. of the exophthalmic patients first noted the goiter eight years before examination at the average age of 34 years, and the symptoms developed at the age of 40. Fifty per cent. gave a history of acute onset, two years before coming under observation, at the average age of 29 years. Sixty per cent. of the nonexophthalmic patients observed that they developed more marked symptoms of intoxication as the goiter became more chronic.

Before coming under treatment, five exophthalmic patients had had ligation of the superior thyroid arteries with temporary relief; four had had partial thyroidectomies without permanent benefit; three had had pelvic operations without lessening the hyperthyroidism; the condition of one was aggravated by a panhysterectomy; and one had had a tonsillectomy six months before without influencing the severity of the exophthalmic symptoms. Enlargement usually begins in the right lobe, sometimes in the isthmus and least frequently in the left lobe. In 95 per cent. of the exophthalmic patients of this group both lobes and isthmus were involved before the goiter became exophthalmic. A majority of the patients noticed increasing symptoms of intoxication as the goiter became more chronic, gradually involving both lobes and isthmus. Eighteen per cent. of the mildly toxic patients became exophthalmic after an average period of five years. This study indicates that both nontoxic and toxic goiter occur later in life in nongoitrous localities than in sections where the disease is more prevalent.

The following tables show the results after quinin and urea injections:

Effect of the Injection on Symptoms	Relieved.	Improved.	Not Imp.
Exophthalmic	85 (aver. 4 mos.)	15	0
Nonexophthalmic	84 (aver. 2 mos.)	10	6
Effect of the Injections on Goiter.	Cured.	Reduced.	Not Red.
Exophthalmic	80 (aver. 5 mos.)	15	5
Nonexophthalmic	75 (aver. 4 mos.)	12	13

Two patients suffering with severe toxic goiter with exophthalmos of several years duration received only slight benefit; later a lobectomy was done without additional relief. Four exophthalmic patients were pregnant two to four months. Relief from hyperthyroidism followed the injection and they went to term without recurrence and had normal deliveries. The number of patients cured is highest in the group of those who came for treatment early in the disease; the benefit received by those who came later was in proportion to the degree of damage done the circulatory and nervous systems. A goiter that has once disappeared has never recurred. A majority of the patients in this group have been under observation for two to four years. The quinin and urea injection has limitations the same as any other treatment for goiter and can be employed only in selected cases. The treatment of the exophthalmic type in young adults is very difficult, and should be attempted only under the most favorable circumstances. If the best results are to be secured, hyperthyroidal patients must have at least a year of mental and physical rest after treatment.

ACCURACY OF DEATH CERTIFICATES

More accurate and definite statements of the occupations of decedents should be written upon death certificates. Until this is done mortality statistics by occupations will continue to be unsatisfactory.

The Bureau of the Census is planning for the near future a monograph on tuberculosis. How much more valuable this monograph will be if it is possible to show accurately the occupations of decedents.

As a physician you appreciate the importance of such statistics. As a physician you are by education better qualified than the ordinary informant to understand a proper statement of occupation.

Will you not, therefore, take pains to see that the occupation items upon each one of your death certificates are properly supplied?

PERSONAL AND GENERAL ITEMS

Dr. Harry V. Weaver of New Bedford, Mass., died at his home on September 21, 1917, at the age of forty-seven years. Dr. Weaver was a graduate of Boston University School of Medicine, class of 1893, and a specialist in diseases of the eye, nose and throat.

Drs. W. Lincoln Bates and Martha B. Bates (the latter of the class of 1908, B.U.S.M.) have removed their offices in Providence from 141 Benefit St. to 426 Brook St.

Dr. J. W. Crumbaugh of Wilmington, Delaware, has removed his offices to the Equitable Building, Ninth and Market Streets.

Dr. George J. Searle (B.U.S.M., 1888), who was formerly in Florida, writes from Plymouth, Ohio.

Dr. Belle J. Allen (class of 1904, B.U.S.M.) has accepted appointment at Winthrop College, Rock Hill, South Carolina, and does not expect to return to India.

GOOD OPPORTUNITY FOR FIRST-CLASS PHYSICIAN. Two offices and garage at 74 Brockton Avenue, Abington.

Dr. Chester Clark (N.Y. Hom. Med. Coll., 1916) is a First Lieutenant in the Medical Officers Reserve Corps and is now in England in the Central Military Hospital, Aylesbury.

Dr. Franklin E. Robinson, formerly of Carthage, N. Y., is located at 325 Highland St., West Newton, Mass.

Dr. Samuel M. Beckford (B.U.S.M., 1917) is teaching Anatomy in Leonard Medical School, Shaw University, Raleigh, North Carolina, and the students there have petitioned that he be given the subject of Physiology to teach as well. Shaw University is a missionary institution. He writes: "The buildings have been very poorly kept and with no museum or reflectoscope. . . . Already I am making good progress with a museum and making plans for better sanitary condition. The president is now raising funds towards a reflectoscope. . . . I think I have good reasons to express thanks for the careful training given in B.U."

Dr. Charles E. Libbey (B.U.S.M., 1897) of Danville, Vermont, has entered the Medical Officers Reserve Corps and is now in the "service."

Dr. J. Perry Seward of New York City has removed his office from 200 West 70th St. to 616 Madison Avenue.

Dr. Joseph H. Fobes has removed from 1 West 68th St., New York City, to 616 Madison Avenue.

Dr. John E. Runnells (B.U.S.M., 1906), for some years superintendent of New Hampshire State Sanitarium at Warren Summit, is now superintendent of the hospital at Scotch Plains, New Jersey.

Dr. Augustus E. Marden (B.U.S.M., 1889) is at Phoenix, Arizona, in the Government Indian School at that place.

Mrs. L. G. Knowles, having resigned from her long service in Boston University School of Medicine, announces that she is prepared to do private secretarial work, either at her residence or in the physician's office, in editing, proofreading and typewriting (from copy or from stenographic notes) of medical or literary subjects. Address Suite 7, Hotel Newton, 55 East Newton Street, Boston.

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ORIGINAL COMMUNICATIONS

ADDRESS AT THE OPENING OF THE FORTY-FIFTH ANNUAL SESSION OF BOSTON UNIVERSITY SCHOOL OF MEDICINE

October 4, 1917

J. P. SUTHERLAND, M.D., Dean

Another year, a year filled to the brim and overflowing with world-wide lessons and experiences which will modify for all time the opinions and the philosophies and the interests and the activities of the peoples of this earth, has passed since the majority of those present here this morning met at the opening of the forty-fourth annual session of our School on October 5, 1916. The year that has just passed doubtless will be looked upon as one of the most momentous in the history of mankind, a year of great awakening of the nations to the fact that mankind is a universal Brotherhood and not an aggregation of unrelated and independent communities. This year has been, as it were, the beginning of a New Age of enlightenment concerning the essentials of life, an enlightenment brought about through the sad and deplorable and cruel and wicked exigencies of the most devastating war humanity has known. Yet we meet here today in the somewhat self-centered academic atmosphere of a professional school, withdrawn, temporarily at least, from the affairs of the world, to devote ourselves to the acquisition of special knowledge and skill which we expect eventually will be utilized in the service of our fellowman.

To the privileges and fellowships, the opportunities, the routine and the discipline offered by our School during its forty-fifth annual session which begins today, it is my honored privilege and duty and pleasure to welcome you, one and all. The welcome that is extended to you is not merely a formal and

individual utterance, but is an expression of the deep and heartfelt interest of the entire Faculty in your welfare, happiness and success. This interest is not confined to your student days or to your student life, but goes with you outside the lecture hall, laboratory and clinic, during your undergraduate life, and follows you fraternally during the manifold and varied vicissitudes of your post-graduate experiences.

Those of you who have been with us one or more years as well as those who today for the first time are welcomed to their places in our midst may be interested in briefly recalling some of the conspicuous events of our past year as well as in a briefer forward glance.

In appreciation of his services to the School it should be recorded that Dr. Frank E. Allard, Lecturer on Physical Economics, died on the fourth of February, 1917, in his fifty-sixth year. Dr. Allard graduated from Dartmouth College in 1885, receiving from that institution the degree of Bachelor of Science. In 1889 he matriculated into Boston University School of Medicine on advanced standing and graduated therefrom in 1892. In 1895 he became Instructor in Physiology and most creditably performed his duties in connection with that department. In the practice of his profession he early became interested in the medical side of life insurance and in 1903 he was transferred from the physiological department to institute a new course in the curriculum, and from 1903 to 1916 when failing health compelled his retirement from active work he was Lecturer on Life Insurance. His official position as Medical Director of the Boston Mutual Life Insurance Co., and his wide experience as examiner in the same company made him an authority on his subject.

In his capacity as Medical Director he has been succeeded by Dr. Percy G. Browne, a classmate of Dr. Allard and an associate in his insurance work. Dr. Browne is our Professor of Diseases of the Chest.

During the past year the interests of the School naturally largely centered in the absorbing national crisis, and Medical Preparedness became a topic of serious thought and work. As a result of lengthy correspondence with the Surgeon-General's office a special course of lectures on the medical problems of greatest moment in war was arranged for. The lectures were delivered by Colonel Chamberlain and Captain Freeman, both of the United States Army, at Harvard Medical School, to the senior classes of Harvard, Tufts and Boston University School of Medicine.

To the credit of last year's senior class one of its members, Max Mark Braff, early enlisted in the Medical Reserve Corps of

the Navy, was accepted on his credentials and physical fitness and was assigned to duty in the Portsmouth and later in the Charlestown Navy Yard pending his final examinations for appointment as a commissioned medical officer in the Navy. In July he successfully passed his examinations and soon thereafter received his commission and is now in active service. Since then F. W. A. Mitchell and Jos. Segal, both of last year's senior class have enlisted and have been commissioned.

In this connection it is worthy of note as a practical demonstration of the sincere patriotism of the graduates of the School, as well as their professional ability, that T. M. McClintock, '98, Chas. A. Sturtevant, '99 (who served as Assistant Surgeon in the Philippines during the Spanish War), E. F. Haines, '06, and Fred N. Beardslee, '99, are commissioned and on medical service in the Army and Navy; that H. E. Maynard, '02 is on duty in "Hounslow Barracks," a British Military Hospital; that J. F. Cooper, '10, has been temporarily released from his duties in the mission field at Foochow, China, and is with the Chinese contingent in France; and that A. N. Bruckshaw, '07, is an ensign in the Navy; that J. L. Mahoney, '98, R. Blackmore, '02, W. A. Jillson, '05, C. E. Burt, '08, and R. A. Pierce, '12, are in the Medical Officers Reserve Corps waiting for orders; that Ettore Ciampolini, '16, is on duty in a military hospital in Florence, Italy.

It is also apropos, since its medical staff is composed almost wholly of graduates of the school, to mention the fact that the staff of the Massachusetts Homœopathic Hospital with which the School is so closely affiliated, by an intensive campaign lasting less than two weeks during the month of May, '17, raised more than thirty thousand dollars (\$30,000) for the purpose of equipping a 500 bed "Base Hospital" abroad, now officially known as "Base Hospital No. 44," and waiting to be called to active duty. Drs. W. F. Wesselhoeft, J. Arnold Rockwell, Jr., Wesley Terrence Lee, Thomas E. Chandler, O. R. Chadwell, Howard Moore, David L. Belding and Sanford B. Hooker, all members of our Faculty, are to fill positions on the staff of this "Base Hospital." Drs. Conrad Wesselhoeft, 2d, Milo C. Green, Harry F. Morin, and many other members of the Faculty and graduates of the School are enrolled in various positions in connection with the medical side of the war, but these facts speak so eloquently for themselves that comment would be superfluous.

It should be noted that Dr. Henry M. Pollock, superintendent of the Massachusetts Homœopathic Hospital, has consented to give a course of lectures on "Hospital Administration and Management." That such a course meets a need is

testified to by the fact that at least thirty-six of our alumni are connected with the executive end of private or large public hospital administration. So much by way of welcome. So much for certain details connected with the School, its Faculty, its relation to the war. Now for a few moments let us glance hurriedly at some aspects of the life of the world and humanity which, though not strictly medical, should be of interest to all students, seekers for truth and knowledge. It is impossible for us to live in scholastic retirement; to devote ourselves merely to the acquisition of medical knowledge and skill; to prepare ourselves only for a restricted professional life. We are human. We are part of an unhappy, struggling world, with our duties and responsibilities as individuals, as units in families, in communities, in our state, our country, in the world. We are parts of a whole, and whatever affects a part is necessarily reflected throughout the whole. It is our freely accepted duty for the time being to take advantage of every opportunity, to devote our best energies, our utmost mental and physical strength, our loyal and most faithful efforts to perfecting our equipment in things medical, as much as in us lies, so that in due season we may carry healing and comfort to the suffering. But while this is to be our most pressing and imperative duty we must not forget that so-called medical education is only a partial education. It is education along a very special line, and we must be careful not to translate all our experiences into medical terms, or interpret life from even the broadest medical viewpoint. From a very liberal non-academic but practical point of view education is the training which fits one for *life*; not necessarily for the constricted, limited, selfish, individual existence, but for life in and of the world, for the useful coöperative intermingling with one's near and most distant neighbors. It is true the medical life is so comprehensive that sooner or later as one's experiences widen, all subjects, except possibly a few in abstract science, come within its horizon. Medical education, therefore, must be all inclusive. It may be claimed that life is too short to cover such a wide range of thought and study and activities. Unquestionably *undergraduate* medical life, even with a curriculum including approximately fifty subjects, is too short a time in which adequately to *complete* an education; that is, to fit oneself for a widely useful medical life. As a matter of fact matriculation into a medical school means an initiation into a student life which terminates only with life itself, the four years' course in the medical school being only a sort of primary grade, as it were, or the beginning. One who enters a medical school with any notion that his equipment is complete when he obtains his diploma of graduation must recon-

struct his views and ideals, or else prove unworthy in the profession he has entered.

The chief characteristic of modern times, that is our own days and the preceding century, is the growth and technical application of "Science." The Natural Sciences have generously revealed their secrets to the searching and inquisitive eyes of man, and man's inventive genius has revelled in his increasing mastery over physical forces; in bridling the lightning, in leading the forces of heat and the attraction of gravitation captive, in harnessing the sun's rays to do his bidding. Man's knowledge in what we call physics, in chemistry, in botany, zoology, physiology, embryology and histology, in geology, and in astronomy has steadily and definitely increased in amount until it would seem as if there were no more worlds to conquer in things material. His utilization of this knowledge is shown in the growth of manufacturing and industrial pursuits, and in an increasing commerce. His knowledge and inventive genius are demonstrated in his construction of a bewildering variety of machinery, of steam, gas and electrically driven engines; of cotton gin to a Hoe press that prints, folds and binds in one process; of looms without number; of delicately adjusted microscopes, of powerful and wonderful telescopes; of talking and singing, adding and writing machines; of telegraphic and telephonic apparatus; in his construction of "sky-scrapers" and tunnels; in irrigation plants and agricultural devices for planting, tilling, reaping, etc. Man's ingenuity enables him to see microorganisms of $1/400\,000$ of an inch in diameter, and the striations of Diatomaceæ $1/125\,000$ of an inch in diameter. His conceptions carry him far beyond the molecule to the atom and beyond the atom to the electron. At the other end of the scale he measures the planets and outlines their courses, and penetrates the great universe to what to the average mind is an inconceivable distance. To learn that the outermost planet of our solar system is situated 2 743 000 000 of miles from our sun, and that its majestic march through its journey 'round the sun carries it through an orbit of 18 273 000 000 of miles is appalling, and yet man has measured greater distances, and his vision penetrates far beyond this distance, for the nearest fixed star is 21 000 000 000 000 of miles distant from this earth, and we are told that colossal Sirius, so often admired by us all, is 12 000 000 of miles in diameter (against our little earth of 8 000 miles) and 83 000 000 000 000 of miles away. But even Sirius becomes a near neighbor when we think that distant Arcturus is 154 000 000 000 000 of miles away. Beyond this even, though the eye of man aided by the most powerful telescope cannot penetrate, there are suns and earths and plan-

ets, for modern photography demonstrates the existence of stars otherwise unrecognizable.

Again man recognizes things which cannot be seen; the infra-red and ultra-violet rays are today demonstrable, and no one doubts the presence of an intangible something called the ether which interpenetrates all matter.

But man or modern science does not stop at these relatively gross material things. His researches carry him into psychological fields where by the recognized methods of science he is investigating imponderabilia;—such as hypnotism, telepathy, clairvoyance, double-personality and so-called “communications” with the discarnate (see transactions of the Society for Psychical Research and other recent literature).

And perhaps more marvelous than all this, — more wonderful than all the inventions utilized by man, more wonderful than the incredibly minute things referred to, or the inconceivable bulk and distances mentioned, is the fact that this knowledge, this stupendous familiarity with “science,” is all conceived by and stored away in a small mass of “gray matter” composed of a countable number of protoplasmic cells forming a part of what is called the Brain, an organ averaging in man approximately 3 lbs. in weight.

I mention these things in order to emphasize the statement that today science rules the world. Even in medicine the bulk of our time and our best energies are devoted to the fundamental medical sciences, as they are called; of anatomy, histology, embryology, physiology, chemistry, bacteriology, pathology. These things claim and are worthy of much attention; they are among the absolutely essential things, but the therapeutic arts, the palliation, the prevention and the cure, are apt to be somewhat neglected. This is not true of surgery which, although a very mechanical art, is in its life-saving power the crowning achievement of medicine, and properly calls for a suitable apportionment of the student's time and energy.

The point to which I am anxious to call attention is this. Study of, progress in, and appreciation of the natural sciences is not a universal attribute. It is in fact in only a relatively small area of the earth's surface that science has its home, and only a minority of the earth's population that are its devotees. Prof. J. B. Baillie, of Aberdeen University, in a very convincing article in *The Hibbert Journal* for April written to show that “Science is one of the Humanities” makes the claim that “science is . . . but the consequence of a peculiar frame of mind which characterizes certain Western peoples. It is neither universal to humanity nor essential to all mankind.” He says “it is dependent on climatic conditions and racial

qualities"; that "its domicile seems as much restricted to specific localities as a botanical or an animal species." He further says "The native habitat of the modern scientific spirit has been primarily the middle region of Europe, extending from the north-west to the south-east, and forming a kind of rough triangle whose apex lies in Italy, and whose base stretches from the southern shore of the Baltic Sea across Scandinavia to Scotland. . . . The mood of science finds its peculiar climate in this region, . . . The vast continents of Asia and Africa and non-Europeanized America have no scientific areas. The inhabitants of these non-scientific regions have indeed knowledge of their own, and a wisdom of their own; but it is not science. Asia and Africa, especially the former, are mainly religious and ethical in their frame of mind, not scientific. Science is a creation of the European West." (P. 362, April issue of *The Hibbert Journal*.) It would seem as if there were nothing in this that any of us would seriously disagree with, and as members of the medical profession we recall the fact that only a very few short years ago the "Carnegie Foundation for the Advancement of Learning" pronounced American educational institutions and methods, especially medical schools, almost hopelessly below par because they did not measure up to the standards and methods of the educational institutions of Teutonic Europe, the central home or special domain of the scientific spirit, towards which gravitated student life from the four quarters of the earth, and from which radiated an influence felt in all sections of the world.

Lest I prejudice you in any way against Professor Baillie let me quote his warning (p. 364). "Nor need we suppose that the scientific mind has all the advantages on its side, and the non-scientific all the disadvantages. . . . It is worth observing how the over-indulgence in the luxuries of science seems to destroy a man's balance of judgment in other realms of experience, practical and religious. So much is this recognized that the very name 'Scientific expert' is almost a by-word for general intellectual incompetence."

Perhaps you already anticipate my object in turning your thoughts into this channel. It may be unwarranted to claim that the "modern scientific spirit" is primarily and essentially the main cause of the hate and bitterness, relentlessness and cruelty, suffering and unhappiness, devastation and misery that find their main center in that "rough triangle" referred to by Professor Baillie and radiate thence to the ends of the world, but at all events, a strange coincidence is found here.

It would seem as if science had been weighed in the balance and found wanting in so far as the ideals of world-wide

“*Liberté, Egalité, Fraternité*” or peace, prosperity and happiness, or freedom, justice and charity are concerned. But if science has failed so has religion. Yet a brief glance at, or a close scrutiny of, the history of mankind from the earliest recorded times shows unmistakably that the strongest motive force humanity has known has been religion. Vladimir Solovoy (a voluminous writer and one of the most remarkable thinkers Russia ever produced) taught that “Early in the history of the race the feeling of reverence was extended from the living to the dead and became the foundation of ancestor-worship; and as, in the course of its development, human reason gradually rises to the conception of one heavenly Father, the feeling of piety is transferred pre-eminently to him. . . . Reverence for something — whether it be human beings, deified forces of nature, abstract moral laws, or a living God — is inherent in every normal consciousness, . . .”

President Wilson, quoted by Prof. H. B. Alexander of the University of Nebraska in an article on “America’s Self-Revelation,” says “I have not read history without observing that the greatest forces in the world, and the only permanent forces, are the moral forces.” (*Hibbert Journal*, April, 1917, p. 406.)

The highest morality, the noblest ethics, the religions of the past have all failed, however, to bring the highest development to mankind. Confucius taught a high morality. “What you do not want done to yourself do not do to others” is credited to him, but Confucianism has not advanced the cause of humanity. The same is true of the philosophical Brahminism which leaves one in abstractions. Buddhism, though wide-spread and poetical and full of imagination and influencing even today the lives of millions of people, fails when put to the test. Zoroastrianism once flourishing and influential is now confined to less than 100 000 Parsees, and is steadily dwindling under the forces of Mohammedanism and modern civilization. Force, symbolized by the sword, did much for Islam, but Mohammed’s teachings are inadequate for the world’s progress. Greece and the Roman Empire had practically no religious influence on the world.

Christianity, as it has existed for the past sixteen centuries, has also failed equally with other religions; with philosophy, art (as music, painting, sculpture, poetry), history, literature, science in bringing about a realization of the universal brotherhood which is destined to come in the days of reconstruction now begun. Most unfortunately “Christianity” has been so perverted by man that since the end of the second century of the Christian era *it has not had an opportunity* to bring its influence to bear upon mankind.

The Countess of Warwick in a strong article on "The New Religion" claims that the Established Church (Anglican) "is dead"; that the old religion had failed humanity in its present direst needs. The Dean of St. Paul's (London) in an article on "Survival and Immortality" a subject which, at the present time when such large numbers of the picked and most vigorous youth of the nations are meeting a sudden death on the field of battle, is foremost in men's minds, makes the discouraging statement ". . . the Christian hope of immortality burns very dimly among us. Those who study the utterances of our religious guides must admit that it is so. References to the future life had, before the war, become rare even in the pulpit. The topic was mainly reserved for letters of condolence, and was then handled gingerly, as if it would not bear much pressure," and quoting Plotinus, chiefly, and Spinoza, Martineau, Höffding, Munsterberg, Pringle-Pattison, Eucken and a few others of the same class, he has only a few philosophical platitudes to offer bereaved hearts.

The boasted civilization of recent centuries has proved no worthier than the religions, the philosophies, the arts, the sciences in furnishing the aid and comfort humanity needs, because of the artificiality of civilization. Prof. James Ward, in his Presidential Address to the Civic and Moral Education League (in London), May 23, 1917, succinctly says, "People on all hands are realizing that the old civilization is passing away; and the new social reconstruction that will replace it is being everywhere anxiously awaited." (P. 534 *Hibbert Journal* for July, 1917.)

I have made these references and quotations (and many more of the same sort might easily be made if time permitted) to bring before you the idea that a grand Reconstruction is in process of evolution; a reconstruction that will modify all relationships of mankind, of individual to individual, of nation to nation; the roseate dawn of a New Age characterized by a better civilization, a truer religion, a purer Christianity, can be seen above and beyond the smoke of battle, and it behooves us one and all, medical profession and laymen, to be awake, sensitive to the changes, receptive and willing to do our part in the reconstruction itself. We may well take for our mottos "Awake thou that sleepest" (Ephesians 5 : 14), "Awake, awake, put on thy strength" (Isaiah 52 : 1), "Gird up the loins of your mind" (I Peter 1 : 13). Prepare for reconstruction.

Through what may seem a somewhat round-about journey I have arrived at the lesson I should like to leave with you as a companion during your year's work.

The physician's life consists of much more than the ad-

ministration of a pill or potion, the laying down of a few sanitary or dietetic rules, the making of a diagnosis, or the performance of an operation. The duties especially of the general practitioner bring him into the most intimate relations with his patients. At birth and at death, in joy and in sorrow, in tribulations of all sorts, his help is sought. To him come not only those physically, but those mentally, morally and spiritually sick; those whose hearts are broken; parents over delinquent children; the youth and the maid who have gone or been led astray; people in social, financial, domestic trouble; and to them all he is expected to listen sympathetically and intelligently and to give advice, encouragement, and parental or fraternal sympathy and comfort. To fill so many rôles the physician must be well equipped not only in the fundamental sciences and medical arts and technique, but in the exceptionally high qualities of heart and character that belong to the most sincere purposes and are founded deep in doctrine. In these days particularly, doctrine, that is a definitely recognized, true and reliable guiding principle, is needed in social life, in political life, in scientific life, in medical life and in religious life. In the purely medical life you will find yourselves provided by your instruction here with "doctrine," or a guiding principle. In other of life's relations, especially in cases of doubt, it is well to remember words written by the Psalmist three thousand years ago, "Thy word is a lamp unto my feet, and a light unto my path" (Ps. 119 : 105), and the promise given to mankind two thousand years ago "Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you." (Matt. 7 : 7; Luke 11 : 9.)

IN RETROSPECT

By JOHN L. COFFIN, M.D., Boston

THERAPEUTICS IN THE NINETEENTH CENTURY

It is the privilege of one who has arrived "on the Western Slope" to reminisce, and therefore perhaps you will pardon me if I look back somewhat over the therapeutic field in the past, that we may take counsel together as to what it may indicate for the future. Perhaps it may be interesting for you to know how they treated typhoid fever, or as they called it then, *Typhus Mitior*, a century ago. I quote from Thacher's "Modern Practice," published in Boston in 1817.

"It has been the practise almost invariably among former writers, to condemn the use of the lancet, as altogether inadmissible in this modification of typhus fever, but practitioners

are daily becoming less tenacious of the vital fluid; and it has been asserted that typhus fever has often been marked with symptoms of inflammatory excitement to a degree justifying depleting remedies, and that experience has evidenced their utility. After this evacuation, it is indispensably necessary to clear the first passages of their crude and acrid contents, by the early exhibition of an emetic, which by the concussion it gives to the whole system dissolves the morbid catenation and frequently terminates the disease; and in every stage of this fever, mild emetics may be exhibited as often as indicated with beneficial effects. Cathartics of calomel and jalap, or neutral salts and senna, are next to be directed, and throughout the whole course of the disease, costiveness must be obviated either by mild laxatives or emollient injections. If these remedies fail, the head is shaved and washed frequently with vinegar and water and the patient is douched with cold water by 'allowing it to fall from a considerable height from a watering pot.' "

In pneumonia as follows: "Blood-letting is of essential importance, and it ought to be drawn from a large orifice, and the quantity proportioned to the strength and vigour of the patient, and the urgency of the symptoms. One copious bleeding is always more beneficial than repeated smaller ones; though in cases of high inflammation, and imminent danger, a repetition of the operation will be indispensable, until an abatement of the inflammatory diathesis takes place. The safety of the patient, however, greatly depends on a free and easy expectoration within the first three or four days of this disorder. Those most powerful expectorants, the mercurial powder, and the solution of tartarized antimony, in small nauseating doses, as directed in pleurisy, may in this disease be administered with full confidence, as experience has amply confirmed their superior efficacy. Moderate purgative medicines will occasionally be proper, but these must neither be heating nor drastic; eight or ten grains of calomel, followed by an ounce of Glauber's salts, will be a suitable cathartic for an adult. Instances will occur in this disease, in which emetics will be strongly indicated; when the stomach appears to be overloaded, and the lungs greatly oppressed with phlegm, moderate doses of Ipecacuanha, combined with tartarized antimony, or squills, will afford more effectual relief than any pectoral medicine. It not unfrequently happens that emetics in their ordinary doses, or even when increased, fail to produce the desired operation. I have in such cases of late years administered the lobelia inflata, or Indian tobacco, with much success. It will often induce vomiting in a very speedy and effectual manner, and frequently relieves the laborious breathing, without its emetic effect. A tablespoonful of the

tincture for an adult and a teaspoonful for a young child of three or four years may be a proper dose, and repeated if necessary according to its effect."

Ten years later this prescribing had not changed, as may be seen by comparing the article with "Continued fever" and "Pneumonia" in Gregory's "Theory and Practise of Physic" published in 1831. Venesection was still vigorously advocated, though evidently some doubt had arisen as to its efficacy in typhoid, as he says, "Every part of the treatment of fever has been the subject of controversy, but the employment of blood-letting is that, which, of all others, has been most widely disputed." He then goes on to give his argument for the full use of the lancet in this disease. In Watson's "Theory and Practise of Physic" published 1849 we find that ideas have changed and we see the birth of what became later on the "expectant" method of treatment. It may be interesting to you as it was to me to compare the introductory remarks on Treatment of typhoid by these authors.

Gregory (1831) says, "It is well remarked by Dr. Cullen that though in every fever that runs its full course, there is an effort of nature of a salutary tendency, and though from hence it might be inferred that the cure of fevers should be left to the operation of nature or that our art should be directed only to support and regulate them, it yet requires but a moderate share of observation to understand that these are very precarious and often wholly insufficient to overcome the disease."

Watson (1849) says, "In the first place, then, it is very difficult to estimate the value and efficacy of any particular plan of treatment and still more of any remedial substances, in this disease. Continued fevers, like other disorders which run a definite course and have no direct or necessary operation in spoiling the structure of vital organs, have a strong natural tendency to terminate in health. We see this tendency when the disease is left entirely to itself and it equally exists when remedies are employed to regulate its course or to abbreviate its duration. No one can doubt, who has had much experience in fever, that this tendency is sometimes thwarted by the *nimia cura medici*; and that the patient gets well *in spite of* the well meant but mischievous interference of the doctor. This tendency to recovery is a constant source, therefore, of fallacy in our observations upon the behavior of this disease, under different plans of treatment and upon the effects and utility of remedies. It leads us, too often, into the danger of ascribing to drugs what is really due to the workings of nature, of confounding antecedents and sequences with causes and effects: of counting recoveries as cures." Again, "Our object must be,

when the fever is once established, to *conduct* it to a favorable close: to "obviate the tendency to death." Upon this point I agree with Pitcairn, who being asked what he thought of a certain treatise on fevers declared, "I do not like fever curers. You may guide a fever, you cannot cure it. What would you think of a pilot who tried to quell a storm? Either position is equally absurd. In the storm you steer the ship as well as you can; and in a fever you can only employ patience and judicious measures to meet the difficulties of the case."

This author condemns venesection and emetics and advises mercury only very cautiously, arriving at this last conclusion from the fact that out of 12 cases treated by himself and colleagues with mercury, four died; while in the same epidemic of sixteen cases who took no mercury, only three died, and these three cases were practically moribund when admitted to the hospital, one from uterine hæmorrhage and the other two from exhaustion.

In pneumonia at this time the old treatment still held sway. "Blood-letting, tartarized antimony and mercury. Of these, blood-letting is the chief," says this author. In the article on typhoid in Ziemson, 1874, written by Saterwaite, he says, "Most of the means that have been recommended as sure cures of typhoid fever, hardly retain even an historical interest." Again, "Amongst all the remedies of which I can speak from personal experience, there are but two whose specific influence over typhoid fever I would not positively deny, these are calomel and iodine." This author advocates strongly the tub bath, cold, when hyperpyrexia is present. In the volume of Ziemson published in 1875, Jurgenson, in the article on pneumonia, maintains in contradiction to preceding writers that pneumonia is constitutional and belongs to the group of infectious diseases. He condemns almost all previously advocated treatment as injurious. His idea is summed up in the statement: "Nature cures and the only duty of the physician is to maintain life until this cure is effected. His efforts consist almost solely in 'Prophylaxis against exhaustion of the heart and control of already existing exhaustion.' His means are cold baths, quinin and stimulants. Pepper, in his edition, confines his treatment of typhoid almost entirely to diet, cold water either by baths or sponging, moderate doses of quinin and cautious use of stimulants. With regard to the use of calomel, he says, "More caution, it seems to me, is required in the use of calomel. While it is probable that in a few cases, the intestinal lesions may be favorably modified by the purgation which it induces, the indiscriminate use of the drug is, I am sure, calculated to do more harm than good." In the succeeding edition published eight

years later, 1893, he places reliance on diet, alcohol, hydrotherapy, and instead of the massive doses of quinin for hyperpyrexia, antipyrin, phenacetin, acetanilid and salicylic acid. Regarding the treatment of pneumonia the same author says, in edition of 1885, "An heroic antiphlogistic plan of one period gave place to the rational plan of another and that in turn to the expectant plan of a later period, while today an antiseptic method finds many advocates." He denounces venesection and gives seven different reasons therefore, and concludes thus: "Not only does indiscriminate bleeding increase the death rate and have no influence over the progress and course or severity of pneumonia but it postpones crisis and convalescence and in the old, young and enfeebled is very often nothing less than a fatal procedure."

As regards other methods in use up to this time he says, "Calomel and antimony have been almost eliminated from the therapeutics of pneumonia. There is no evidence that the former has any influence either on the progress of the disease or the absorption of the pneumonia exudation." Again, "Expectorants have no place in the treatment of pneumonia, as only a very small portion of the exudative matter in the lung is removed by expectoration." Again, "Counter-irritation by blisters and other irritants applied to the chest is of questionable utility." He believes cold baths detrimental if not dangerous, and relies on diet, alcoholic stimulants and quinin.

Nine years later, in the article in Pepper's System, written by Delafield, he says, "The treatment of the exudative inflammation that seems to me most satisfactory is that by the combined use of Aconitin 1/400, digitalin 1/500 and whiskey."

In 1898, Christanson prepared a serum from the horse and Sylvestor, serum from convalescents with which they thought marked benefit was obtained in their patients. In the Brit. Med. Jour., in 1897, Washburn reports an antipneumonococcic serum, and in 1898, Weiseiker a serum obtained from convalescents, for both of which preparations good results were claimed. Otherwise the treatment had not much changed at that time. Today the treatment of typhoid embraces diet, more liberal in character, and the internal use of "Antipyretics, intestinal antiseptics and antityphoid serum." The treatment of pneumonia — fresh air, milk diet, heart stimulants such as alcohol, strychnin, caffein, and in the young and plethoric a return to the bleeding of a century ago.

The wonderful discoveries made during the last quarter of a century through laboratory research have exceeded anything done in centuries in establishing the definite causes of many diseases absolutely unknown before, and the methods of

their transmission. From this knowledge has arisen almost a new department of medicine that is known as preventive medicine. Through preventive medicine the disastrous epidemics which decimated the various peoples of the earth have now become practically a matter of history. The wonderful result of this work may be seen in the absence of what we now class as preventable diseases in the great war going on now. Only last June, a gentleman direct from Paris, who had spent the first year of the war in the trenches, told me that it was the wonder of the age, that through the application of the principles of modern preventive medicine there had been absolutely none of these epidemics of small-pox, measles, typhoid, in the armies of either the Central Powers or the Allies, diseases which in previous wars had killed more soldiers than fell in battle. At the same time he added that among the soldiers in the trenches the losses from tuberculosis, pneumonia, and pleurisy had been enormous, much greater, he thought, than was generally known.

All honor to those men who have devoted their lives and in some cases sacrificed them in this work for the betterment of their fellow-men. The great success which has followed laboratory investigation and research into the causes of disease would naturally lead to a similar method of treatment, and so it is today that the laboratory has invaded the field of therapeutics and we are now experiencing a phase which may not inaptly be called laboratory therapeutics. What place it may finally take in the kaleidoscopic history of medicine, he would be courageous who would dare to testify. Good results have undoubtedly been obtained in the case of typhoid fever and the various forms of septicæmia, but in other conditions where much was expected, disappointment has ensued. On this point I would like to quote from an article by Joseph L. Miller of Chicago in the September 8th number of the *Journal of the American Medical Association*. "Typhoid fever is the only acute infection, treated with vaccins, in which a large series of cases with suitable controls has been reported. A study, however, of the accumulated statistics of typhoid does not lead to the conclusion that vaccins when given subcutaneously have materially modified the course of the infection. We are disappointed when we search the literature for beneficial results from vaccin therapy in colon bacilli infection, acute or chronic rheumatism, bacillary dysentery, whooping cough, gonococcal infection and dermatologic conditions such as acne and furunculosis. Furthermore, a review of the literature fails to reveal any striking evidence that vaccins when given subcutaneously have definitely modified the course of any acute infection; much less has it been demonstrated that the results were due to the

specific character of the vaccins. It has only been in the last two years that extensive comparative studies have been made regarding the value of specific and nonspecific vaccin therapy. As a result of these studies it now appears possible to draw conclusions on this point. This author goes on to show that there is nothing specific about these injections, but that any foreign protein such as sterilized milk, provided it sets up a febrile reaction, has just as beneficial a result. In conclusion he says, "The nature of the reaction responsible for this suddenly developing immunity has not been determined and it may be due solely to the temperature reaction and the various agencies of immunity excited by it. It is too early to state whether or not this method of treatment will become a permanent therapeutic measure. The results so far obtained would make it appear that it cannot be entirely discarded. The chief objection to its continuance is the danger of grave or fatal reaction. Its careless administration must be carefully guarded against."

In 1893 Osler published a paper on the visceral complications of *erythema exudativa multiforme* in which he showed that the exudative feature was only secondary and that the fundamental trouble was visceral, either an autointoxication, abnormal biliary condition or insufficient renal action. In a paper published August 4th, last, by Dr. Christian on the same subject he pertinently states:

"In more recent years with frequent therapeutic use of large amounts of foreign serums, serum sickness has become a well recognized syndrome. Cases of the type which Osler described in his papers bear close resemblance in many phases to these patients with serum sickness, and this gives a further reason for regarding them as being entitled to be grouped together, although in this erythema group very little is known about the etiology."

The laboratory history of syphilis is interesting. Briefly, the discovery of the spirochæte now called the *treponema pallidum*, a remarkable and long-looked for discovery, which established the infectious nature of the complaint. Next the discovery that salvarsan, an arseno-benzene compound, would kill the spirochæte, presto, inject the syphilitic with salvarsan and a cure would result. Apparently it did, and the early luetic manifestations disappeared like magic, but alas, they did not stay disappeared but must be followed by mercury, which has been effective in this disease for a few hundred years. That the use of salvarsan is not entirely millennial may be shown by the fact that in the May, 1917, number of *Journal of Cutaneous Diseases*, Schamberg, Kolmer and Raiziss conjointly publish a paper fifty-one pages in length on the "Toxicity of Salvarsan."

In the April number appears a paper by McDonagh of London, England. He says: "No initial lesion of a disease can be so varied as the syphilitic chancre, a circumstance difficult to explain if the spirochæta pallida is the sole cause. Diseases the symptoms of which are continually recurring are practically all due to protozoa, which have life cycles; therefore, it is reasonable to suppose that syphilis is not different, in this respect, from malaria, *etc.* The division of the spirochæta pallida has not, I believe, been actually witnessed, and recurrences of symptoms occur, in spite of the fact that two injections of salvarsan suffice to kill every spirochæte in the body." This author maintains that syphilis is not caused by the spirochæte but by a spore of which the Treponema is only the adult male phase. Some of his conclusions are: "The spirochæta pallida is not the sole cause of syphilis, but only the adult male phase of the coccidial protozoön-leucocytozoön syphilidis." "A positive Wassermann reaction means no more than that the patient has presumably had syphilis; it does not signify that the patient is actively syphilitic or that he necessarily requires treatment." . . . "Metals act as oxidizing agents and non-metals as reducing agents. As oxidation and reduction are regulated *in corpore* by iron and sulphur, better and safer therapeutic results can be obtained by using compounds containing these two elements than by using compounds containing such toxic elements as arsenic, antimony and silver."

Thus as we look back over a century of therapeutic history we have a kaleidoscopic view, or to be modern, a moving picture, of blood-letting, purging and puking, followed by cold water in shower and tub and sponge, with nauseous mixtures internally; diet and hygiene and expectancy, again followed by antiseptics internally and externally and concluding with vaccins and serums and what not injected into the life stream. Progress surely, but in what direction? During most, if not all, this time the homœopathic principle has remained the same, stable as the law of gravitation. Under its beneficent application, people *have* got well in past, *may* in the present, and *will* in the future if you will give them the opportunity. Why leave a sure thing to run after strange gods?

LARYNGEAL TUBERCULOSIS

HERBERT F. GAMMONS, M. D., Assistant Superintendent State Tuberculosis Sanatorium, Carlsbad, Texas

The diagnosis and treatment of laryngeal tuberculosis are considerations which are not standardized by physicians in tuberculosis work. Some specialists do not make a routine

examination of the larynx and a number do not believe in treating laryngeal infection except possibly by rest.

A routine examination of the larynx should be made in every case of pulmonary tuberculosis and in those suspicious cases where there are symptoms pointing to laryngeal involvement. Examinations at intervals should be made on all cases of pulmonary tuberculosis and more often on those cases who raise large amounts of sputum because sputum often becomes lodged in the box of the larynx, produces inflammation and subsequent tuberculous infection.

A prerequisite to the successful treatment of tubercle formation in the larynx is the same as that in any other location of the body, namely early diagnosis and institution of rest treatment. It is a fact that rest has decreased the cough and pain to a great extent when applied to the organ of voice and every sanatorium should have a ward for laryngeal cases where deaf and dumb method of communication would be in vogue or where patients would be made to communicate by means of paper and pencil.

The necessary factors for a successful examination of the larynx are:

1. The illuminator, examiner's mirror and patient's mouth should be on the same level.
2. Cooperation must be obtained and the patient taught to hold out his tongue with a cloth; sometimes it is necessary to use a tongue depressor on account of a highly arched tongue.
3. The patient must be told to breathe deeply or to phonate as the case demands to bring the different structures of the larynx into view.

The chief signs to be looked for in an early infection are localized inflammations or infiltrations which are usually found in the posterior commissure, on the arytenoids and on the true vocal cords. These locations are infected with about the same frequency; the false vocal cords are less often involved and tuberculosis of the epiglottis is uncommon.

As cases progress, untreated both as to the local and pulmonary condition, we get pathologic changes as in the lungs depending on the resistance of the patient and the virulence of the infection—marked infiltration being present when the condition is favorable and necrosis when the opposite is the rule. The latest manifestation is often an œdematous infiltration which as a rule ends in necrosis. All of these pathologic changes may be present in different parts of the larynx simultaneously.

Approximately half of the cases seen have not had any subjective symptoms other than of the primary lung involvement and would not have been discovered without a routine

examination; change in voice was present only when the true vocal cords were infected and in only a few cases was there any pain or sensation except tickling.

TREATMENT

The usual treatment consists in the application of argyrol in different strengths, formalin 1 to 10 per cent., lactic acid 20 to 80 per cent., camphor and menthol 5 per cent. in olive oil, Lugol's solution and the use of the cautery, amputation of the epiglottis, scarification, or nerve blocking as the case demands. Sometimes it is necessary to use a cocain spray in the advanced cases and tuberculin is at times indicated.

I have obtained the best results by using argyrol in a 20 per cent. solution and formalin in a 2 per cent. solution; the argyrol in those cases where the mucous membrane is not broken and the formalin where there are ulcerations. Some physicians will not use argyrol because they claim that it is not germicidal to the tubercle bacillus; the local physiologic effect is what we want and that is relief of congestion and in the absence of ulceration no germicide would be efficacious.

Formalin acts as a germicide and at the same time stimulates granulations; it should be used in cases of ulceration where the cautery is not indicated on account of extensive involvement.

Treatments as a rule should be given two or three times a week, the larynx first being washed out with an alkaline solution to remove the mucus; Seiler's and Dobell's solutions have been used for this purpose. I have had better results by applying the medication to the larynx on a cotton applicator than by the use of a spray.

I have never seen a case of laryngeal tuberculosis, having any reasonable chance of improvement as far as the lungs were concerned, which did not improve under treatment. On the other hand, cases which seemed to offer good prospects of arrest as far as the lungs were to be considered and who were not having laryngeal treatments invariably had a progressive laryngeal ulceration.

CONCLUSIONS

1. All patients with pulmonary tuberculosis should have laryngeal examinations at regular intervals, especially those who have large amounts of sputum or any symptoms referable to the larynx.

2. Laryngeal tuberculosis is a disease in which, if treated by rest and other recognized measures, a favorable prognosis may be given.

3. Treatment should not be routine but the case should be treated according to the pathology present.

EDITORIAL

BOOKS for review, exchanges and contributions — the latter to be contributed to the *GAZETTE* only and preferably to be typewritten — personal and news items should be sent to THE NEW ENGLAND MEDICAL GAZETTE, 80 East Concord Street, Boston. Subscriptions and all communications relating to advertising or other business should be sent to the Business Manager, 80 East Concord Street, Boston, Mass.

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THE INDEX

Abbreviation of several of the departments of the *Gazette* is necessitated by the space occupied by the index in this issue.

This issue of the *Gazette* contains the index for Volume lii, 1917. This index covers not only the material contributed to the *Gazette* but includes all of the original articles which have appeared in recently current homœopathic periodicals. An effort has been made to make this list of homœopathic journals as complete as possible. Ten domestic and six foreign journals have been reviewed with the purpose of compiling a working *Index Medicus Homœopathicus*. This has been in accordance with the plan announced a year ago and approved by a considerable majority of the subscribers who replied to our *questionnaire*.

Such an index ought to meet with the universal approval and support of the homœopathic profession. It is discouraging, however, to note the almost infinitesimal proportion of authors who evidence even a rudimentary knowledge of the bibliographic method — who take account of stock and ascertain what actually is known before rushing to the medical press with gratuitous or anciently historical statements. It is impossible to be honest with himself, or to give predecessors their due, or to be sure that he is presenting anything particularly new or true unless the writer is self-informed regarding previous work on his subject. Moreover, without exception all who have attained real eminence in any field of endeavor have been at pains to learn what has been done before them, have been thoroughly versed in ancestral as well as current mentalities. It ought to be unnecessary to iterate the importance and useful-

ness of an index, whether for scientific research purposes or the systematization and preservation of all kinds of records in a readily accessible form. A splendid exposition of the importance and necessity of references was published in the *Gazette*, 1917, lii, 53.

The editors will endeavor to extend the scope of this index in future volumes and heartily invite criticism and collaboration.

S. B. H.

MEDICAL AUTHORSHIP

In preparing the index for the present volume a very irritating obstacle was met in the form of some of the so-called titles of "original" medical papers. A few are listed: "Are you prepared for the overt act?" "Some random thoughts." "On the firing line." "Reflections and suggestions." "Something else again." "Some facts for the reader to think about." "What she did and what I did."

Perhaps we may be excused if we quote from remarks on this problem published previously in these columns.¹ "What can be learned or guessed at from any of these? Nothing, except the bland inanity of one angle of the author's mentality. Such "titles" may be appropriate to a school-girl's graduation essay or a theological discourse, but they are distinctly and ridiculously out of place in any presumably scientific medical journal. They are exasperating to the busy man who must select his reading from the table of contents. They sound like fiction and frequently the articles read like fiction. Such titles mean absolutely nothing when indexed and the articles are usually, though often undeservedly, consigned to oblivion merely because of the author's unconscious fatuity in selecting some popular *bon mot*, some melodramatic phrase, to express his object in writing the paper, instead of making the titular inscription a distinctive designation which is explanatory or descriptive of the nature of the substance of the article."

Other germane phases of this subject have been pointed out by our contemporary *The Homœopathic Recorder* and are herewith presented. "When you write a paper to be read before a medical society and afterwards to be printed, there are several things you ought to observe in order to prevent medical editors from tearing their hair and compositors from making the atmosphere blue — if the editor is lazy and refrains from doctoring up your manuscript. In a broad sense the advice is this: Do not write your paper as you would a prescription to a drug-

¹ *Medical literature*, 1915, L, 37-42.

gist who, after years of suffering, has learned to make a shrewd, and innocuous, guess at your meaning. If you are to read the paper yourself and that is to be the end of it, the hieroglyphics are all right — if you can understand them — but if it is to go forth to the world it should be written so that the world, the medical world, can understand it without doubt. Remember that the medical world is made up of many men from many schools. That what is plain to one is darkness to another. That if a paper is worth reading it is worth publishing. That if it is worth publishing it is worth being written so that type-men can set it properly, so that every medical man can understand it. Let us illustrate the point by a few mild examples:

“Diagnosis, Pul. Tub.” Why not write “Diagnosis, Pulmory tuberculosis”?

“With 4 cups of ” — Why not write, “With four cups of,” *etc.*?

“Symptoms of T. B.” Suppose a reader not knowing “T. B.” were to turn to the dictionary.

“Hosp.” Why not “hospital”?

“R. S.,” “R. L.” Why not “right side” and “right lung”?

“H₂O and milk.” Why not “water and milk”?

“Br am 3 1 hr.?” Ay?

“R. Tub.” Why not “prescribed Tuberculinum” or tuberculin”?

“S. L. continued.” Why not “Sac. lac. continued,” or, better, “Saccharum lactis continued”?

“Pat.” Why not “patient”?

“K. bich.” Why not “Kali bichromicum”?

And this is true of all our remedies, for what does the outsider know of “Pul.,” “Asa.,” “Bad.,” “Bap.,” “Con.,” “Cro.,” “Doli.,” “Dig.,” “Led.,” “Mill.,” “Pet.,” “Zing.,” or of others that could be quoted? These abbreviations are all right in text-books which furnish a key, but a published paper goes forth to the great world, compared with which the homœopathic world is very small, so why not write so that the great world can understand you, at least when you mention a remedy?

“You write a good paper, one free from the defects first mentioned, and then you say that you gave the patient, let us say, “bry.” Now how many men in the great majority know what “bry.” means? Very few. Why not (at the risk of shocking some of our purists) write you prescribed “Bryonia”?

“Among other minor things that worry editors and type-setters is writing on both sides of the paper; crowding the lines so close that you cannot get a pin point between them; typewriting with no spacing between the lines, or typewriting

with so pale a ribbon that the letters at times are illegible; not paging the manuscript, and so on. Small things, yes, but life is mostly made up of small things, and to do them well makes steps toward success. Also we believe the messages of our physicians are needed by the world, needed now more than ever, and deserve fitting dress."

ANTITYPHOID INOCULATION

It would seem that at this late date the value of protective inoculation against typhoid fever should be well established in the mind of every rational physician. Yet our contemporary, *The Homœopathic Recorder*, in an editorial in the September issue, takes occasion to cast several slurs upon this valuable contribution to preventive medicine. It is easy, of course, to understand that the same idea of a subject is not held by everyone, but we must protest when facts are distorted and misrepresented.

The *Recorder* tells us that "the inoculations — are really a severe handicap on the good work of sanitation and hygiene. In the Boer War the men had plenty of typhoid inoculation and 'died like flies.'" What are the facts? There are official records of the inoculation of 14 626 men out of a total strength of 328 244 men who served during the three years of the Boer War (inoculation was voluntary). In other words, only about 4 per cent. of the soldiers were protected — a rather small proportion on which to base the *Recorder's* sweeping generalizations! Again, the cultures used were heated to 60° C. to destroy their vitality — a temperature which, as has since been shown, seriously diminishes the vaccin's ability to evoke the production of antibodies. Sir Almroth Wright, who supervised the inoculations, believed that the extent of the disease was decreased about one-half and the mortality even more favorably influenced. In view of the relatively small number protected, we may not be astonished to know that 57 684 cases of typhoid fever were reported, with over 8 000 deaths.

Contrast this with the condition in the English Army in the present war. Ninety-eight per cent. of the English soldiers have voluntarily been inoculated; as a result, only 6 022 cases of typhoid, with but 292 deaths, have occurred. How many of these cases are found in the uninoculated 2 per cent. we are not told, but may, perhaps, safely guess.

The main thesis of the *Recorder's* remarks is that the decrease in the rate of incidence of typhoid fever is due, not to the

vaccin, but to improved hygiene. It is true, of course, that the science of sanitation has made great strides in the present century, yet figures tend to show that other influences than those of sanitation are at work as regards typhoid. The three most common intestinal diseases, all of which are transmitted by similar agencies, are diarrhœa, dysentery and typhoid. If more hygienic surroundings were the only factor, we should expect to find a corresponding decrease in the morbidity rates for each of these conditions. For this reason, the following comparisons are of interest:

Admission rate per 1 000, U. S. Army

	1898	1916	Per cent. of 1898 rate
Diarrhœa,	303.76	31.76	10.4
Dysentery,	28.09	2.69	9.5
Typhoid,	192.65	.08	0.041

Such a disproportionate fall in the rate for typhoid fever is more than significant; it is well-nigh conclusive as showing the value of antityphoid vaccination; for, be it remembered, there has been in our army no vaccination against dysentery.

The brilliant record of our troops during the mobilization on the Mexican border in the summer of 1916 should be remembered. In spite of the fact that typhoid fever was decidedly prevalent in the cities near the camps, notably San Antonio, but one or two cases of this disease among the soldiers were reported. Yet it was inevitable that many of these men, eating more or less promiscuously in the cafés and hotels, should be exposed. Numerous similar instances might be adduced, but such will readily occur to our readers.

That laboratory evidence of the presence of immune bodies in the blood of an inoculated person is at hand is, of course, another strong argument in favor of the value of the procedure under discussion.

To sum up — in antityphoid inoculation we have a method of protection against a serious disease which has the support both of the laboratory and of huge numbers of clinical cases. The only disadvantage which can be urged is the possibility of three or four days' malaise, usually not severe enough to cause inability to perform one's daily tasks. Oppose to this the possibility of a serious, possibly fatal, and certainly protracted and exhausting illness, and there should be no doubt as to which way the balance will swing.

W. O.

THE PSEUDODIPHThERIA GROUP OF BACTERIA

Soon after the discovery of the bacillus that causes diphtheria the early bacteriologists found that there existed a large group of organisms which in morphology and many cultural reactions bore strong resemblance to *B. diphtheriæ*. Because of the belief that these microorganisms, though commonly encountered, were not primarily pathogens but were inconsequential secondary invaders or pure saprophytes, intensive study of the group lapsed and for a number of years the "diphtheroids" were patiently regarded as but another of those obstacles which nature so lavishly distributes in the path of medical progress.

Attention was redirected to the group by the findings of Bunting and Yates in their investigation of Hodgkin's disease. The consistency with which they found a diphtheroid bacillus in the diseased lymph glands led them to attribute direct ætiologic significance to the microorganism which they accordingly named *B. hodgkini*.

We have recently received a splendidly comprehensive monograph¹ on the diphtheroid group by Dr. Ralph R. Mellon, now Pathologist to the Hahnemann Hospital at Rochester, N. Y., formerly Assistant Professor of Clinical Pathology at the University of Michigan, Department of Homœopathic Medicine.

The entire literature of the subject is thoroughly and critically reviewed; the unfortunate tendency of too many authors to believe everything they read is happily avoided. Of more than a hundred strains collected from various sources in this country and abroad, forty-seven were selected for study—preliminary observations having shown the remainder to be duplicates. On these forty-seven strains extensive cultural and immunologic investigations were carried out. The scrupulous attention to details of technic which is of such imperative importance in comparative research is admirably exemplified in Mellon's work and, coupled with an open mind and sound judgment, has served to place this monograph in the top rank of authoritative presentations of the subject.

The complement-fixation reaction was found to give the most clear-cut results in group differentiation, and could be correlated with the results of carbohydrate fermentations and with morphologic characters. This correlation adds great weight to the probability that the grouping represents actual and not fortuitous conditions.

Mellon has allocated his strains in seven groups, any one of which may become pathogenic under favorable conditions. The

¹ A study of the diphtheroid group of organisms with special reference to their relation to the streptococci. R. R. Mellon, M. Sc., M.D., Dr. P. H. J. Bact., 1917, ii, Nos. 2, 3, and 4

first four groups, represented by *B. hoagii*, *B. diphtheroides liquefaciens*, *B. xerosis*, and *B. hoffmannii*, are typically saprophytic; *B. enzymicus*, *B. flavidus* and *B. ruedigeri* are more often pathogenic. A considerable sum of evidence is collected to show that diphtheroid infection is no myth. Study of virulence is difficult because the whole group rapidly loses this attribute when kept under artificial conditions. Citations of cases of diphtheroid infection include tonsillitis, chalazion, acute and chronic otitis media, arthritis, caseous and ulcerative lymphadenitis in cattle, bronchopneumonia, interstitial pneumonia, ulcerative cystitis and epizoötic infective abortion in guinea-pigs. Many of these instances of recovery of diphtheroid bacilli have derived additional ætiologic import by confirmatory serologic evidence. One of the strains studied gives, in its peculiar pleomorphism and serologic reactions, rather definite indication of relationship to the streptococci. An organism probably identical with it has been isolated by Walker² from a number of cases of bronchial asthma.

The importance of further studies of the diphtheroid group needs no emphasis. Mellon may well be credited with the commendable achievement of having advanced our knowledge in this field and of having provided an emulable working basis and plan.

S. B. H.

²Walker, I. C.: Studies of a diphtheroid organism isolated from the sputum of patients with bronchial asthma. J. Med. Research, 1916-17, xxv, 391.

CLINICAL DEPARTMENT

From the Neurological Clinic. Four Dispensary Cases involving the *arm*.

Case No. 11289. A Russian Jewish woman. Age 55. She is short and very fat. Referred from the Orthopædic Department for pain and weakness in right arm of seven weeks' duration. She said that about two months ago she fell, striking on her right arm at the shoulder. Examination elicited definite soreness on pressure over the right circumflex nerve extending to musculo-spiral nerve. She could not place the arm behind her back or raise it to her head and "it aches me" she said. The X-ray disclosed no break. The shoulder had been baked without benefit. Here is a simple case of traumatic neuritis, sometimes called "Saturday night paralysis" because it is commonly met with in men who have slept off their Saturday night debauch with the head resting on the arm or the arm hanging over a chair in such a manner as to exert prolonged pressure on the musculo-spiral nerve.

The patient was given hypericum 3x every two hours and high frequency electricity twice a week. She was told to keep her arm in a sling, and the condition explained to her. The remedy was changed to cimicifuga after two weeks. The arm feels better after four weeks' treatment. She can now get it up to her head, though slowly. There is still some sense of numbness and soreness.

Case No. 112931, also referred from the Orthopædic Department, is an American woman of 60 years. She came for pain in her left shoulder of two weeks' duration. She knows of no cause for it. Two years ago she had a similar attack in the other shoulder lasting six months. At the age of 17 years she had a left hemiplegia which lasted about a month, and eight years ago had paralysis of the left arm which lasted about a week. Six years ago she fell about 14 feet striking on the head; was badly bruised but did not lose consciousness. She has had five children, two were still-born and two died in infancy; one is living and well. Mother is living, 80 years old; has a floating kidney with sudden attacks of pain. Father living at 87 years of age; has a tumor of right arm.

Examination shows a gray, stocky woman who looks her age. Blood pressure is 135/70. Heart all right. There is extreme sensitiveness to pressure over the area of the left trapezius and deltoid to both slight and deep pressure, and she says the pain is very severe, keeping her awake nights. There is no limitation of motion but all movement is painful so that she

has to keep the arm still and nurse it. The skin is slightly red over the painful area but there is no eruption.

This is a case of simple sensory neuritis. I am aware that many points in the history offer interesting material for discussion. The question of both hysteria and multiple sclerosis would have to be considered as well as syphilis. But taking the question of the acute process for which she came we have only to distinguish between a simple sensory neuritis and herpes zoster and this is done by the absence of all eruption. That is, there is no inflammatory involvement of the posterior root ganglia. This case was given at first potassium arsenate 3 drops *t. i. d.* and for the first two weeks codein $\frac{1}{4}$ grain every other night at bed time. She was told not to use the arm. After two weeks the prescription was changed to cimicifuga 6x, *q. i. d.*, and the codein stopped. She is improving and now is free from pain and gets her sleep.

Case 102559. An Irish woman. Age 35 years. Comes to the neurologic clinic for pain in her right forearm and fingers of three weeks' duration. She was confined nine weeks ago. The baby is well. Four weeks ago she ran the points of scissors into the thenar eminence of her right hand. The wound got infected and the arm swelled and became very sore. The sore was opened and drained and recovery took place except that the cicatrix remained sensitive. Then the neuritis set in with definite soreness along the course of the radial nerve. The patient looks pale and run down. She was given ferrum phosphate. A week later, as there was no improvement and she had increasing chills and sweating, a tablet of arsenic 2x and *ferrum reductum gr. 1, t. i. d.* was added and she was advised to go into the country. She reports improvement.

Case No. 114061. An American man aged 53 years comes to the clinic for pain and weakness in his left shoulder. He has been working in a munition plant on a machine which required him to hold down a jarring lever with his left hand. He worked on this machine for four months when he began to notice soreness and later pain in all the muscles of the arm and shoulder.

Examination: A muscular, thick-set man, looks young for his years. Well, except for left arm. Has never been to a doctor except for the present trouble. The left arm has no limitation of motion, no tremor, no soreness along nerve trunks, no sensitiveness of skin, no acute pain, no eruptions, but much soreness on deep pressure at the insertion of the left pectoral and trapezius muscles. Upon use he says that the arm and shoulder quickly tire and then ache for some hours. In my experience this is an unusual case and for want of a better name

it may be called traumatic myasthenia. We can theorize that the motor cells in the anterior left horn of the cervical enlargement are fagged, as in occupation neurosis, but more acutely. He was given arnica every two hours and told to give the arm complete rest in a sling. For the pain he was to apply hot wet compresses. After a week's treatment he reports improvement.

There is yet another type of shoulder that because of its limitation of motion may be confused with motor or pressure neuritis, and that is chronic bursitis of the shoulder joint. This type, however, does not exhibit soreness over the nerve trunks and pain is only felt when the shoulder joint is forcibly manipulated or moved. This is the type in which massage and baking may do good.

PERIODIC HOMŒOPATHIC LITERATURE

Pacific Coast Journal of Homœopathy. October, 1917

1. *The sickly child.* 470. Lischner, H.
2. *Blood pressure observations in gynæcology and obstetrics.* 479. Cookingham, F. H.

"Where the pressure is much lower at the close of the operation than at the beginning, restorative treatment should be begun at once, before the patient is removed to her room. The fall in the blood pressure is a positive indication for quiet, and the patient should not be moved until the blood pressure approximates the reading before the operation."

"The blood pressure test shows very early any indications of departure from the normal metabolism in the pregnant woman. This change in the blood pressure usually precedes any clinical signs or symptoms or any demonstrable change in the urine."

A pressure over 140 mm. Hg. is always suspicious.

"A blood pressure of 140 to 150 mm. will be of much less import in a woman of forty than in a young woman. The significance of the blood pressure also depends upon whether the high reading is the result of a rapid rise . . . or whether it is a high stationary pressure." The former is more dangerous.

Rising blood pressure, with albuminuria, not relieved by treatment, is an indication for interference with pregnancy.

3. *Painful shoulders.* 485. Tomlinson, R. H.
4. *An acute otitis media with complications.* 505. Smith, J. J.

The Hahnemannian Monthly. September, 1917

5. *Correct methods of choosing the indicated remedy.* 513. Coleman, D. E. S.

Careless handling of drugs, ignorance of solubility and chemical action defeat the purpose for which the drugs are prescribed. For instance, the lower potencies of phosphorus oxidize on exposure to air, nitric acid and some other substances cannot be "potentized" in alcohol until a certain degree of dilution is reached.

6. *The logic of infinitesimals.* 519. Patch, F. W.

7. *The necessity of examining cases, with an illustrative example.* 525. Golden, G. M.

G. pleads for periodical prophylactic examinations of healthy people.

8. *Backache from the standpoint of the orthopædist.* 531. Brook, J. A.

9. *The reliability of homœopathic materia medica.* 540. Vandenberg, W. W.

10. *Serology.* 542. Sappington, S. W.

11. *The value of coöperation between the gynæcologist and the pathologist.* 549. Betts, N. S.

Homœopathic World. September, 1917

12. *Coca in war-strain.* 413. Bellairs, R. H.

The higher potencies (30x to cm.) are recommended. The symptoms on which this recommendation is based appear to be largely clinical.

British Homœopathic Journal. August, 1917

13. *Certain aspects of logical method in relation to homœopathy and life.* 209. Goldsborough, S. F.

A lengthy philosophical discussion of the importance of the dynamic phase of the patient, the tendency of the organisms to recovery from acute disease. The author concludes that we should look on doses of homœopathically selected medicine as "simply aids to the natural response of the patient to the presence of his disease."

September, 1917

14. *Simple Mammary cysts.* 241. Neatby, E. A.

Attention is called to the fact that the appearance of non-malignant cysts is often preceded by dysmenorrhœa or pelvic

pain and subacute or chronic mastitis. From this, the author suggests, we may conclude that the mastitis, with its resultant cyst, is due in some way to congestion or other abnormal condition of the pelvic organs. Phytolacca is highly recommended, as are conium and silica.

15. *A few whiffs of gunpowder.* 250. Clarke, John H.

A few cases illustrating the value of gunpowder (trituated) in the treatment of septic conditions.

The Chironian. August, 1917

16. *Infantile Paralysis.* 29. Bartine, O. H.

Review of the work of the New York Committee on After-care of Infantile Paralysis Cases.

17. *Human polarity in electrotherapeutics.* 33. Bell, A.

The author, arguing mostly from analogy and assumption, states "that the left side of the trunk is positive, the right side is negative, the middle line is neutral; the inside of the limb is positive, the outside is negative." He claims "to be the first physician to use the galvanic current in actual treatment, applied according to the laws of human polarity." He gives technique for the treatment of various conditions. From reading the article, one feels almost certain that the philosopher's stone has at last been discovered!

18. *Diabetes mellitus.* 42. Bretzfelder, K. B.

A general review of the subject.

19. *Therapeutics of the pituitary gland.* 60. Tritsch, J. E.

A review.

In view of the prevailing popularity of pituitrin in obstetrics, the list of accidents possible from the use of this drug in hastening labor is timely; tetanus and *strictura uteri* with incarceration of fetus and death; too prolonged uterine contractions with fatal fetal asphyxia; *ruptura uteri*; pressure necrosis of soft parts; post-partum atony of uterus with hemorrhage; cervical and perineal lacerations; collapse, especially if intravenous injections.

September, 1917

20. *Femoral Hernia; a symposium by the class of 1918* (N. Y. Homœopathic Medical College).

1. Surgical anatomy. 82. Von Gillume, S. H.

2. Varieties, clinical symptoms and diagnosis. 85. Landman, L. M.

3. Discussion. 92. Ballin, D.

4. Treatment of femoral hernia. 93. Hetrich, J. A. W.

5. Discussion. 101. Wilson, M. J.

The Clinique. August, 1917

21. *Hormones and chalones*. 353. Neiberger, W. E.

The author uses the rather unfamiliar word *autacoid* to mean the active principle of an endocrine gland. Of these, the hormones are those which excite cell-activity, whereas the chalones diminish this activity. Study and proving of these drugs are urged.

22. *Autogenetic versus stock vaccin therapy*. 357 Smith, A. E.

A brief review. The author appears to favor autogenetic vaccins, but wisely remarks that there is room for doubt as to the value of vaccins in almost any of the conditions in which they are employed.

23. *Pharmacology of Lycopus Virginicus*. 360. Hinsdale, A. E.

Provings were conducted on three healthy persons, and the action of the drug upon the heart of frogs, turtles and dogs was studied. Hinsdale concludes that *Lycopus* might be indicated in: the beginning of certain fevers of an infectious type, when the increase in the rate of the heart's action is not so high as would ordinarily be the case; during the course of an acute disease with a threatened myocarditis, where the pulse-rate and blood pressure are lower than usual.

24. *Report of Pharmacological Laboratory, Hahnemann Medical College of Chicago*. 367. Hastings, W. A.

25. *Gynæcology in general practice*. 372. Walters, F. A.

September, 1917

26. *Quinin in malaria* (ed.) 386.

The editorial speaks of the intravenous administration of quinin in malaria. The salt used is the chlorhydrosulphate. Each cc of the solution represents one grain of the drug, and 10cc are given twice daily for four or five days, and then one per day for ten days.

27. *Some high-blood-pressure remedies*. 401. Askenstedt, F. C.

Baryta muriaticum is recommended "in moderately advanced cases of arteriosclerosis where a high systolic pressure, with a comparatively low diastolic tension, is attended by cerebral or cardiac symptoms." *Secale cornutum* is "indicated where the diastolic, rather than the systolic, blood-pressure is high"; it is more useful in the functional forms. *Plumbum metallicum* is of possible value in cases presenting renal or cerebral symptoms as complications of hypertension. Other

drugs mentioned are *uranium nitrate*, *tabacum*, *opium*, *digitalis*, and *coffea cruda*.

28. *Health of the new army*. 408. Major Bispham.

A brief consideration of the way problems of hygiene are being met in the army.

29. *Some uses of the tissue remedies*. 412. Hopkins, Mary E.

Iowa Homœopathic Journal. August, 1917

30. *Foci of infection above the collar-button*. 9. Linn, E. S.

31. *Gonorrhœa of the spirit and syphilis of the soul*. 16. Wieland, F. Reprinted from the "Clinique."

A very readable article, warning us against jumping at conclusions in genito-urinary conditions.

Homœopathic Recorder. September, 1917

32. *Hahnemann — the great*. 387. Hawkes, W. J.

33. *Essentials of homœopathic philosophy*. 392. Grimmer, A. H.

34. *The power of high potencies — a reasonable scientific fact*. 397. Van Denburg, M. W.

35. *Mentality of the ophidia*. 400. Dienst, G. E.

This paper is a study, not in snake-psychology, as its title might imply, but in the materia medica of the snake-venoms. "— were these remedies administered — the insane asylums and sanatoriums of our land, so densely populated with the afflicted, would soon be greatly depopulated, and the candidates for these institutions would rapidly decrease in numbers." The rest of the paper deals with the mental symptoms of this group of drugs.

36. *Useful hints*. 414. Jones, Eli G.

Dr. Jones quotes with approval the statement of another physician that "Belladonna 200 will cure quinsy" and that "I use Kali bichromate 200 in every case of diphtheria." This appears to be Dr. Jones' idea of individualization. The dictum that "Kali phos. 6x, ten tablets in a cup of hot water at bed-time, cures constipation" is almost too much, even for one who has been hardened by reading this author's previous effusions. Possibly some of these sweeping generalizations are penned after Dr. Jones has spent a poor night in a sleeper while making some of these trips of which we read so much in his medical articles; if so, our judgment must not be too hard.

BOOK REVIEWS

A Text-Book of *Materia Medica and Therapeutics, Characteristic, Analytical and Comparative*. A. C. Cowperthwaite, M.D., Ph.D., LL.D., Emeritus Professor of *Materia Medica* in the Hahnemannian Medical College and Hospital of Chicago. Eleventh edition with an appendix embracing many new remedies, including the animal nosodes. Pp. 886, Price \$6.00. Boericke and Tafel, Phil., 1917.

The first edition of this work appeared in 1879. From time to time, revisions and additions have necessitated new editions and this year witnesses the eleventh. Uncommonly does a book attain such eminence of popularity and still find many who hope to see it strike twelve.

The book is neither dainty nor unduly cumbersome — both in size and extent of subject matter it occupies a place between the condensed manuals and the unabridged encyclopædic treatises.

Cowperthwaite's method of treatment of individual drugs is to give, first: A brief description of it and the usual method of preparation; second: An abridged analysis of its general pharmacologic action; third: An "anatomical" arrangement of the more important and better "verified" characteristics; fourth: A condensed section on the therapeutic application of the drug.

The symptoms given in italics are "those which occur very often in provings, and which have been repeatedly verified in practice; these we may designate as grand characteristics."

Symptoms that have been observed less often in provings but which have been frequently verified in practice appear in ordinary type.

"While most of the symptoms given are pathogenetic, that is, are the result of provings on the healthy — yet it has not been deemed advisable to throw out altogether those distinctively curative symptoms which have been so repeatedly verified as to render them unquestionably characteristic, and such only of curative symptoms are given." An important feature in this connection is that such "clinical" symptoms are given a distinguishing symbol (°).

With this plan of symptom selection the reviewer is in hearty accord. That the plan has been consistently followed is perhaps open to question. Possibly more thoroughly critical reference to original sources might enhance the value of this compilation. One example will suffice.

Under *DROSERA* we find *in italics* (to indicate one of the grand characteristics "which occur very often in provings. . . .") the following: "*Rough, scraping, dry sensation deep in the fauces, . . . causing a hacking cough with a yellow mucous expectoration, and hoarseness, the voice having a deep bass sound. . . .*" This passage is from Hahnemann's *Materia Medica Pura* and is based upon provings by Wislicenus. Out of eight of these provings only two exhibited a cough and only one had the *rough, scraping, dry sensation . . . etc.* A modern investigator would rightly be skeptical of a result obtainable only in 12.5 per cent. of his experiments especially when bacteriologic control and the exclusion of fortuitous infections as incitant of the cough was impossible. Even if the prime question as to the causative relation of the drug to the symptoms of this prover be ignored, it seems scarcely justifiable to perpetuate this *drosera* "sketch" by according to it a place among the grand characteristics "which occur *very often* in provings."¹

Probably hundreds or thousands of similar instances of deficient authenticity could be cited; not alone in this volume but in any of our text books on *materia medica*. It is well to remember that repeated affirmation is a most potent expedient, but it serves to implant errors nearly as fixedly as it does truths.

This criticism is general, and, we hope, not devoid of constructive applicability. None of our *materia medica* compilations even remotely approaches thorough reliability; this book of Cowperthwaite's comes perhaps closer to perfection than most others.

S. B. H.

¹ *Vide* Wesselhoft, C. 2d.: *The homœopathic treatment of whooping cough*. New Eng. Med. Gazette, 1917, lii, 312

because of bad home conditions, physical helplessness or pronounced anti-social tendencies, and only 12 of them were provided for in an institution adapted to their care. Twenty-six of the defective children were in industrial schools for delinquent children, and of these the report says:

“Institutions for the care of delinquent children are greatly handicapped by the presence of defectives, since they require special attention and exert a bad influence over the normal children. After a short period of residence these defectives are returned to the community without sufficient supervision.”

Other defective children with delinquency records were at large in the community; in all, 98 of the 212 defectives studied were delinquent or immoral or difficult to control.

The report suggests that, while any program for the care of mental defectives must have as its central feature suitable institutional provision offering training or custodial care according to the needs of the individual, other activities are equally essential. It is pointed out, for example, that institutional care is not necessary for all mentally defective children, for, contrary to the popular impression, it is found that there are certain types who safely can remain at home provided they have the attention and study which they deserve. However, special provision should be made for their safety, care, and education, and out-patient work of an institution for the feeble-minded, in coöperation with schools, social agencies, and families, is referred to as a new and important method of providing in the most humane possible way for such children.

The possibilities of industrial training by which certain types of defectives may gradually become in part self-supporting and the importance of providing facilities for mental examination and diagnosis of doubtful cases are also brought out in the report.

HOME CANNED FOOD SAFE

No Need to Fear Botulism in Properly Prepared Products

The United States Department of Agriculture has issued the following statement prepared by the bacteriologists of its Bureau of Chemistry and the States Relations Service:

“There is no danger that the type of food poisoning known as ‘Botulism’ will result from eating fruits or vegetables which have been canned by any of the methods recommended by the United States Department of Agriculture, provided such directions have been followed carefully. It is possible that in a number of instances the directions were not strictly followed and that spoilage has occurred. Of course, extreme care should be taken to ascertain before eating canned goods of any kind whether they are in good condition, and if they have spoiled they should not be consumed.

“In case of any doubt as to whether the contents of a particular can have spoiled, the safest plan is to throw it away, although all danger of Botulism may be avoided by boiling the contents of the can for a few minutes, since the *Bacillus botulinus* and the toxin or poison which it produces are killed by such treatment. No canned food of any kind which shows any signs of spoilage should ever be eaten. In the cold pack method of canning given out by the Department of Agriculture, only fresh vegetables are recommended for canning, and sterilization is accomplished by the following processes: cleansing, blanching, cold dipping, packing in clean, hot jars, adding boiling water, sealing immediately, and then sterilizing the sealed jars at a minimum temperature of 212 degrees Fahrenheit for one to four hours, according to the character of the material. Since the spores of *B. botulinus* are killed by heating for one hour at 175 degrees Fahrenheit (according to Jordan’s “Bacteriology” and other recognized textbooks) there is no reason to believe that the *botulinus* organism will survive such treatment.”

WARNING AGAINST MEDICINE FRAUD

Imposters posing as federal employees are trying to sell rheumatism and other "cures" which they represent to the gullible as being made by the United States Government, is a warning issued today by the Bureau of Chemistry, United States Department of Agriculture. Letters received from residents of Minnesota and South Dakota tell of such misrepresentations by agents of the "United States Medical Dispensary" or "Dr. Henry Post," Washington, D.C. The packages and labels guaranteed for \$20 "cures" for various ailments but failed to give any address of those who are to refund. Federal inspectors have been unable to locate any such concern or doctor in Washington or elsewhere.

The label contains a serial number and states that the "product" is "guaranteed by Dr. Post under the national pure food and drugs act of June 30, 1906." The number given is that assigned to a concern which has never made such a product and has no connection with Dr. Post or a Dr. George Lawrence of South Dakota who, according to a correspondent, represented himself as both Dr. Post's agent and an employee of the United States Government.

The department's inspectors can not find that the product is being shipped in interstate commerce, which would bring it under the Food and Drugs Act and are of the opinion that the agents carry it personally to escape detection by the Federal authorities. The department therefore has brought the matter to the attention of various State and city food and drug officials with the view of securing their coöperation in detecting and preventing such fraudulent practices.

ACTION OF THE STATE COMMITTEES OF THE MEDICAL SECTION, COUNCIL OF NATIONAL DEFENSE

Urging immediate action providing for at least six months of intensive military training of all young men in their nineteenth year, to become operative as soon as the army cantonments are available;
also recommending physical training in schools, etc.

The following resolutions were adopted unanimously at a meeting of Committees from all states (except Maine and Delaware), held in the Congress Hotel, Chicago, October 23, 1917.

Whereas, The experience through which the United States is now passing should convince every thoughtful person of the necessity for the universal training of young men, not only for the national defense in case of need, but also to develop the nation's greatest asset — its young manhood — in physical strength, in mental alertness, and in respect for the obligations of citizenship essential in a democracy; Therefore, Be It

Resolved by the State Committees of the Medical Section of the Council of National Defense that they strongly urge the adoption by our government at this time of a comprehensive plan of intensive universal military training of young men for a period of at least six months, upon arriving at the age of nineteen years; and that this body also support the movement to secure the introduction into public schools of adequate physical training and instruction;

Resolved, That the members of each State Committee immediately take active steps to insure public support for the subject of these resolutions through the newspapers, through public meetings and through the appointment of committees in each county; also that copies of these resolutions be forwarded to the Senators and Members of Congress in their respective states, with a personal request that favorable action be taken at the coming session of Congress upon a measure following the principle of the Chamberlain Bill and to become operative as soon as the army cantonments are no longer required for the training of the forces in the present war;

Resolved, That each State Committee from time to time report to the Medical Section of the Council of National Defense as to action taken and progress secured in their several states.

CONSERVING LIFE BY ELIMINATING WASTE*

By ROBERT P. FISCHELIS B. Sc. Phar. D.

It is time to sound a warning to pharmacists, hospital authorities, physicians, dentists, veterinarians and all others engaged in manufacturing, supplying, dispensing and using drugs and biological products, that unless efforts are made on the part of all to eliminate waste through carelessness, deterioration or misapplication, we may be confronted with a serious situation regarding supplies of many drugs, chemicals and biological products most necessary for the conservation of life.

The demand for certain drugs and biological products, particularly for the large armies which are being raised, is bound to be unprecedented. The civilian population will need the same medical attention as it is accustomed to in time of peace, and patriotism demands that our boys at the front shall not be inconvenienced for lack of medical supplies.

Unless waste is eliminated in the handling of drug products, and remedies are more judiciously employed, shortages are bound to occur. Foreign governments have commandeered drugs in their countries from time to time when acute situations arose. Our country will be forced to do the same thing unless the professions demonstrate that they can handle the problem adequately themselves. Surely we do not want a dictator in pharmacy nor do we want situations to arise which will compel the government further to regulate business.

Such steps are inevitable, however, unless concerted efforts to conserve supplies of pharmaceutical and biological products are put forth. There is an inexcusable waste of biological products each year, due mostly to careless ordering on the part of the retailer. Let us stop and consider for a moment that if every drug store in the United States were to return but one package of diphtheria antitoxin to the manufacturer because it had become outdated and therefore useless, approximately 50 000 packages of this valuable remedial agent would be wasted—and this while lives are being lost elsewhere for want of the product. This is but one example, and when we take into consideration that there are 150 000 physicians and 15 000 veterinarians in addition to the 50 000 druggists in the United States, who use hundreds of biological products, the wastage possible, because of careless ordering, at once assumes enormous and startling proportions. Yet such a waste would occur if a majority of the members of the professions did not stop to contemplate the results of such carelessness.

All of us must stop thinking merely as individuals and consider the significance of multiplication of individual wastefulness and carelessness. A single package of any article, subject to deterioration, which becomes useless due to overstocking, seems trivial, but when multiplied by thousands this trivial waste soon assumes formidable proportions. It makes no difference whether the pharmacist bears the loss in permitting an article to deteriorate or whether the manufacturer makes an allowance, there is nevertheless always a loss. And added to the loss of the product itself there is the loss of accessories like rubber, metal, glass, wood, paper, dyes, other chemicals, time, labor and money used in putting it up, which in these days are very expensive and in some cases rare commodities.

Of course, it is impossible to foretell with absolute accuracy what the demand for a certain perishable product will be, but the careful pharmacist can gauge demands pretty accurately and waste can be reduced to a minimum by careful study of conditions. It is unnecessary, particularly at this time, to order more biological or pharmaceutical products than are needed for use in the immediate future, as supply stations of manufacturers are now so conveniently located to every section of the country that in the case of epidemics, supplies of biological products, *etc.*, can be obtained anywhere within twenty-four hours at the very latest. It is better to take advantage of supply facilities than of the privilege of returning goods. The former is economy; the latter is waste.

* Abstract of a paper by Robert P. Fischelis, B.S., Phar.D. Read at the meeting of the Commercial Section of the American Pharmaceutical Association.

Overstocking of supplies of all kinds in the drug store is exceedingly bad practice from a commercial point of view as well as from the standpoint of national necessity just now. The practice of hoarding supplies of products which are apt to become scarce is also a poor one, from the point of view of the shrewd business men, aside from any moral consideration, owing to the uncertainty of market conditions and the uncertainty regarding the length of the war. It not only has the effect of inflating prices, but it may also serve as a boomerang and leave high-priced stocks on the hands of the retailer when normal conditions are restored.

The purchase in bulk of pharmaceuticals subject to deterioration is a wasteful procedure unless there are immediate prospects of disposing of them. It should always be remembered that quick turnovers bring greater profits than "free goods" lying on the shelves for long periods.

We must not overlook the fact that every pint of fluid-extract and every package of bacterin or serum manufactured represents materials more and more difficult to procure, as well as time and labor, which, unless properly utilized, represent absolute waste.

"Doing Your Bit" means more than flying the American flag over your store. It means enlisting actively in the work of *Conserving Life by Eliminating Waste*.

PAMPHLETS ON MEDICAL FRAUDS

Published by the Jour. A. M. A.

"Consumption Cures," 133 pages.....	Price, \$0.20
"Epilepsy Cures," 34 pages.....	".10
"Deafness Cures," 48 pages.....	".10
"Cancer Cure Fakes," 48 pages.....	".06
"Obesity Cures," 66 pages.....	".10
"Female Weakness Cures," (new — soon off press).....	".15
"Some Mechanical Cure-Alls," 56 pages.....	".10
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"At the Bar of Public Opinion," 28 pages.....	".10
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\$2.01*

DIAZO TEST ABANDONED

The Diazo test has been declared useless in the diagnosis of typhoid fever by the Diagnostic Laboratory of the New York City Health Department. The laboratory reports that less than 250 samples out of nearly 1,700 specimens submitted last year, gave positive reactions and "that this really assisted the attending physician in arriving at a correct diagnosis is very doubtful, for it is now generally conceded that the Diazo reaction is of little or no diagnostic value."

The Diazo reaction, described by Ehrlich in 1882, depends upon the presence in the urine of certain aromatic substances which form anilin colors in the presence of diazosulphobenzol, the latter being formed by the union of sulphanic acid (amidodisulphobenzol) and nitric acid.

The clinical value of the Diazo reaction, long doubted by many, is lessened by several facts; it does not occur in the milder forms of typhoid; it occurs in many other diseases, notably carcinoma, pneumonia, tuberculosis and many acute fevers, and the reaction occurs in the urine of persons who have been taking certain drugs; for instance, naphthalin, chrysarobin and tannic acid.

*With "Nostrums and Quackery," price \$1, and "The Great American Fraud" (paper), 25 cents, cloth, 50 cents, the amount is \$3.26 or \$3.51.

HOW PROHIBITION AFFECTS EUROPE

Favors Its Adoption Here

"To Drink or Not to Drink, This Country Must Decide." Russia Has Put the Ban on Vodka and English Indulge Only With Meals; Much Drunkenness There at Start of War

By JEANNE JUDSON

[Miss Judson has just returned from two months' service in British munition factories and at the Anstie Grange and Hill V. A. D. hospitals in Farnham, Surrey.]

To drink or not to drink? This is one of the biggest questions of war-time. It has been asked and at least partially answered by every one of the nations at war in Europe, and now it is up for discussion in America.

No nation, however, has decided on absolute prohibition so far. The manufacture and sale of vodka has been stopped in Russia, in England the liquor traffic is regulated by the defense of the realm act, and in Germany, where beer is ranked high in food value, it is portioned out to the inhabitants in the same manner as other foods.

There are two reasons for the abolition of vodka in Russia and for the defense of the realm act in Great Britain. In Russia vodka was recognized as a menace to the efficiency of both the men fighting at the front and of those working at home, and, being a grain product, it cut into the supply of grain to be used as food. In the same way in England the consumption of liquor was regulated for the double reason of economy and efficiency.

England Drinks Only at Meal Time

The defense of the realm act provides for the sale of intoxicants only between the hours of 12.30 and 2 P.M. and between 6.30 and 8 P.M. — that is, at luncheon and dinner time. In a country where everyone drinks with meals this concession was considered necessary. It enables the laboring people to have their ale and porter and the others to have wine or whisky and soda. There is a growing feeling in England that even this should be abolished and that total prohibition during the term of war is the right thing.

In the early months of the war in England there was a great deal of drunkenness not only among men, but among women. Especially was this true among the very poor women in the East End of London. Many of these women whose husbands enlisted in the army were in possession of the first regular income they had ever enjoyed in their lives, provided by the government allowance to soldiers' wives and families, and they proceeded to spend it in the public houses. A law was passed prohibiting women with babies in arms from buying drinks in the public houses, and this resulted in giving many an old grandmother a livelihood. These old women stood outside the pubs holding women's babies for a few pence, while the mothers themselves, relieved of their charges, went inside to drink. This was only one of the ugly details that led to the passage of the defense of the realm act.

Treating Made Illegal

Even this did not entirely abolish drunkenness. It was claimed that men who never drank to excess now drank great quantities during the luncheon and dinner hour because they couldn't get it at other hours. To make this condition less exaggerated treating was made a crime, and men could only buy for themselves. Even this measure is often cleverly side-stepped by various ruses, especially in clubs, though treating has to a great extent been actually abolished.

As the war goes on, however, and the need for conserving every resource, especially every food resource, increases, the sentiment in favor of prohibition grows, not alone among people who are themselves drinkers and who would under ordinary circumstances consider a prohibition law as an infringement of their God-given rights.

Great Need of Prohibition Here

The need for prohibition in wartime is perhaps greater in America than in other countries. It is we who are expected to supply not only ourselves, but the other warring nations, with food, and a very large part of our grain products yearly goes into the making of whisky and beer.

In times of unusual mental excitement people who drink drink more, and people who are unaccustomed to drinking drink in honor of the unusual circumstances. As America awakens to the reality of war we will have the same experiences of drunkenness that were manifested in Great Britain. It is not probable that we will have the same experience with our women. It is not the poorer classes among women who drink in the United States, but those whose position is such that they might be expected to set an example in self-control and abstemiousness.

As an alternative for absolute prohibition it has been suggested that the brewing and distilling industries pay a large part of the expense of the war in special taxes. These they are willing to assume.

The question now under discussion in America is not whether prohibition is a good or bad thing in time of peace, but whether a luxury which can only be supported at the expense of necessities should not be abolished during our time of stress.

Issued by the Committee of Sixty for Wartime Prohibition, N. Y.

ABSTRACTS FROM INTERNATIONAL CLINICS

Experiences in Reconstruction Surgery of the Extremities, by Wayne Babcock.

Babcock calls attention to the needless sacrifice which is often made of extremities, especially the hands, which can be restored to a fair degree of usefulness by conservative surgery. The article is very profusely illustrated. He goes into considerable detail in showing how a badly injured limb may be saved, either partially or completely. The article, which does not lend itself readily to condensation, should be consulted by all interested in surgery. It is especially valuable for those entering the Military Service, where many of the problems it deals with will be encountered frequently.

Cause and Treatment of Constipation in Infants and Young Children, by C. G. Grulee

Grulee summarizes his views as follows: "I would like to urge that catharsis be abandoned as a routine treatment; to ask that the simple rules of diet be insisted upon, and that when these are not sufficiently effective such mechanical factors as glycerin suppositories and paraffin oil be resorted to, and that only in extreme cases of acute constipation a cathartic be used."

Functional Tests in Chronic Nephritis

Christian discusses the various tests to determine the functional capacity of the kidney, usually the phthalein output, blood urea, nitrogen, index of urea excretion, and specific gravity of urine.

The last-mentioned is a simple means of determining the functional capacity of the kidney. The kidney normally accommodates itself to different kinds of urea complexes by excreting a more or less concentrated urine, a urine which pretty closely parallels the fluid intake. If, however, the kidney is injured it does not accommodate itself so well or so promptly so that curves representing the specific gravity taken every two hours instead of showing marked variations flatten out in proportion as the kidney is diseased.

Christian believes that the functional tests are useful in determining prognosis, and, to a certain extent, treatment, and in some cases diagnosis when there is a question of early nephritis, but they are mainly helpful from the point of view of prognosis.

Polycythæmia, by Arthur F. Beifeld

Beifeld deals with the differential diagnosis between polycythæmia and other conditions associated with an increase in the number of red blood corpuscles, such as Osler-Vaquez's Disease and Geisbock's Disease or Polycythæmia Hypertonia. The treatment of polycythæmia is largely symptomatic. For this purpose venesection is the most efficient agent. In Beifeld's case the blood pressure fell from 220 mm. systolic and 130 diastolic to 170 systolic and 100 diastolic. The red cells fell from 9 600 000 to 8 400 000 and the hæmoglobin from 115 to 105 per cent. The venesection must be repeated from time to time.

PERSONAL AND GENERAL ITEMS

Dr. Martha I. Boger, B.U.S.M., 1915, has removed from 32 to 145 Middle St., Portsmouth, N. H., where she has established a very successful practice.

Dr. James E. Knowlton, B.U.S.M., 1917, is registered for the Fifth Year Course, upon completion of which he expects to enter the medical service of the Canadian Army.

Dr. Lillian M. Trafton, B.U.S.M.; 1916, has opened an office at 150 Worcester Square, Boston.

Dr. Mary H. Baynum, B.U.S.M., 1885, died at her home in Corinna, Me., in July of the present year.

Dr. Robert L. Emery, B.U.S.M., 1908, has removed from Rockport, Mass., to Winchester, Mass., where he has purchased the practice and the house of Dr. Benjamin T. Church. His practice in Rockport has been taken by another graduate of Boston University, Dr. William C. Phillips, class of 1896, formerly of Springfield, Vt.

A brief message, dated October 1, has been received from Dr. Janet P. Cooper (B.U.S.M., 1917), *en route* for Australia. She was then at Auckland, New Zealand, where the steamer had been delayed for ten days by strikes in Sydney, but was expected to sail the next day.

There is a vacancy in the staff of the Rutland State Sanatorium caused by the resignation of Dr. W. B. Howes (B.U.S.M., 1912). The position is well salaried. Applications may be sent to Dr. H. C. Clapp, 419 Boylston St., Boston, Mass.

Dr. Wm. C. Harmount of Pittsburgh is in France in the service of the United States.

Dr. C. H. Dobson, formerly of Conway, Mass., has been transferred from the M. O. R. C., at Fort Benjamin Harrison, Indiana, to Camp Sherman, Ohio, with Ambulance Corps No. 332 of the 83d division of the National Army. He writes that they are well and comfortably quartered and have good food. Chillicothe, two miles away is full of officers' and soldiers' wives, and prices for living have mounted accordingly, rooms alone renting for from \$10 to \$17 a week.

Doctors Chandler and Green of Base Hospital No. 44 have been ordered to the Rockefeller Institute, New York, for a course of study on wound treatment.

Dr. D. L. Belding has been ordered to the Rockefeller Institute for the course in bacteriology offered to the laboratory men who enter the service. These courses are to begin December third.

WANTED: Assistant physician for State Hospital service. Apply to Superintendent, Homœopathic State Hospital, Allentown, Pa.

WANTED: Assistant physicians, men and women, at Westboro State Hospital, Westboro, Mass. Apply to H. O. Spalding, Superintendent, Westboro, Mass.

THE INDEX

To our knowledge, this index is the only one published which approximates completeness as regards current homœopathic literature. It contains references to all the original articles in sixteen of the leading American and foreign homœopathic medical journals.

EXPLANATION

Under "Authors" are listed the names of all who have made original contributions to the *Gazette* or to the other periodicals. Under "Subjects" appear the references to all reading matter in the *Gazette* and to all original signed articles in the other journals listed below. All material is indexed under the important words of the title,—cross references being liberally used. Book Reviews, Obituaries and Society Proceedings are indexed under the letters "B," "O," and "S," respectively.

The numbers used refer to the page in the *Gazette*. The **boldfaced** numerals refer to reading matter in the *Gazette*; those followed by the asterisk indicate original articles in the *Gazette*; the numerals in ordinary type indicate that only the title of the article is given.

The figures in parentheses indicate the number of the paragraph on the page given. The abbreviations C and E denote respectively, Clinical department, Editorial department.

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<i>British Homœopathic Journal</i>	London
<i>Chironian</i>	New York
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<i>Hahnemannian Monthly</i>	Philadelphia
<i>Homœopathic Recorder</i>	Lancaster, Pa.
<i>Homœopathic World</i>	London
<i>Indian Homœopathic Review</i>	Calcutta
<i>Iowa Homœopathic Journal</i>	Iowa City
<i>Journal of the American Institute of Homœopathy</i>	Chicago
<i>North American Journal of Homœopathy</i>	Chicago
<i>Pacific Coast Journal of Homœopathy</i>	San Francisco
<i>Polycrest</i>	Columbus, Ohio
<i>Revista Omiopatica in Italia</i>	Torino
<i>Tijdschrift van de Vereeniging van Homœopathische Geneesheeren in Nederland</i>	Oudenrijn
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