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OF

MEDICINE:

A MONTHLY RECORD OF THE MEDICAL AND AUXILIARY SCIENCES.

तदेव युक्तं भैषज्यं यदारोग्याय कल्पते।
सचैव भिषजां श्रेष्ठो रोगेभ्यो यः प्रमोचयेत्॥
चरकसंहिता।

That alone is the right medicine which can remove disease:
He alone is the true physician who can restore health.
Charaka Sanhitá.

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NEED OF AN INDIAN HOMŒOPATHIC PHARMACOLOGY.

Pharmacology deals with the science or knowledge of drugs as well as the art of preparing medicines. It comprehends a certain knowledge of materia medica and pharmacopœia. India, the land of so many drugs of inorganic, organic and vegetable kingdoms, should have a pharmacology of its own. Allopathy and homœopathy may have their separate books. According to the foundation of the homœopathic preparations, the whole principle is based on an uniform standard of scientific graduation. The metric system of tenths and hundredths is observed for the preparation of attenuations. The vegetable tinctures are derived from fresh roots, leaves and flowers. Maximum saturation is the essential principle. The orthodox system of medicinal preparation is not only vitiated by its incongruous compounds, but mostly dry vegetables are used to facilitate the ready method of use. For commercial gain the scientific basis is destroyed. It is an open truth that tinctures from fresh substances contain medicinal power which can not be found in tinctures prepared from dried vegetables. The volatile principles are lost, and even the fixed principles are wasted to

a certain extent. This mode of preparation is nothing but arbitrary. The orthodox system to be relevant in its application should follow the homœopathic basis.

The time taken for preparation of homœopathic vegetable tinctures is open to serious objection. No tincture can attain the point of maximum saturation unless the vegetable is reduced to small sizes. Roots, stems, leaves and flowers want to be cut in small pieces before being immersed in rectified spirit. The best direction for preparation will be found in the Pharmacopœia Homœopathica Polyglotta, by Dr. Willmar Schwabe of Leipzig. The period for getting maximum saturation can not be obtained in a week or fortnight. Our series of experiments have demonstrated the fact that no good tincture can be obtained unless the vegetable products are allowed to remain in rectified spirit for one month. Though the process takes long time to arrive at the finality, yet it must be said that we should not sacrifice the best quality for commercial gain. Respectable druggists should have their own preparation according to the definite method of saturation. For this reason not only every nation but all respectable homœopathic pharmacists should prepare their standard tincture for use. If it is not be possible to prepare most of the tinctures, at first the polycrests should come to our relief. The inorganic preparations of homœopathy are used in the shape of triturations. They also follow the definite rule of decimals and centesimals. The organic substances should be prepared like the vegetables for their saturation. At present we should limit our scope to the 12th or at the most to the 30th attenuation. The higher divisions can not be undertaken without the accumulation of sufficient capital for the purpose. The attenuations above 30th having sufficient risk and responsibility in the hand-made preparation, can be utilised after due consideration. The machine-made high attenuations not only lose their uniform strength but attain quixotic power in each preparation. Therefore they are generally unsafe, unreliable and inadvisable for use. The present tendency to use high attenuations in almost all cases can not but be condemned.

When most of the diseases are amenable to treatment by low attenuations, then it is superfluous if not mischievous to administer medicines of those ultra-divisions of atoms. The cost is on the way. The recommendation to adopt homœopathy is, firstly, to avoid the danger of polypharmacy and secondly, to cure at the least expense. The high atomic divisions of medicines may serve the first purpose but not the second. With some practitioners it serves the advertisement of fashion. The orthodox school is gaining a notoriety by using new drugs for parade of knowledge. Truly speaking that irrational knowledge not based on experience is extremely dangerous to human lives. The days of Antipyrine, Antifebrine and Phenacetine in fevers are gone. Their introduction invited death. The commercial fashion created the mischief. Homœopathy of modern days is treading on the same ground. The adoption of a fashion without examination of its consequences is no doubt a reprehensible practice. Where Ipecac. can cure slight cough and bronchitis, there an unknown drug is prescribed costing the patient four times the price of Ipecac. and without effect. Homœopathy essentially wants the use of those drugs which have been proved. It is a rank quackery to use un-proved drugs at the very first prescription. There may be a semblance of defence for the use of unproved drugs when they are used after the failure of many proved medicines. The practitioner who mostly use such unproved drugs boasts of his queer knowledge. It is rather ignorance which leads to its administration. In the same way, the frequent use of high attenuations signifies the creation of a distinct class of practitioners, who in their calm moments may think of their adventurous achievements. We have not observed any pulseless case of cholera regaining the arterial vibrations at the wrist by the use of high dilutions from 200th and above and yet it has become the fashion to administer them to that kind of patients whose death may be said to be imminent. Stories are running from one end of Calcutta to the other of the cure of cases by high dilutions. It has not come to our lot to see the curative effect of any acute dangerous disease from that ultra-division of atoms.

High dilutions have made another usurpation, that is, of our marks of difference between decimals and centesimals. We use D for decimal and generally nothing is put against any attenuation which is centesimal. The common form of homœopathic prescription without D or C may mean decimal or centesimal. 6th may mean decimal or centesimal. All attenuations are liable to misinterpretation without any expressed sign. So it has become necessary to have a direction either D or C. The high dilutions on the other hand are used as C for their hundredth, D for five hundredth, and M for thousandth. Therefore the safe guide to adopt is to write dec. for decimal and cent. for centesimal dilutions, leaving the high dilutions to adopt C, D, or M.

Coming to our subject, it may be questioned, can we get those vegetables which are used in homœopathy as our produce in India? We can safely assert that many of them are procurable. Objection may be raised as to the quality of the plant though they are identical, for their birth in two different places. As far as we can judge, the difference may be so small that it would be safe to put back the objection. As an example, it is known that our Quinine is in no way inferior to the product of the Peruvian bark in its own original habitation. On the contrary, it has been asserted by some, that Indian Quinine is superior to the foreign product in its power. Then there is another obstruction of a technical character, that is, the proving of the drugs from the species produced in their original home. The answer is that the Indian drugs do not prevent their proving on the Indian nation. The identity of plants being established, it is highly desirable that fresh pathogenetic actions of the Indian nature will lead to better use in Indian diseases and constitutions. If we want to be a distinct nation then we should firmly strive for industrial development not depending for our daily requisites on the supply of other nations. The vast expanse, the charming fields and the superabundant luxurious vegetations of India having the advantage of many temperatures and altitudes,

look to its people for the manufacture of its raw products. It is a sin bordering on criminality that our grand resources would die away, and foreign medicines should furnish the weapons to save ourselves from the ravages of diseases. The art of preparing medicinal products being so simple, it requires an ordinary effort to save our fifty lacs of rupees, drained away in foreign countries.

It will be interesting to take a brief survey of the homœopathic medicines to know whether they are available in India. In some instances the exact species are available; for a few others an allied species may take the place of the indicated vegetable. It should be noted that in this occurrence a fresh proving will render the necessary help to the use of the medicine. As for the introduction of new drugs, provings are necessary for their inclusion in the Indian Homœopathic Materia medica. Any suggestion for their use as in Hale's New Remedies may help us to a certain extent but to be most useful pathogenetic indications are necessary. Depending on these facts the following list for a future Indian Homœopathic Pharmacology may be the guiding object. At first we take into consideration the vgetables, for the inorganic elements and their compounds are common properties of all nations.

1. *Abelmoschus* is otherwise known as Hibiscus abelmoschus. It is Musk seed for having its odour like musk. The seeds are native of India and are properly known as Misk-ki-bia or Kasturi dana differentiating from Misk dana of true musk. Watt in his Dictionary of Economic Products of India calls it Misk dana without making the proper difference. It is a tropical vegetable.

2. *Abies canadensis* is not available in India. Its allied species are Abies Webbiana, A. Smithiana, and A. dumosa, all of them having their habitat in the Himalayas. A. Webbiana is the Himalayan silver fir, A. Smithiana is the Himalayan spruce and A. dumosa is the Indian hemlock spruce. Abies canadensis has synonyms Pinus canadensis or hemlock spruce. The exudation is canada pitch. Its best allied species is A. dumosa or the Indian hemlock spruce and has its

habitat the north-east of Kumaon, Nepal and Sikkim. Kumaon is its principal habitation.

3. *Abies nigra* or the black or double spruce comes from the northern part of North America. Of this variety of spruce the gummy exudation is made into tincture. The gum is available in the Indian market.

4. *Abrotanum* or Artemisia abrotanum comes from southern Europe. It is not found in India but can be had in northern Asia, north of India.

5. *Absinthium* is the common Worm wood, and has its native forest in Europe and Asia, but not in India.

6. *Acalypha Indica* is our Muktajhuri or Muktabarshi, mostly found on the old and dilapidated walls or the road-sides as weed. Watt doubts its Sanskrit name as Aritta munjari. In Vaidyak Sabdasindhu no mention is made of Muktajhuri, Muktabarshi or Aritta munjari. It seems to be a weed of the hot regions mostly growing during the rains and common in Bengal.

7. *Acanthus mollis* comes from south Europe. We have no A. mollis but A. illicifolium is a common plant of the Bengal swamps. Watt puts the Bengali name of A. illicifolium as Harcuch Kanta and the Sanskrit Harikusa. These names are wanting in Vaidyak Sabdasindhu.

8. *Achillea eupatorium* or A. Filipendulina has habitat in the Philipine islands. We have A. millefolium but A. eupatorium is wanting in India. A. millefolium which is simply known as Millefolium, will come for consideration in its proper place.

9. *Aconitum anthora* is available in Europe, Asia Minor and other places except India. A. anthora has not been used to that extent as its omission will prove a great loss to our materia medica and pharmacology.

10. *Aconitum cammarum* is available as fresh roots in the markets of the Panjab, principally Lahore and Simla. The plant generally remains unidentified in India. We are not without expectation that it will be plentifully found in the western Himalayas.

11. *Aconitum ferox* is principally used in India instead of A. napellus. Its habitat is in the eastern Himalayas and the supply to the Calcutta market comes from the eastern Nepal. In Sanskrit it is known as Vatsyanag and in Hindi and Bengali it is termed Vachnag. The appellation of Vatsyanag indicates that it is a smaller species of serpent poison. The other common name is Mitha Jahar which is applied to all species of aconite. Dr. Watt locates its habitation in the "Temperate sub-alpine Himalaya, from Sikkim to Garhwal." The difference with A. napellus is "chiefly in the less divided leaves, denser flowered racemes, and shorter beak to the helmet." Dr. Watt has given its another name *Singyi* or *Singya bis* or the *Sringi* poison of the Sanskrit authors. In Vaidyak Sabdasindhu A. ferox stands for Vatsyanag. *Sringi* does not mean any variety of Aconite. It is the *Sringi* or *Sringi* fish of Bengal. There is another Sanskrit word *Sringika* which means *Senko* or Arsenic. It is evident that *Sringika* can not stand for *Vatsyanag*. The root of A. ferox can be confounded with that of of A. lycoctonum. For differentiation the following note occurs in Watt's Economic Products. "The specific identity of these two forms appears open to grave doubt, however, and, indeed, the chemical nature, structural characteristics and the association with Lahore would seem to suggest that the white spongy root was much more likely to be obtained from *A. lycoctonum*, a species plentiful on the north-west Himalaya from Kumaon to Kashmir than from *A. Ferox*. The latter is the characteristic species of the eastern Himalaya, and nowhere occurs west of Garhwal. Being the root of a temperate plant, the 'Lahore *Backnab*' most probably comes from Kashmir and the surrounding mountains (where *A. Lycoctonum* at altitude 7,000 to 10,000 feet, and *A. Napellus* at 10,000 to 15,000 are very plentiful); indeed the latter species is one of the commonest plants on all the higher Himalayas from Kumaon westward, but is not met with in the region of *A. Ferox*, the eastern Himalaya."

Confusion is not possible in mixing A. ferox with A. napellus. A. napellus can be mixed with A. lycoctonum, but the market at Simla supplies the pure species of A. napellus when *Mitha*

Jahar is asked for. We have procured the entire A. ferox plant from a friend at Darjiling who was able to supply them from the road-side lands of certain parts of the place. They came as fresh and have yielded beautiful tincture. The roots and stems were not at all spongy and difficult to make small sections.

12. *Aconitum lycoctonum* is mentioned in connection with A. ferox. It is generally sold in the markets at Lahore and therefore it is called Lahori Bachnag. The supply seems to come from Kashmir and Garhwal. Though coming from the same countries where A. napellus can be found yet there is great difference between the two in their botanical structure. A. lycoctonum is higher than A. napellus. The former is generally 3 to 6 feet while the latter is not more than 2 to 4 feet in height. The stems of the lycoctonum plant are glabrous whereas those of napellus furnish with smooth green and hairy nature. The racemes in the lycoctonum are long branched and tomentose; those of napellus are simple, few or many flowered. The flowers of the former are pale yellow or dull purple, those of the latter are bright blue or present dull greenish hue.

The difference of A. napellus with A. ferox is chiefly due to the last having "less divided leaves, denser flowered racemes and shorter beak to the helmet." A. lycoctonum forms a species of Japanese aconite.

Aconitum napellus is spoken of in Kashmir Ban-bal-nag or the young serpent of woody structure. Its habitat is on a higher range than that of A. lycoctonum, in the Himalayas. It has a wider distribution in the world than any of the aconites, being found in the Temperate and Arctic Europe, Asia and America.

It has many varieties (1) *Napellus proper* which is poisonous, (2) *Rigidum* which is also poisonous. (3) Multifidum, eaten by Bhotias. (4) Rotundifolium eaten by Bhotias. The Sub-division into poisonous and non-poisonous is the most interesting feature of A. napellus. The poisonous plants are required for pharmacological experiments whereas the non-poisonous varieties are either botanical curiosities or form food stuffs.

The use of fresh aconite roots seems to us an example why fresh roots should be used instead of the dried things. "In the fresh state the root has the odour of the radish, a peculiarity which disappears on drying." We have already observed that A. napellus roots in fresh state are found in the market at Simla and they have been secured by us for identification. The position taken by A. napellus in the homœopathic system of medicine is known to all practitioners of the new school. A. ferox has a future dignity which is not prized at the present day. Perhaps, there will be keen contention for priority of position between the two. The pathogenetic analysis of A. napellus is replete with interesting facts. That of A. ferox remains mostly unknown. It is our duty to make a difference between them in the pathogenetic and clinical aspects.

Besides these, there are other varieties of Indian aconite than those which have already been mentioned. The most prominent among them are, *A. heterophyllum* generally called in this country by the name of Atis. Its principal uses are antipyretic and antiperiodic. In slow and long standing fevers it can be used with efficacy in one or two gr. doses. *A. luridum* can not boast of any good medicinal use and A. palmatum also stands in the same light.

Actaea racemosa or Cimicifuga racemosa is found in Canada, Georgia and Western States of America. A. racemosa is unknown in India. The Indian species is *Cimicifuga fœtida*. Dr. Watt remarks: "There seems every reason to expect that the Indian species which differs from C. racemosa only very slightly will be found to possess all its medicinal virtues." *Actaea spicata* or the Baneberry is found in the temperate Himalaya from Bhutan to Hazara in India, as well as in North Asia, Europe and North America. "Baneberry root is largely exported into Europe and used to adulterate the root of *Helleborus niger* but the former may readily be distinguished on section by the presence of radiating medullary bands while *Hellebore* has an entire or undivided substance."

COMMON DISEASES AND THEIR TREATMENT.

XV.

(Continued from p. 406.)

Polygonum comprehends two species, *viz.*, P. acre, P. hydropiper or Persicaria urens. The first is found in North America and the second in Britain. Polygonum acre has been proved but not Polygonum hydropiper. It produced pulsating, wandering, flashing pains, and inflammation, smarting, raw feeling of Schneiderian membrane of the nose. Red inflamed appearance of nostrils with swollen sensation was also observed. It has also other symptoms of inflammation as: Aching in loins with pain around hip joint; tearing and drawing in loins on exposure to cold, followed by lameness and soreness; swelling of legs and feet; chronic erysipelatous inflammation, and as galvanic shock through lower extremities. It seems that the pains are more nervous than inflammatory in the extremities but more inflammatory than nervous in the nose. The affection of the skin is a prominent character and chronic erysipelatous inflammations have been cured by it. The nervous sensations are electric in their nature and the feeling of galvanic shock through lower extremities is like that produced by Boa vipera or or Russel's viper.

Populus candicans presents symptoms of, bruised, sore swollen, inflamed pain, with burning; whole body feels swollen, bruised, lame, sore and painful, exhausted, clumsy, stinging, restless irritation *as if an eruptive fever* would *come to the surface*, burning irritation of eyes, nose, skin, mucous membrane of mouth, throat and air passages and oppression of respiration and circulation; catarrhal feverish state of mucous surfaces; pulmonic, cardiac and capillary circulation oppressed, feels as if death must result, as if there must be fatal organic lesions; stiffness of muscles, tendons, ligaments, with lameness and with dry feeling in cartilages as if lame; weakness. On the skin its application produces large blisters which hang down like bags of water. It is widely used in healing wounds, open sores and eruptions. The action of the medicine being not uniform in all cases, blisters are rarely produced. In fact, it acts generally like Arnica and especially like Cantharis. The recommendation of its topical application is not safe in all cases.

Prunus spinosa causes *stiffness of all parts of back and small of back as if he had been injured*; stiffness in back and loins, as if caused by a strain; pressure on shoulder extending to deltoid muscle preventing one from raising arm; soreness of axillary glands, tension, wrenching pains and paralytic sensa-

tion in various parts of arms and hands; pain as if bruise would form in wrist; *sensation as if right thumb has been sprained and hindering writing;* wrenching pains in knees and feet; pain as if from sprain in ankle; shootings in muscles; sprained pain in ankle below outer malleolus; *spraining pains and pains which take away breath.*

Clarke cites the following case: "A remarkable symptom is: "Breath always seems to remain sticking in pit of stomach." This symptom with 'pain as if sprained in left ankle' led Lippe to make a remarkable cure in this case. A young lady, 16, jumped from a carriage whilst the horse was running away and sprained her ankle. Left ankle and face much swollen. As swelling abated, breathing became rapid; great oppression with constantly recurring desire to take a long breath; *felt as if air inhaled did not reach pit of stomach,* and till she could force air so far down, had to yield and try to take a deep inspiration."

In another kind of anxiety for deep breathing Prunus spinosa has been found serviceable. *Tightness in upper part of chest; heaviness and oppression of chest; heaviness in chest obliging deep breathing;* in lower part of chest with *anxiety there often compelling deep breathing* are the symptoms which require its help. With regard to them Clarke remarks: "The tightness, stitches, and sticking pains in chest have marked *Prun. spi.* as a remedy in many cases of neuralgic pains with or following herpes zoster." It has another symptom of like nature sighing as if climbing a steep mountain. The resemblance with spraining effects is manifest in thumb, ankle and big toe. In actual spraining of these part prunus spinosa can be administered with effect. In pain of the shoulder-joint due to overlifting it should be used.

All these pathogenetic characteristics have given Prunus spinosa high place in sprain and overlifting which are not generally taken to account. Its proper place would be after Arnica and Rhus tox. or it may be used when the peculiar kinds of breathing difficulties appear in any injury from straining.

Psorinum is the chief of our nosodes. Allen according to Hering defines it thus: "A tincture was made of the pus from mature pustules on the hands of a healthy negro who was probably afflicted with the itch." Clarke says: "The sero-purulent matter of a scabies vesicle was used by Hahnemann. The product of 'Psora sicca' (epidermoid efflorescence of Pityriasis) by Gross. The salt from a product of Psora by Hering." The noticeable feature is the difference of the source from which the medicine is prepared. Hahnemann used the pus from a mature pustule. Whether it was itch or any other form of purulent pustule remains unknown. Gross used the epidermis of pityriasis. At

any rate it is plain, that they are not the same thing. The one is pus and the other epidermis. The former is a purulent matter containing bacilli different from those of the epidermal scales. The pathogenetic results can not be the same. The possible conclusion is that we can neglect the statement of Gross and take the results of Hahnemann. Hering appears to have taken the medicine from an indefinite source. A further proving may show the difference between them.

Psorinum has the following symptoms; *Looks pale, exhausted and thin, his clothing is too large for him;* Right side of body is full of burning pains; soreness; *stormy weather affects him,* he felt restless a few days beforehand; *weakness, after riding in a wagon or from little labour*; can not bear walking in the sun; *glands of neck swollen and on touch bruised pain extending to head*; tensive pain in nape; boring in dorsal vertebrae; pain in loins; weakness of joints as if they would not hold together swelling and tension of back of head as if sprained; right side of occiput as if dislocated; hip joint as if ulcerated; hands and feet as if broken.

Allen remarks: "Frequently indicated for persistent weakness after debilitating diseases, depressed in mind and body. General anaemia, aversion of food, with foul taste." Psorinum is a medicine for chronic weakness and exhaustion due to exhausting diseases, as chronic offensive diarrhœa, any kind of offensive unhealthy discharge occurring for a long time, and low chronic inflammation. Clarke further writes: "Whole body painful, easily sprained and injured. Great sensitiveness to cold air, change, storms; to sun; restless for days before thunderstorm."

Pulsatilla is one of our all pervading medicines. It has the power to reduce inflammation primarily of veins and secondarily of arteries. Hughes remarks: "The veins seem to lose their vital resistance under the action of Pulsatilla; so that varicosis readily occurs, especially in the rectum." According to Hempel and Arndt, we find: "*Varicose Ulcers*—The burning stinging pains which patients sometimes experience in varicose ulcers, are often relieved by Pulsatilla. Varicose, readily bleeding ulcers, have been healed by pulsatilla. Its power to produce venous congestion, renders it valuable in the treatment of such sore. Hence in *Varicose Veins,* with which women are so often troubled in consequence of frequent pregnancies, pulsatilla proves useful.

"By applying the bruised root to a rheumatic limb, pulsatilla has caused inflammation and gangrene of the parts. It seems to possess a peculiar power of disorganising veins and embarassing the venous circulation. In *Gangrena Senilis* with coldness of the limbs, and partial suspension of the venous circulation we therefore give pulsatilla with occasional advantage."

The following opinion of Teste has seen recorded by Clarke: "Teste himself has given a very luminous account of the remedy. He puts it at the head of a group with *Silic.*, *Calc.*, *Hep.* as its chief members (*Graph.*, *Phos.*, in less degree, with *Fer.*, *Cham.*, and *Gadus* as analogues). These drugs act principally, says Teste, on the vascular apparatus. All the symptoms which they have in common depend upon a small number of primordial symptoms (*e.g.*, impeded respiration, engorgement of air passages, irregular beating of heart) indicating vascular disturbance. Hence arise—(1) Throbbings here and there synchronous with the pulse. (2) Blackness and diminished fluidity of the blood. (3) Swelling of veins, capillary engorgement, a sort of ill-conditioned plethora. (4) Diminished vital heat and action. (5) Congestion of blood to head and engorgement of the sinuses. (6) Sensation of heaviness and fulness of brain; and (7) the same kind of pain sometimes with apoplectic shocks, in centre or (more usually) on right side of brain. (8) Vertigo and cloudiness as in complete apoplexy, especially *when atmospheric pressure is low*, as at the approach of storms, and on heights."

Venous stasis producing inflammation of the arterioles is a character of Pulsatilla. The result is phlebitis and congestion of arteries connecting the capillary tubes of arteries and veins. It has the following symptoms: Varicose veins, even when inflamed, especially when blue, particularly in pregnant females, feels more comfortable when walking about; sharp drawing and jerking pain in muscles, worse at night, or in bed in evening, as well as by heat of a room, better in open air, and often accompanied by numbness, paralytic weakness, or hard swelling of parts affected; tension in some of the limbs, as if tendons were too short; shifting pains which pass rapidly from one part to the other, often with swelling and redness in joints; pain as from a bruise or subcutaneous ulceration on touching parts affected; symptoms generally most violent in evening or at night before midnight, sometimes also in morning and often after a meal; symptoms are worse every second day in evening; *pain in muscles of neck with stiffness; sprained pain on motion in sacrum; pain in sacrum as if suppuratiag or as from a band, when lying with stiffness; pain in sacrum after sitting can scarcely rise; feeling in extremities if beaten;* bursting pain in muscles of thigh and upper arm; *pain in morning in bed worse in joints, forcing him to stretch with general heat; tearing in shoulder joint obliging him to bend arm; pain as if beaten in middle of humerus, extending into thumb, so that she could not use it; tensive pain in tendons on the bend of arm on moving it;* sprained pain in bones of wrist; *pain in hip joint as if dislocated; bruised sensation in bones and muscles of thigh; tearing and drawing pain in knee; bleeding*

af varicose veins of leg; swelling of back of foot; varicose veins of foot swell up; foot red hot with tensive burning pain, which on standing changes to sticking; tearing across back to heel; foot red, inflamed and painful; symptoms occur mostly in evening, next in succeeding hours till midnight (Lyc, Cycl., Euphor. Valer; Phos.) *rarely about 4 a. m. and still more rarely in morning; amelioration in open air; amelioration of pains when lying on back* (Sang., Bry., Calc c., Lyc.); *aggravation from lying on side.*

(To be continued.)

REVIEW.

Report on the Administration of Police of the Lower Provinces, Bengal Presidency, for the year 1904.

The most noticeable feature in the report is that 277 members of the force were convicted of offences under the Indian Penal Code. This fact does not show the good moral condition of the men employed to keep the peace of the country.

The health of the force was not good. The general prevalence of malaria is against the good condition of the whole population of the Lower Provinces. It is proposed that the Inspector General will introduce in the most unhealthy districts mosquito curtains and the systematic use of quinine. We are inclined to differ from the proposal of the Inspector General as malarious attacks never equal in its intensity for three or four years in any district. The change of intensity is a peculiarity of malaria. Further the people of the Lower Provinces are surcharged with the effects of quinine and hardly any good will result from its systematic use.

EDITOR'S NOTES.

The Physiological Action of Air in Crowded Rooms.

The Knowledge for August writes :

"It is a commonly accepted belief that the unpleasant effects produced on the human system by the air in overcrowded rooms is due to volatile products given off by the skin and lungs; but experiments made by Dr. Paul of the Breslau Hygienic Institute appear to indicate that the main cause is the retention of heat by the body. Under normal conditions heat is lost by conduction, radiation, and evaporation of moisture, as well as during respiration. The loss of heat by conduction is to a large extent prevented in crowded rooms, in which the air is usually of a relatively high temperature, and contains a high proportion of moisture, while the loss by radiation is very incomplete when the body is surrounded by others at about the same temperature. In Dr. Paul's experiments it was found that headache and all the other unpleasant symptoms could be entirely prevented by regulation of the heat, even when the air was saturated with respiration products, and contained as much as 15 per cent. of carbon dioxide; whereas without this regulation of temperature they appeared even when absolutely pure air was breathed. The retention of heat could be demonstrated objectively by the rise in temperature of the skin."

If the experiment of Dr. Paul can be accepted, it overthrows many previous experience. The decision is that it is not carbon dioxide, or the volatile products expired by the lungs is the cause of the rise of temperature in overcrowded rooms and its subsequent results. The retention of heat as in sunstroke proves the deleterious influence. Why the heat is retained remains unknown. In a crowded room the heat of the place may not be so high as the temperature of the sun when sunstroke is produced. Yet the effect is the same.

Unidentified forms of Tropical Fever.

The Public Health for September informs :

"WHILE the etiology of malaria was obscure and the disease was ascribed to heat, moisture, etc., the occurrence of what were supposed

to be irregular and abnormal forms excited no surprise; but now that its nature and causation have been satisfactorily and definitively settled, these non-malarial, *i. e.*, not parasitic cases, call for investigation. A Dutch ship's surgeon, Dr. Moritz Silberstein, describes in the *Zeitschrift für Hyg. u. Infectionskrank.* vol. 47, part iii., three outbreaks that occurred on board the same vessel in a voyage from Java homewards, having different clinical symptoms. In the first, which appeared while the vessel was still in the harbour of Tanjong Priok, near Batavia, five of the crew were attacked with febrile symptoms which lasted from 12 to 18 hours, followed by an apyretical interval or remission of two days. On the 4th day there was a sudden rise of temperature, which subsided on the 5th day, ending in a crisis. The attacks did not recur and all the patients recovered. No malarial parasite was found, but it must be admitted that such negative evidence is not conclusive. This form of fever was first described by Van der Schee in 1894. The second outbreak shortly after lasted only twenty-four hours and resembled an abortive form of influenza. There was no eruption, and examination of the blood revealed nothing. In it six other members of the crew were involved. Between two and three weeks after leaving Java a third outbreak occurred, this time among the passengers, and attacked six persons. This was distinguished by an exanthem resembling that of rötheln, but though the interval that had elapsed between the ship's departure from Batavia and the first case would suggest an incubation period, rötheln was unknown in Java, and it certainly was not measles. Blood parasites were sought in vain. These anomalous fevers, the specific and communicable nature of which is indicated by their attacking a plurality of individuals simultaneously, offer a wide field for future investigation."

The bacteriological examination of fevers does not coincide with clinical experience. In Calcutta we see types of fevers which are alike the malarious fevers of the *mafassil*. But the malarial parasites are absent in Calcutta fevers of the malarious type. The Cambridge University Commission which was invited to India has come to this conclusion.

Types of Plague Bacilli.

We are indebted to the British Medical Journal of 23rd September for the following facts :

"Dr. Klein has continued his researches on the bacteriology of plague, and adheres to the view which he expressed in last year's report that two strains of bacillus pestis are to be recognized—namely (1) the virulent "human" type, and (2) the less virulent "rat" type. These types, he maintains, differ from one another in morphological, cultural, and physiological respects, and the differences are of a definite and permanent character. The bacilli of the "human" type are of a more or less cylindrical shape; in gelatine cultures the growth of the colonies is at an early stage conspicuously granular and more or less opaque in aspect; the bacilli are very virulent for the human species, and cultures of the organisms are highly virulent for rodents. The bacilli of the "rat" type, which has presumably passed through several generations in the rat, are less cylindrical than the "human"; they exhibit oval and coccus-like forms, and show a rapid tendency to undergo involution. The growth on gelatine in early phases is of conspicuous translucency and the colonies are less angular than those of the "human" type. Their action on the guinea-pig (and presumably on man) is less virulent, and by transmission in artificial cultures virulence is rapidly lost. Dr. Klein does not think that the "rat" type is merely due to an attenuation of the more virulent organism by continued residence on artificial culture media, because the "human" type retains a considerable degree of virulence through many generations of subcultures for several years, whereas the "rat" type quickly loses its virulence almost completely. Moreover, the "human" type rapidly recovers full virulence by a renewed passage through the animal body whilst the original virulence of the "rat" type, when once lost by artificial culture, cannot be regained by animal passage. Dr. Klein recognizes that these two types of bacilli have in all probability descended from a common stock. He has not, however, succeeded in converting the "rat" into the "human" type, though he has met with more success in his efforts to modify the "human" into the "rat" type. For this latter purpose he employed passage through rats which were antecedently protected by subcutaneous inoculation of Haffkine's prophylactic."

The two distinct types of bacillus pestis in fact come to one, when the human type is convertible to that of the rat. The stronger was able to be milder, but the milder could not be stronger. It is evident that degeneracy is an easy task, as the preliminary process of decay. The recovery of strength by a degenerated species is a difficult process though not impossible. The bacilli, evidently, follow the course of all vital structures.

A Note on the Occurrence of a Spirillum in the Blood of Patients Suffering from Secondary Syphilis.

In the Lancet of Sept. 30, 1905 we have the following by Surgeons G.M.O. Richards and Lawrence Hunt :—

"HAVING read the accounts of the discovery by Schaudinn and Hoffman of a spirillum in the hard sore and other lesions of syphilis and of Roux and Metchnikoff who found the same organism in the chimpanzee inoculated with the secretion from a syphilitic chancre, we investigated the same organism in cases under our care.

Our procedure to begin with was to examine films from every case of venereal sore and we found in films made from scraping some of the sores the organism described by Schaudinn and Hoffman. It appeared to occur in three forms, presumably involution forms of the same organism, differing only in thickness, length, and the number of spirals; one form being thick and straight or slightly curved, a second of the same thickness as the first but with spirals, and the third one exceedingly thin, distinctly spiral, with a large number of turns and very long. The first two varieties appeared to exist in the secretion and the superficial part of the sore, whilst the third variety only occurred in the deep scrapings, and in a film from such scrapings the organism could be seen lying amongst the blood cells.

As the secondary stage of syphilis appears clinically to be a stage when the infection is blood borne and drawing an analogy from the rose spots of typhoid fever where bacilli have been found, we took a case of secondary syphilis with a rash of a few days' duration, pricked a typical spot, and made the blood films, taking the greatest care to avoid contamination by cleaning the skin with

soap and then spirit and using specially clean slides. The films were then stained for five minutes by Giemsa's stain diluted 1 in 3 with distilled water, and on examination were found to contain a spirillum exactly like the fine form found in the sore. Other cases were taken and we have now observed the same organism in three patients. Films were taken from spots on the abdomen, chest, and arm. The spirilla do not occur in large numbers and often require a long search and in some of the films only one has been seen. In one patient the organism was seen in a blood film taken on each of ten successive days and in the three cases in which the organism was found in the blood it had previously been seen in all forms in the primary lesion.

From our observations the presence of spirochætæ in the venereal sore appears to be diagnostic of syphilis, and up to the present all cases in which the organism has been found have developed a secondary rash. Later we hope to publish statistics of a large number of cases."

The bacillary development in secondary syphilis is interesting for affecting the blood cells and the appearance of the secondary rash. The spirochætæ are ascribed to be the cause of the eruption. The development of the primary spirillum to the spirochætæ has not been sufficiently proved. To establish the connection between the two, more investigations are necessary.

Sale of Unsound Food—Ptomaine Poisoning—Damages.

In the Clerkenwell Country Court, the following decision stated in the Public Health for October has been arrived at:

"This was an action for damages brought by a widow against the defendant, a fishmonger, for damages for the loss of her son, caused by his having died in consequence of eating some stewed eels, which he purchased from the defendant. The action was brought by the plaintiff under Lord Campbell's Act, as she was partly supported by her son. The evidence showed that Mrs. Smith's son, who was a billiard marker, went to the defendant's shop on May 11th and purchased some stewed eels. Sickness ensued, and a few days later the young man died. The medical evidence, both at the coroner's

inquest and in the present action, showed that death was due to ptomaine poisoning.

The defendant said his eels were kept alive in a tank and only taken out as required for cooking. Between 700 and 800 customers were served on the day when the plaintiff's son was said to have called, and not a single complaint had been received.

Judge Edge said the questions raised in the case were most important, not only to the defendant, but to all people who supplied food to the public. Whether there was carelessness or not on the part of the defendant's servants, the fact remained that this young man died from some poisonous matter that was undoubtedly taken by him in the course of eating the eels. He found that there was no negligence on the defendant's part; but under the Food and Drugs Act and the Sale of Goods Act a person who sold food to the public was held to warrant that such food was good and wholesome for the purpose for which it was wanted. In this case Smith had no choice whatever in selecting the eels, and he relied entirely upon the defendant's skill and judgment to provide him with a good and wholesome article. The coroner's jury decided that the ptomaine poisoning arose through eating bad fish, and although he (the Judge) was not bound by the coroner's jury, yet the conclusion was irresistible that Smith died in consequence of eating the eels. That being so, the defendant was liable for damages, and his verdict would be in the plaintiff's favour for £40 and costs."

The decision will lead to good result by preventing the sale of unsound meat and fish. In India the want of such law is badly felt, for it is a notable fact that almost no restriction is placed to prevent the sale of unsound foods. The rule in the bazars of Calcutta is to sell them after ten in the morning as from that time the supervision of the Food-Inspectors ceases to exist. Ptomaine poisoning happens though not often in this country and lately a case came to our observation.

Burke's Experiments.

Sir William Ramsay in The Independent says:

"Mr. Burke made use of solid radium bromide in fine powder. He sprinkled a few minute grains on a gelatine broth medium,

possibly somewhat soft, so that the granules would sink slowly below the surface. Once there they would dissolve in and decompose the water, liberating oxygen and hydrogen, together with emanations, which would remain mixed with these gases. The gases would form minute bubbles, probably of microscopic dimensions, and the coagulating action of the emanation on the albumen of the liquor would surround each with a skin, so that the product would appear like a cell ; its contents, however, would be gas, or, rather, a mixture of the gases—oxygen and hydrogen. The emanation, enclosed in such a sack would still decompose water, for enough would diffuse through the walls of the sack, which, moreover, would naturally be moist. The accumulation of more gas would almost certainly burst the walls of the cell, and almost equally certainly in one, or two places. Through the cracks more gas would issue, carrying with it the emanation, and with it the property of coagulating the original bubble would resemble a yest cell, and the second cell a bud, or perhaps more than one, if the original cell happened to burst. This process would necessarily be repeated as long as the radium continued to evolve emanation, which would be for the best part of a thousand years. The 'life' therefore would be a long one and the 'budding' would impress itself on an observer as equally continuous with that of a living organism.

I am surpprised to learn from Mr. Burke's first letter that the 'organisms' appear to dissolve in water. The emanation does not coagulate or apparently affect gelatine, for I have tried and found that it does not ; indeed, it was not to be expected. Is it possible that the gelatine is pushed away to form the cell-wall, leaving the albumen as a partial contents of the cell, along with gas ? The latter would, doubtless, diffuse through the cell-wall of coagulated albumen and dissolve in and mix up with the water. On placing the apparent 'organism' in water the gelatine, too, would be extracted, and the cell would seem to disappear, the wall being excessively thin. It would be interesting to learn if Mr. Burke has attempted to stain his 'organisms' with the usual dyes used by microscopists. It is possible that the coagulated albumen would take the stain better than the uncoagulated matter and that the structure would thus be revealed.

As I said before, I have no desire to dogmatize. The supposition

that the pouring of energy in some form into matter similar to that of which living organisms are made, and which serves as sufficient food for actual living organisms, might conceivably result in the production of life, is a very attractive one. But one is bound to sceptical, and the explanation which I have ventured to suggest appears to me to be sufficient to meet the case. But no one will rejoice more than I if it should utimately prove to be inadequate."

Mr. Burke's experiments to prove the connecting link between the animate and the inanimate world are open to many critisism. Unless the experiments undergo re-trial to prove his assertion, it will not be safe to assert the discovery of the lowest animal life. A few years ago, the news came from Mexico that Professor Heerara has discovered of such animal existence. But since nothing has been heard.

Plague and Overcrowding at Bombay.

The following is from Lancet, September 16.

"IMPORTANT public meetings have been held at Bombay which may be taken to indicate an awakening of conscience on the part of leading inhabitants. The great mill owners and others are compelled to recognise that the very high death-rate and the prevalence of plague are evils that could in a large measure be checked. The form of precaution which has found most favour is that of inoculation with Professor Haffkine's prophylactic. Some mill owners have promised to give Rs. 50 to the family of any one of their work-people who die form plague within a year after being inoculated. That sounds very well but certain of the mill owners who make this offer are working their employés more than 12 hours a day, and perhaps, as members of the Bombay municipality, are helping to put aside proposals made for the purpose of improving the housing of the poor. Inoculation may prevent a person from dying from plague but if he is overworked, badly paid, and lives in an insanitary, overcrowded dwelling he will die prematurely, though the immediate cause of death be some other sort of disease. Formerly the hours of labour in the Bombay mills were limited by the duration of the daylight and therefore did not exceed 12 hours. Now, however, that electric light has been introduced the

work can be prolonged indefinitely and consequently some of the mill hands are now kept at their task for 14 or 15 hours a day and this with a temperature in the shade of from 85° to 95° F. Finally, when these wretched people have finished their work they go home to jerry-built houses of so miserable a character that they are not only insanitary but unsafe. A member of the Bombay Corporation, pointed out at a recent meeting that "last year 202 notices were issued by the municipal authorities for the removal of unsafe buildings; that in the last five years 122 buildings or parts of buildings have collapsed in the city, killing 26 and injuring 30 people; that nowadays frame buildings in Bombay are made with inferior wood, the work is scamped, and the structures are shaky and jerry-built." Some idea of the insanitary condition of the dwellings may be gathered from the fact that a bye-law was proposed to establish 40 superficial feet and 300 cubic feet as the legal minimum of space for each inhabitant. But to enforce this rule it was calculated that it would be necessary to displace 235,000 persons out of a total population of 718,650. Of this population of Bombay the greater part—namely, 80·86 per cent.—occupy one-room tenements and the average number of persons living in each room is 4·21. That cholera and plague should prevail under such conditions is in nowise surprising. Bombay seems to be passing through a somewhat similar phase of economic development as that which afflicted the great manufacturing centres of England in the "forties." It greatly needs a Lord Shaftesbury with his Common Lodging-houses Act of 1851, it needs the British Ten Hours Act, and many of our sanitary and building Acts and bye-laws."

Several facts have been noticed in this note. We can not understand the importance of Haffkine's prophylactic serum; when it has failed to reduce the mortality in the Panjab, where Haffkinism was in its full force. The insanitary condition of Bombay may be compared to that of other cities in India. The people of India are poor and therefore they can not afford to pay for costly sanitation. Government should come to their relief. The pressure on Bombay is nothing but the jealousy of Manchester. Being defeated in the attempt to impose duty of two per cent. on short rills, it has come to the Factory Act to impose pressure.

CLINICAL RECORD.

Foreign.

GYMNASTICS AS A THERAPEUTIC AGENT.

BY HELEN S. CHILDS, M.D., BOSTON, MASS.

[Read before the Massachusetts Homœopathic Medical Society.]

Case 1. Miss S., aged eighteen; height, five feet, six and one-half inches; weight, one hundred and fourteen pounds; chest measurement, thirty-one inches. Respiratory murmur weak and shallow, lateral curvature, lordosis, menses once in twelve months, unable to walk any distance without being exhausted. No appetite.

Ten weeks later. Height, five feet, nine inches; weight, one hundred and thirty-four pounds; chest measurements, thirty-four inches. Respiration eighteen, deep and regular. Spine nearly straight. She walks six or eight miles without being tired, swims, exercises, and dances; appetite excellent. Have learned from the physician that she has taken the full college course during the winter and is in good general health.

Case 2. G. C., aged fifteen years, six months; height, five feet; weight, eighty-nine pounds; chest measurement twenty-eight inches. Respiratory murmur weak; right scapula protrudes; chest narrow, clavicle prominent; right lung compressed from old pleurisy.

Ten weeks later. Height, five feet, two inches; weight, ninety-eight pounds; chest measurement, thirty-one inches. Neck full, shoulders straight, respiration clear, full.

Case 3. V. C., aged twelve years, eleven months; weight, seventy-one pounds; height, four feet, ten inches; chest measurement, twenty-nine inches. Respiration, faint, rapid. Has always been subject to lung affection and spent winter South.

Ten week later. Height, five feet; weight, eighty-five pounds; chest measurement, thirty-two inches; respiration, clear and regular.

No case had medicine of any kind. Just plenty of good, nourishing food, milk, water, gymnastics in the pine woods, swimming, and an out-of-door life. They all increased in height, weight, and chest measurement and greatly in endurance. If we are to choose between medicine and gymnastics let us try exercise first, and many times even homœopathic remedies will not be required.—*The New England Medical Gazette*, August, 1905.

HAMAMELIS IN WOUNDS.

By Dr. F. G. Oehme.

First Case. My left thumb was accidentally caught between a door post and the door, the sharp edge of the latter pressing violently on the thumb back of the nail. The pain was very severe and the jammed part soon grew black, but the skin was unbroken. I applied at once a cloth saturated with *Hamamelis* and kept it wet for several hours, also occasionally took a few drops of the *Hamamelis* internally. After about ten minutes the pain subsided. After dispensing with the wet cloth I occasionally merely moistened the injured part with the *Hamamelis*. Next day there was only a slight soreness left and the blood-extravasation was so much less that the thumb required no further attention. Some six or seven weeks later to my great surprise the nail began to come off and a new one appeared.

Second Case. Some 20 years ago while making one morning professional visits on horseback I passed a wheelwright shop. Wishing to speak to the owner, at work in his yard, I rode up to him. The yard was considerably littered up, therefore I picked out the cleanest part for my horse. After a short conversation I rode home about four miles at a lively gait, and after arriving and tying the mare in the yard I noticed that she kept kicking with one of her hind feet, and therefore examined her foot and found that a nail had entered close to the frog, about at the middle between the forward and back end of the frog; it also had perforated at the top of the hoop, about one-half inch below the hair and protruded about one-half an inch. It had gone right through the middle of the whole foot. I carefully removed the nail and succeeded in getting it out unbroken. It was over four inches in length. A small roll of cloth, saturated with *Hamamelis*, was applied to the frog where the nail had entered, then the whole foot wrapped in several layers of cloth, all well saturated with *Hamamelis*, and over all some dry cloth to prevent evaporation. *Hamamelis* was poured on the inner cloth several times during the day, the last time at ten o'clock P. M. Some *Hamamelis* was also poured on her oats. The next morning on examining the foot, as moderate pressure seemed to cause no pain, I led her a few steps and found that she did not walk lame. The same treatment was continued the second day. On the third forenoon her foot was again examined, and as she showed no pain on hand pressure and rapping I rode her carefully about one mile.

As this ride seemed to have no bad effect, I rode her on the fourth day several hours as usual, but favored her somewhat.

I described the case to an old blacksmith, asking how long it would take to get over such an injury. He replied one month at least.

Hamamelis is the more effective the sooner it is applied after an injury. If the skin is unbroken, use the full strength, also take internally a few drops; but if the skin is broken, use half *Hamamelis*, half water.

After the birth of a child we have had the mother cleansed with half *Hamamelis* and half water, lukewarm, and afterwards a compress saturated with the same solution applied to the pudenda. It removed the soreness quickly.

We have several remedies, like *Arnica, Calendula, Hypericum, Ledum, Rhus, Symphytum*, etc., which have proved of great value in external injuries and which would often achieve a quicker cure than the routine antiseptic treatment.—*Homœopathic Recorder*, August 15, 1905.

CASES OF DIPHTHERIA.

By Dr. Grubenmann, in St. Gallen.

Translated for the Homœopathic Recorder from the *Allg. Hom. Zeit.*, May 16, 1905.

For about fifteen years I have not used any other homœopathic remedies than *Mercurius cyan., Mercur. bijod., Lachesis, Apis, Acid nitr.* and *Lycopodium;* in accordance, however, with the experience gathered before in diphtheria, I never give anything below the thirtieth centesimal dilution, and I may say that I have never had any severe sequelæ, such as post-diphtheritic paralyses or albuminuria of more than a few days' duration. In my many hundreds of cases I have never as yet had any cases of paralysis of the fauces, the nose, or of the upper or lower extremities, except in the one case of Willy K., in St. Gallen. He was taken sick on November 9, 1904, with diphtheria faucium et narium with a moderate degree of fever; the exudation in the fauces remained quite small for the first three days, while the sharp, corrosive and fœtid secretion from the nose made the parts between the mucous membrane and the external skin very sore. On the 13th of November, after almost

continuous insomnia and restlessness, there appeared grayish, foul and torn membranes on the tonsils, the arch of the palate and the uvula, tending even to the soft palate and not only the tonsils, but also the glands of the neck, swelled up, as also the glands on the outside of the throat to a considerable degree, so that the head and throat showed the well-known and disquieting aspect of a round and pretty much shapeless mass. Here I will not omit to state that in such an advanced state of the disease I not only give *Nitric acid* 30 and *Mercurius bijod.* 30 every hour, but also for the last two years I have been using a homœopathic remedy externally from the end of the jaw to the neck; this remedy is *Arsenic iod.*, in the fourth decimal dilution, ten drops in one or two tablespoonfuls of absolute alcohol of 95 per cent. Septic cotton is moistened with this and laid on the outside of the neck and is attached with India rubber strips, being renewed every two to three hours. I could always, after twenty-four hours, see some diminution of the swelling of the glands, and I would continue this application at most for four days, always without any ill consequences. In the case of Willy, as a result, the glands were less swollen, the exudation on the fauces also received a better color, became more compact and more yellowish, and the line of demarcation soon showed itself, the red line, for which I always look, and which tells me in the most severe cases that the process of cure is securely established, but fully eighteen days elapsed before the throat was perfectly clean, although the fever had stopped long before; no other case under my treatment had ever taken so long.

I may explain this long duration of the treatment to state that the little boy showed a pronounced lymphatic state, was anæmic and had always been ailing in his digestive apparatus. This case labored for three weeks afterwards with paresis of the pharynx and nose and of the upper and lower extremities; but he attained to perfect health and vigor through the use of *Causticum*, *Gelsemium* and *Phosphorus*. I do not usually treat an ordinary faucial diphtheria for more than six days, and when complicated with nasal diphtheria for ten days.

Another case that was almost equally severe was that of Emma Gr., in St. Gallen, three years old; but her constitution was better and so she got over her diphtheria of throat and nose, attended with a swelling of the glands on the outside of the throat and of the cervical glands from December 4 to 13 by a brilliant cure. The remedies in her case were *Mercurius cyan.* 30 C., *Lachesis*

30 C., and *Apis* 30 C., while *Arsenicum jod.* 4 D. was used externally.

The third severe case was that of Grittli M., combined with diphtheria of the nose; this occurred in October, 1904, and proceeded in like favorable manner.

The fourth severe case was a genuine croup, with only a little and slight formation of membranes in the fauces. On the 9th of December, 1904, in the evening, I was called to see Walter B., and found that he had already lain for twelve hours (after his mother had given him *Aconite* and *Spongia*) in a state of increasing stenosis. His temperature was 104°, with frequent and high pulse, the suffocative dyspnœa was continuous, not by fits and starts, attended with some stridor. I would here remark, that in genuine croup, as well as in pseudo-croup, whether before or after diphtheria, I never give the diphtheria remedies properly so-called, but always *Aconite, Hepar, Spongia, Kali bichrom.* and *Phosphorus* in the 30 C.; of these this patient received *Hepar, Kali bichrom.* and *Phosphorus.* These remedies have hardly ever left me in the lurch in laryngitis diphtheretica, and I was astonished when the parents of the boy sent for me in a hurry on the following morning, because the boy still had stenosis. Without hesitation I gave the boy also the alcohol compresses with *Arsenicum jod.* 4 D., as large as a plate, over the region of the larynx, and by evening the dyspnœa and all danger were over; nor was there any farther formation of membranes in the fauces or the nose. *Arsenicum jod.* helped also here, although there was no glandular swellings, for few of my colleagues will suppose that a stenosis of the larynx which had steadily increased for twenty-four hours without any free intervals should by some lucky turn have passed into a spontaneous cure.

I would again emphasize that I consider it a *conditio sine qua non* for a successful treatment of diphtheria, that the thirtieth centesimal potency be used, and although I consider the lower dilutions as indispensable in many other forms of disease I would absolutely not dare to pass in this case below the thirtieth potency, and I conclude with the words of Bacon of Verulam: Truth is the daughter of time, not of authority.—*Homœopathic Recorder,* August 15, 1905.

Gleaning from Contemporary Literature.

A CLINICAL STUDY OF SOME DISEASES OF THE PANCREAS.

BY FRANK A. WATKINS, M. R. C. S., L. R. C. P., L. S. A.,

Pathologist to the London Homœopathic Hospital.

DURING the last twelve months five cases of pancreatic disease have passed through the wards of this hospital; and as wishes have been expressed that one of them at least should be published, I have ventured to bring them before the notice of this Society in the hopes that they will not be found altogether uninteresting and of some practical value.

Case 1.—As there was nothing of much interest in this case, I do not intend to give the details, save to mention that the patient was suffering from general tuberculosis, which probably originated in the genito-urinary tract. When the *post-mortem* examination was made, it was found that there were numerous patches of fat necrosis distributed throughout the peritoneum. The pancreas, on macroscopic examination, appeared to be normal, but, unfortunately, no microscopic section was made. A section of the necrosed fat is laid on the table for your inspection.

Case 2.—J. J., housekeeper, aged 58 years, was admitted into the London Homœopathic Hospital, under the care of Dr. Washington Epps, on March 21, 1904, but had been an out-patient under the care of Dr. Stonham since the previous August, suffering from jaundice. Patient thought the jaundice was due to sleeping on a damp bed; says that the day after she noticed her urine changed colour, and this was followed within fourteen days by general jaundice.

Previous history good, with the exception of attacks of "congestion of the chest," which sometimes laid her up. Climacteric was reached at age of 50. Says she has been losing flesh lately.

Present Condition.—Complains of no abdominal pain. Marked œdema of legs up to the knees. Loose white stools, dark urine, tongue rough. Chest feels tight, harsh respirations all over the chest. Jaundice is present. Abdomen is distended, and contains some free fluid.

March 23.—Complains this morning of sharp hepatic pain extending to the right shoulder, also of "wind" in the abdomen, which is tensely distended, so that the contents cannot be now palpated. Urine contains a little bile.

March 25.—Examination *per rectum* revealed ballooning of the rectum and retroversion and retroflexion of the uterus. Considerable tenderness of the uterus on manipulation.

April 20.—Pain continues in the hepatic region and over right shoulder. Has gained 4½ lbs. in last fourteen days. Jaundice is rather more marked.

April 21.—Asthmatic rales all over the chest. Gurgling and bubbling sounds of fluid over back of right lung at base. Vocal resonance is also diminished. Œdema of the back as high as the tenth dorsal spine, also of the abdominal walls and legs. A consultation was called, and it was thought that patient was suffering from malignant disease of the liver.

April 30.—Abdomen tapped yesterday, and 9¾ pints of bile-stained transparent fluid were drawn off. This morning peritoneum seems about full as before; the œdema of the legs has been much relieved.

May 2.—Paracentesis abdominis again performed yesterday, and 9 pints 18 ounces of fluid withdrawn. There is no enlargement of the

liver to be made out by palpation and percussion. The signs of fluid at base of right pleura are still present.

May 5.—Patient became more feeble each day and died on May 12.

Post-mortem examination was made on May 12 by Dr Frank A. Watkins, pathologist to the hospital.

Both pleuræ contained a small quantity of bile-stained fluid, and a small amount of lymph was present on the visceral pleuræ.

Both lungs were much congested, especially the bases.

The pericardium contained a small quantity of fluid, and there was some lymph on the visceral pericardium.

The heart was pale and very flabby; aortic and mitrah, valves were atheromatous.

Abdomen.—There was very little omental fat present. The peritoneum contained an enormous quantity of bile-stained serum. The liver was markedly cirrhotic, its surface presenting a hopnailed appearance, and its consistence was exceedingly tough. There was evidence of recent hepatitis on its upper surface; there were dense adhesions around the gall-bladder and transverse fissure, the former being so compressed that it contained only a very small quantity of bile. Weight, 38 ounces.

Spleen weighed 8¾ ounces.

Kidneys.—Both intensely congested; capsules stripped with diffiiculty.

Pancreas.—Weight, 6 ounces, and showed slight evidence of hæmorrhages.

Microscopic Report.

Section No. 469 taken from pancreas.—This shows the presence of a considerable round-celled infiltration of the glandular tissue. There are small hæmorrhages present in the fibrous septa between the lobes of the pancreas.

The autopsy showed that the disease of the liver was not due to a malignant growth, but that it was due to cirrhosis, and also revealed the presence of hæmorrhagic pancreatitis and enlargement of the spleen. It is not an uncommon occurrence to find pancreatitis associated with cirrhosis of the liver; more especially in those cases described as "diabetic bronzing." I have drawn attention elsewhere that this association seems to throw light on the etiology of pancreatitis. The cirrhosis of the liver occurs first—being the result of absorption of toxins from the portal circulation; when the functions of the liver fail the toxins enter the general circulation and then ensues the pancreatis.

Case 3.—I am indebted to Dr. Hall, of Surbiton, for his kind courtesy in furnishing notes of this case prior to her admission to the hospital

"The patient, C. M., came to me at the dispensary complaining of dyspeptic symptoms, but, as I had not the time there to examine her carefully, I suggested seeing her at home in bed. On December 6, 1904, I paid my first visit and examined her carefully. She complained only of sickness, and vomited all food; the matters brought up were mostly fluid and of a dark green colour, and at times were very copious; the only pain complained of was under the right scapula posteriorly. Nothing was found in the lungs or heart. Upon inspecting the abdomen, there was apparently no distension and no abdominal swelling in any part. Upon palpation, there seemed some dilatation of the stomach; and the liver dulness appeared to be very small, but there was no general tympanitis and no evidence of free fluid in the abdominal cavity. No pain or tenderness was elicited in any part of the abdomen after most careful palpation. Bowels were somewhat constipated, but were moved by enema or mild purgatives, and the motions were of the normal colour. There were no pelvic symptoms, and examination *per rectum* revealed nothing. I saw her almost daily until the 19th, and during this time the

sickness gradually increased so that nothing could be retained upon the stomach; the tongue also became dry and brown, and the pulse quick and feeble. Rectal feeding was resorted to, and the vomiting was controlled to some extent, but still continued. On the 29th inst. Dr. Johnstone saw the patient with me, and made a careful examination, but could not find anything definite; he suggested there might be obstruction of some kind and advised her removal to hospital, as an operation might be rendered necessary; she was accordingly carefully removed and placed under the care of Dr. Byres Moir. I may say that from the symptoms I looked upon the case as one of liver trouble, and treated it accordingly, but later on was very much puzzled and could not decide exactly what was the pathological condition; the urine was examined from time to time, but nothing abnormal was found. None of the remedies used had any effect in checking the vomiting; only the rectal feeding seemed to control this in any way."

The patient was removed to Durning Ward of the London Homœopathic Hospital, under the care of Mr. Knox Shaw, on December 30, 1904. The following clinical notes were made by Dr. A. Taylor, the house physician.

History of the present illness.—Since June, 1904, has complained of pain and distention of abdomen. Five to six weeks ago began to vomit; this, later on, became of a pumping character, and amounted to about one and half a pints at a time; the colour was a dark green, with a sediment at the bottom. Two or three days before admission the vomit was said to be black, like clotted phlegm. Micturition became difficult whilst in the recumbent position, and, consequently, patient was obliged to sit up, when she would pass about a teacupful of urine at a time.

Past history.—No previous illness, always strong. Has eight children living. Temperate habits.

Present condition.—Lies in a semi-dozing condition; has a deep red flush over the face; tongue dry, fissured, brownish-white fur; answers questions rationally. Urine contains slight cloud of albumen, somewhat turbid, amber colour.

Abdomen.—Walls very thick, doughy, and flabby. Nothing abnormal felt on palpation. Very little dulness over the liver area; some tenderness in the mammary line. Nothing abnormal detected with the spleen.

On January 2, 1905, patient was transferred to Quin Ward under the care of Dr. Byres Moir.

January 3.—Vomited once yesterday. Nutrient enemata were tried, but were not retained, so patient was fed by the mouth with Valentine mixed with hot water. Two hypodermic injections of 1-60 grain of strychnia were given during the day.

January 4.—All enemata are returned. Vomited twice yesterday. Now in a cold sweat; pulse almost imperceptible. Temperature at 12 p.m. yesterday, 96·8°; this morning at 8 a.m., 100·4°. Patient died at 2 p.m.

Post-mortem examination was made on January 5 by Dr. Frank A. Watkins. Excessive amount of adipose tissue everywhere. Both pleuræ were adherent; no serous fluid in the cavities. Venous congestion very marked in both lungs. The pericardium was normal. The myocardium was pale and flabby, but did not contain much adipose tissue; the valves appeared to be normal.

Stomach.—Enormously dilated; the mucous membrane presented evidence of gastritis, with petechial hæmorrhages, and there was a small superficial ulcer near the pyloric orifice.

Intestines.—The first part of the duodenum was enormously dilated, and appeared to be a part of the stomach, so that the pyloric sphincter was quite obliterated. The second part of the duodenum was much contracted, and its lumen allowed only of the passage of a little finger, the

obstruction being caused by the pressure of the enlarged head of the pancreas, which was encircling the bowel in two-thirds of its circumference.

The wall of the duodenum was not infiltrated with growth apparently. The remainder of the small intestine appeared normal. The large bowel was nearly empty and collapsed.

The appendix vermiformis appeared healthy.

No peritonitis was present. No fat necrosis.

Liver.—Weight, 46½ ounces; presented a nutmeg appearance, and some yellowish patches were present on its upper surface, and extended for some little distance into its substance; this was probably due to fatty degeneration. No evidence of cirrhosis was present. The gall-bladder was greatly distended with bile, owing, probably, to pressure on the common bile duct at the back of the head of the pancreas. A very small gray-white nodule, about the size of a mustard seed, was observed on the under-surface of the liver, and removed for microscopic investigation.

Pancreas.—The head was much enlarged and very hard and tough, and enveloped the second part of the duodenum in two-thirds of its circumference. The tissues here were matted together, and the mesenteric fat seemed to be infiltrated with the growth in the pancreas.

Spleen.—Normal.

Kidneys.—Both showed the presence of venous congestion; the capsules stipped fairly easily.

Microscopic Report.

Section No. 551 taken from head of the pancreas.—There is no normal glandular tissue in this section, but it has been replaced by a carcinomatous growth chiefly of an encephaloid type, in which the alveoli are filled with cubical or spherical cells. In the centre of the section are some tubules lined with one or more layers of columnar cells.

Section No. 552 taken from under-surface of the liver.—The liver tissue is intensely congested all around the nodule, and the hepatic cells are in a state of advanced fatty degeneration; in places are some granules of dark brown pigment. The nodule consists of a tubular carcinoma, in which some of the tubes are lined with columnar cells, others with cubical or spherical cells.

Section No. 552A taken from another part of the liver distant from the nodule.—This is not nearly so much congested.

A specimen of urine which was forty-eight hours old was examined on the day of the *post-mortem* examination for Cammidge's pancreatic crystals, but none were found in either tube.

From the autopsy it is evident that the primary cause of death was the carcinoma of the pancreas.

It will have been noted that prior to death there were present no signs or symptoms which would lead one to suspect cancer of the pancreas; in fact, the only pathological condition diagnosed was the dilatation of the stomach which was revealed to Dr. Hall, on palpation of that organ, and confirmed in the hospital by the "pumping" character of the vomiting; and Mr. Johnstone suspected the intestinal obstruction. When the growth in the pancreas spreads in an upward and forward direction, as in this case, it usually causes jaundice by pressure on the common bile duct, as well as the pyloric obstruction with consequent gastric dilatation; and when they are both present there would not be much difficulty in arriving at a correct diagnosis. If this patient had lived a little longer no doubt the jaundice would have supervened, for the gall-bladder was already greatly distended.

Is there any other method of examination by which we may determine the presence of disease of the pancreas? Mr. Mayo Robson, in conjunction with Dr. Cammidge, believes that there is. In the Hunterian and Harris and Gale lectures, delivered at the Royal College of Surgeons last year, they made their most interesting communications; they maintain that by treating the urines of such patients chemically a reaction is obtained whereby it is possible to determine not only whether pancreatic disease is present but also the nature of it, that is whether it is due to a malignant growth or acute or chronic inflammation, and if glycosuria is present, whether this is of pancreatic origin or not. They base their conclusions on the investigations of 300 specimen of urines; during the latter part of their researches the urines from patients suffering from suspected pancreatic disease were sent to the laboratory for examination without any indication as to the nature of the report expected, and thus any unconscious bias was avoided, and a true estimate of the reliability of the tests was formed. Reactions pointing to pancreatic disease were obtained in 111 cases, and the diagnosis in every case was confirmed on operation.

The specific reaction appears to be due to the presence of glycerine in the urine, which has been liberated from the fats of the body by the influence of the pancreatic juice. By treating this urine with certain chemicals crystals are precipitated having a similar appearance to those of phenyl maltosazone, but somewhat finer; they are of a golden-yellow colour, needle-shaped, and arranged in sheaves or rosettes. The process is a lengthy one, and takes about an hour to carry out; the crystals are precipitated during the following twelve to twenty-four hours, and then their solubility in dilute sulphuric acid must be tested. The process fully described will be found in the *Lancet* of March 19, 1904. It must be carried out with the most scrupulous care, otherwise somewhat similar crystals will appear and the results vitiated.

It will have been noted that I applied the test to the urine obtained from the above case of pancreatic carcinoma with a negative result; but I think that was due to the fact that the urine at the time was in a state of decomposition, and had been obtained from the patient whilst in a moribund condition.

Since then I have examined the urines from two cases of suspected pancreatic disease, and in each case obtained positive results.

The following is an extract of the clinical notes of one of these patients, made by Dr. A. Taylor, house physician:—

Case 4.—F. P., aged 38, female, admitted into the London Homœopathic Hospital on October 4, 1904, under the care of Dr. Galley Blackley.

Seven years ago began to be troubled with pain in the stomach after food, and later on it also occurred during the night, compelling her to get up and walk the room; felt sick at times, but never vomited. Three months ago noticed herself become yellow and a month later clear water used to come up into her month during the night. Has not been able to work for some time, as movement makes her feel sick. Has avoided vegetables and fruit for the last three months, as she could not digest them. Says she has been losing flesh since the appearance of the jaundice.

Present condition.—Has been free from stomach pain now for two months, but there is some aching in the right loin. The urine has been thick and green since the appearance of jaundice. Bowels regular, motions are the colour of putty, appetite very good, tongue dry and furred, sleep very broken, catamenia have been irregular for last two months, temperature varies from 98° to 100·2° F., patient is deeply jaundiced all over. Weight on admission, 5 st. 9 lb.; says she used to weigh about 7 st. before the jaundice. Liver projected below the costal margin for a distance of three fingers'-breadth.

October 20.—A specimen of urine was treated yesterday by Dr. Watkins according to Cammidge's test for pancreatic crystals, but none were found. Microscopic examination of the fæces did not show any excess of fat globules, but abounded in fine needleshaped crystals, which are probably fatty acid crystals.

October 24.—Weight, 5 st. 5½ lbs. Symptoms and condition remain much the same. To-day a consultation was called, and there was a good deal of difference of opinion as to the condition of the liver; the majority thought malignant disease of the liver was present, others that the jaundice might be due to unilobular cirrhosis or blocking of the common bile duct by gall-stones. It was agreed to put the patient on chel. 1x.

November 21.—Weight, 5 st. 7½ lbs. Motions are more gray in colour.

December 12.—Another consultation was called to-day, but no agreement as to the condition was arrived at. It was decided to postpone any exploratory operation for the present. Protiod of mercury 3x. was prescribed.

February 6.—Weight, 5 st. 10¾ lbs. Condition much the same. At a consultation held to-day an exploratory operation was advised.

Cammidge's test was again applied to a sample of urine by Dr. Watkins, the bile pigment being first removed, and a search made for glucose and albumen. After twenty-four hours in A tube there was a heavy deposit of golden-yellow crystals arranged in rosettes. No crystals in B tube. The crystals, when exposed to a 33 per cent. solution of sulphuric acid, dissolved in thirty-five seconds. According to Cammidge, this would indicate that an exploratory operation is advisable, and that pancreatitis is present in an acute form.

February 14.—Patient was anæsthetised and Mr. Dudley Wright made an angular incision about eight inches long below the costal margin. It was then found that the liver was not enlarged, was very dark in colour, and showed signs of old localised hepatitis. The abdominal cavity contained a large quantity of serous fluid, somewhat bile-stained. The stomach and colon were adherent to under-surface of the liver. The gall-bladder could not be found on account of adhesions of other structures, which entirely shut it out from the peritoneal cavity. In the position of the head of the pancreas was a hard mass, and from this an extension upwards was felt to the region of the transverse fissure, where another large hard mass was present. Several enlarged mesenteric glands were noticed. The wound was immediately closed, and it rapidly healed, and patient was discharged on March 1.

February 25.—Dr. Watkins made another examination of the urine, but obtained no crystals in either tube. The urine contained very much less bile pigment.

It is much to be regretted that, owing to the extensive adhesions, the pathological condition could not be more definitely defined, but there can be little doubt that the patient was suffering either from cancer of the pancreas or a growth in its immediate neighbourhood, which was obstructing the common bile and pancreatic ducts. The results obtained by examination of the urine would indicate that the latter was the true explanation, and the pressure being intermittent, and reaction was not obtained constantly.

From a diagnostic point of view, this case was of a most puzzling character. At first the opinion leaned to cancer of the liver, but, when the supposed nodules on its surface could no longer be felt, and the patient was gaining weight, this view had to be abandoned (the operation revealed that some of the increase in weight could be accounted for by the occurrence of ascites). Subsequently an exploratory operation was recommended with the expectation that the jaundice was due to gall-stone

obstruction. It may be of interest here to consider what signs and symptoms should have been present to confirm this view. Until quite recently it was taught that the gall-bladder would be found enlarged, but most surgeons now concede that Courvoisier's law is a true one, and which declares that there is no distension of the gall-bladder, but that, on the contrary, it is contracted; in many cases it is so deeply placed as to be quite out of the reach of the finger until the abdomen is opened. When this viscus is dilated it is due to quite other causes.

There is usually a rise of temperature attended by an ague-like attack. Murphy says: "The temperature rises to 104° or 105° within an hour, remains stationary for a few hours, and then drops suddenly to normal, and remains normal for hours, days, or even weeks, when it will go through the same rapid variation, and continue to repeat itself at irregular intervals." "These temperature changes are so characteristic that I have given them the name of temperature angle of cholangic infection."

The pain is agonising, and radiates towards the right scapula, but never towards the pubes. Vomiting is the most frequent reflex. The position of the stone determines whether jaundice is present or not. In passing, I might mention that the most delicate test for the presence of jaundice is to withdraw into a capillary tube a few drops of blood from the patient; if bile pigment be present it will at once be obvious.

Besides these characteristic symptoms of gall-stone cholangitis, there are two tests which can readily be applied and the reactions are as constant as McBurney's tender point in appendicitis, and generally they can be elicited weeks after an attack of biliary colic. The first was introduced by Mayo Robson: "Draw a line from the tip of the ninth right rib to the umbilicus; pressure with the tip of finger along this line will reveal a tender spot, usually situated about one inch above and one inch to the right of the umbilicus."

The second test is described by Murphy as follows: "The operator places the patient in a sitting position, with his back to the examiner. The trunk is flexed, the patient's hands resting on his knees. The examiner, sitting behind, places both hands around the patient's abdomen, all clothing having been removed, so that the points of his fingers are directed towards the middle line. The thumbs are uppermost. He then grasps the upper abdomen below the costal arch, whilst the patient is instructed to breathe deeply. With each expiration the hands sink more and more deeply, the left below the spleen, the right below the liver. As the right hand approximates the tender gall-bladder, tenderness is felt and the breathing becomes more difficult.

"When the right hand comes in contact with the viscus sought for, the breathing is suddenly stopped and very often a cry is elicited. It is not necessary for the hand to reach the gall-bladder for the manœuvre to succeed; as soon as pressure comes to bear upon the tender mucous membrane, backed as it is by the resistant calculus, the arrest of respiration takes place. When there is no such backing, as in those cases where only adhesion or kinking of the bile duct is present, respiration goes on as before."

It is said that the X-rays will differentiate between biliary and pancreatic calculi.

Case 5.—S. H., female, aged 61, admitted into the London Homœpathic Hospital, under the care of Dr. Washington Epps, on February 8, 1905. Patient has had no previous serious illness. During last June had an attack of vomiting, which lasted about a week, but none since. Six months ago had some difficulty in walking for ten days, when she was given some medicine at a nerve hospital, which patient thought brought on the present illness, which began three months ago. Since then she complained of

pain in the lower part of the abdomen, and says that food seemed to rest in the epigastrium as if it could not pass downwards. She first noticed herself yellow about six weeks ago, and the motions of a clay colour and white for two months. No hæmorrhage. Has had poor appetite, and losing flesh for three months.

Present condition.—Skin: deep yellow colour. Liver: enlarged, vertical measurement 5¾ inches; edge not felt; muscles very resistant. Stomach: slight splashing elicited. Urine: brown colour, acid reaction, specific gravity 1018; no albumen; no sugar; green reaction on addition of nitric acid.

February 15.—After the bowels had been relieved with soap and water enemata the surface of the liver was felt to be quite smooth and the edge regular. Weight, 6 st. 13¼ lbs.

Febuary 23.—Cammidge's test was applied to a sample of urine by Dr. Watkins, and a few very fine crystals were obtained in A tube, but none in B tube.

February 25.—Dr. Watkins again applied Cammidge's test and obtained a copious deposit of crystals in A tube and a few in B tube, but none in C tube.

March 16.—Coffee-ground vomit, which reacted to guiacum, but on microscopic examination no blood cells were found, and the Prussian blue test for blood also failed. Weight, 7 st. 3½ lbs.

March 21.—Coffee-ground vomit continues, but was much relieved by ipecac. 3x. At a consultation to-day it was agreed that the patient was suffering from carcinoma of the abdomen.

March 23.—Patient died to-day.

Post-mortem examination was made by Dr. Frank Watkins on March 24. Permission to open the abdomen only was obtained.

Stomach.—Some dilatation of the stomach was present; the mucous membrane showed the presence of gastritis, with petechial patches in places.

Intestine.—A new growth, the size a hazel-nut was found in the mesentery of the small intestine; the mucous lining of the duodenum was ulcerated. The hepatic flexure of the colon was adherent to the gall-bladder and under-surface of the liver. There were numerous new growths—the size of filberts—affecting the appendices epiploicæ of the sigmoid flexure; and a larger one about the size of a walnut in the great omentum; all of these secondary growths contained small hæmorrhages. The transverse and descending colon were filled with hard scybala, and there were also a few in the ascending colon; here they were flattened and marked by ridges, which suggested they had been marked by the valvulæ conniventes during their passage through the small intestine. The omentum contained much fat.

Peritoneum.—The peritoneum contained much bile-stained, turbid serum; this lay free in the cavity, and was not locculated. Behind the peritoneum were numerous small hæmorrhages, but no appearance of fat necrosis anywhere.

Liver.—The liver was large, smooth on the surface, bilestained, and appeared to be of normal consistence. The surface was marked with patches of hepatitis, and one small nodule the size of a pea was observed on the upper surface and removed for microscopic examination. The gall-bladder was very much enlarged but almost empty; there was no communication with the cystic duct; the latter was much dilated and filled with dark brown fluid. No gall-stones were present.

Spleen.—The spleen was normal.

Pancreas.—The pancreas was invaded by a hard new growth as large as a cricket ball; on section it was of a yellow colour, thickly interspersed with small hæmorrhages.

Kidneys.—The kidneys were somewhat larger than normal and bile stained. The capsules stripped readily, leaving a smooth surface. Several small cysts were present in each kidney.

Microscopic Report.

Section No. 593, taken from the tail of the pancreas.—This is a schirrous carcinoma, the cells being more or less spherical.

Section No. 594, taken from the head of the pancreas.—This is also a schirrus, but shows active growth in places, and here the cancer cells are mixed up with red blood cells, which would indicate recent hæmorrhages.

Section No. 595, taken from the omental tumour —This is a carcinoma of a schirrous type invading adipose tissue ; hæmorrhages have also occurred here.

Section No. 596, taken from nodule in liver.—Similar cancer cells are infiltrating the liver tissue ; little or no fibrous stroma is present. The capillaries in the neighbourhood of the nodule are intensely congested, and the liver cells are pigmented and fatty.

A notable feature in Cases 3 and 5 is the presence of haemorrhages in all the new growths, with the exception of the nodules in the livers, where the surrounding tissues are acutely congested in both cases. I do not think that the condition can be fully explained by the disintegration to which maligunant growths are liable ; the occurrence of hæmorrhages in a schirrous cancer is not frequently observed, and in the latter of the two cases they are constant in all the growths. Another factor must be sought for, and it has occurred to me that it may be due to the auto-destructive effects of the secretion from the cancerous pancreatic cells which is poured in to the surrounding tissues and either dissolves the walls of the blood-vessels, which results in hæmorrhages, or it causes so much irritation that it produces the intense congestion as seen in the livers. If this be the true explanation, it would, in a measure, clear up the etiology of pancreatic haemorrhage in general. It is only under physiological conditions that the pancreatic juice is unirritating to the organism ; under pathological circumstances it produces destructive effects, for example, as is seen after contusion of the pancreas from traumatism, or where a surgical wound becomes infected with pancreatic juice, or where regurgitation of bile into the pancreatic duct occurs as the result of the lodgment of a gall-stone in the ampulla of Vater. Experimentally, hæmorrhagic pancreatitis has been produced by the injection of bile, bacteria, acids, and alkalies, into the pancreatic duct.

So far as I know, we have no explanation why, under normal circumstances, the pancreatic juice causes no destructive effects. In the case of the stomach it used to be thought that the peptonising effect of the juice on the gastric tissues was negatived by the circulation of the alkalies in the blood, but this argument could not be maintained when it was pointed out that the pancreas does not digest itself, its ferment being effective in an alkaline solution. It is evident that the gastric and pancreatic cells are endowed with vital functions which resist the action of proteolytic ferments, and such an explanation is not to be refuted by such experimenters as Cl. Bernard, who digested the leg of a living frog by placing it into a gastric fistula of a living dog, or as Pavy, who digested a large part of a rabbit's ear in a few hours by placing it in a similar environment. To sum up, it would appear that anything which disturbs the vital function of the pancreatic cells may be followed by hæmorrhage and other destructive effects.

Before bringing my paper to a close, I should like to draw a few practical conclusions.

During their clinical course there was some reason for supposing that three of these patients were suffering from carcinoma, and yet the weekly record showed an increase of weight, instead of the usual steady decline; this, of course, would have been very misleading had it been inferred that it meant an increase of flesh; in all of these cases it was due to the occurrence of ascites.

It is unsafe to diagnose primary cancer of the liver unless one can feel with certainty the nodes, nor is an undue prominence of one lobe sufficient, for, as in Case 5, this may be due to a larger tumour of the pancreas pushing it forwards. Primary cancer of the liver is a rare disease, and before it is far advanced the tumours can be almost always readily felt. If jaundice is present without an obvious cause in a patient who has reached middle life, and no nodes can be felt in the liver, some other cause must be sought for.

It is early yet to generalise as to the importance of Cammidge's crystals. He says he has found them in cases of adenitis, pneumonia, and cancer of other organs than the pancreas. I have found them in both reactions in two samples of urine which contained heavy deposits of uric acid crystals, so that it would appear from the evidence before us that their occurrence indicates the presence of some serious error of metabolism, and when the reaction is obtained in No. A tube only, it may possibly mean that the metabolic disturbance is specifically due to disease of the pancreas, but the experience of a Cammidge is required to particularise the pancreatic disease.

In conclusion, I wish to thank Drs. Galley Blackley, Byres Moir, and Washington Epps, and Mr. Knox Shaw for their kindness in allowing me to use their clinical notes.

The paper was illustrated by the following microscopic specimens:—

(1) Section of carcinoma of pancreas.
(2) Section of secondary deposit in liver.
(3) Section of hæmorrhagic pancreatitis.
(4) Section of fat necrosis, showing fatty acid crystals.
(5) Cammidge's pancreatic crystals from urine.
(6) Crystals of gluco-sazone.
(7) Crystals of lacto-sazone.

Dr. Dyce Brown said members had been favoured with three interesting and valuable papers on an important subject, and he thanked the readers of them for the large amount of information to be derived from them. The treatment of diabetes by the old school was almost entirely diatetic. On the other hand, homœopathists could show great benefit from their method. The remedies which had been mentioned in the papers were those which he himself had found of most value; chiefly uranium nitricum in the third decimal, and afterwards in the second decimal, phosphoric acid and lycopodium. Arsenic was also valuable. Each case must be treated according to the indications for an individual remedy. One medicine which Dr. Blackely had not mentioned was of great service in certain cases, viz., hydrastis, *i.e.*, where the gastric functions were deranged, as shown by the coated tongue, loss of appetite, a bad taste in the mouth, and difficult stool. But the most interesting point about the disease in the matter of treatment was the diet. He (Dr. Dyce Brown) was utterly heterodox in regard to the adoption of a strict diabetic diet. He did not agree that that was the essential part of the treatment, or that it was of any real value in the *cure* of the disease. He looked upon the excretion of sugar in the urine as only a symptom of the disease, not as the disease itself, nor indeed as an essential part of it. The main question was, what caused the excretion of sugar? That question had not as yet been satisfactorily answered. Evidently there was some condition behind the mere symptom of sugar being

excreted in large quantity. The system could not assimilate carbohydrates. What caused that lack of assimilation? This was a condition which had not been discovered. He thought it probable that some deep-seated nerve lesion was at the root of the trouble, but which had never been satisfactorily proved to exist. In practice the physician prohibited carbohydrates at one end by putting the patient upon a strict diet, the result was a diminished amount of sugar excreted. It was easy to prevent a flow at one end by cutting off the supply at the other, but were we nearer to the cure of the disease by doing that? He maintained that we were not, and his experience bore out that opinion. The result of a strict diet was that the patient became weak, lost flesh, went steadily downhill, abhorred his food, and became miserable, without advancing the cure in any way. Therefore a number of years he had gone entirely on heterodox lines, not dieting the patient strictly at all, but letting him eat in the ordinary way, merely telling him to take as little sugar as possible consistently with the necessity of using a certain amount for cooking purposes. His patients improved on such a plan of diet. At the same time the homœopathic medicine was given. Instead of going downhill in the matter of strength, patients improved, they enjoyed ther food, slept better, and put on weight. In every way the general condition of the patient was improved under that treatment. Under the homœopathic *régime* there was diminution of sugar, or if not diminution there was no increase of that substance in the urine compared with its quantity when the patient was first seen. Since he began that method of treatment he had never seen cause to repent it. One patient who was under his care in the country wrote to say she was intending to come to London on the following Saturday, and that she was sure he would consider her greatly improved, as she felt so much better. During the first week or so she was weak and thin, and had been sleeping badly, and not relishing her food. But now the sugar had diminished in quantity, she was stronger-looking, and better in every way, as her friends remarked. She now slept well also, enjoyed her food, and was not troubled with constipation, whereas formerly she was constantly taking pills for the purpose of keeping her bowels regular. That change was wrought upon ordinary diet, without any restriction. So long as he found such a result in his cases of diabetes he intended to adhere to his present plan of treatment, looking upon the excretion of sugar as merely a symptom of the disease, and regarding the real disease as one which was to be combatted by internal remedies. He was not singular in these views in the homœopathic school, as he knew that several of his colleagues adopted the same plan. Among these he instanced Dr. Burwood, who was an excellent observer and a very careful practitioner, and whom he met some time ago in consultation over a case of diabetes. He had not known Dr. Burwood's views on the subject, but at the consultation he found they were the same as his own.

Dr. Byres Moir remarked that after hearing the first two papers he thought his mind was clear on the subject, and felt he had a good deal to say in connection with his experience in the treatment of the disease. But Dr. Watkin's paper intervened, and that brilliant contribution had had the effect of turning his thoughts in another direction. Dr. Watkin's paper certainly contained much food for thought and reflection. Still, he would mention his own experience in relation to diabetes and glycosuria, not from book knowledge, but from practice. The first question was, were authors of papers and members of the Society not really speaking of two or more diseases? That was a most important matter, because in treatment all depended on the answer to that question. His experience was that two very different conditions were included under the head of diabetes, and that impression was very well supported by the cases which

had been related that evening. True diabetes mellitus in children was quite distinct from the gouty glycosuria met with in adults. Yet there came a period in cases of gouty glycosuria when it was difficult to differentiate it from the other form; but in these cases there was not the same degree of polydypsia. One of his patients recently died who had been under observation fifteen years. The patient was a stout Jewess, weighing about 15 st., of a very neurotic family, and of a highly-strung and sensitive disposition. During some years prior to her coming under his notice sugar had been found in the urine at intervals, and a curious feature in some of those cases was that sugar was found in the urine one day, and yet on the next there might be no trace. But uric acid was present, and it was in big fleshy persons that one usually found this faulty metabolism. The question of diet, which Dr. Dyce Brown had touched upon, was very important. He (Dr. Byres Moir) was sure a strict diet was beneficial in those cases. He had one case a short time ago, which came to him wasted and losing flesh. He put her upon strict diet, and in six weeks she came back with no trace of sugar. He told her she was so much better that she could relax her diet, and she did so. She came back a month later, and he found sugar present again. He warned her to be careful about her food, but the relapse frightened her, and she kept to the diabetic diet. She again came to see him, looking ill. He found no sugar in her urine, the weakness having been entirely due to the strict diet. On putting her on to ordinary diet she had enjoyed good health for five or six years. He thought cases of this kind should be put upon phosphoric acid with strict diet, and when the sugar had been reduced, ordinary diet could be resumed. There was another question about diet which appealed to him. A patient whom he had watched for years had the same trouble, sugar in the urine one day, and acid on another. Last year this patient was in Greece, and for gouty symptoms a friend persuaded him to take a diet by which gout was treated in that country, namely, eating Turkish delight, and that only, except water and a cup of coffee. The patient said he had never felt so well in his life as when taking that, and when he returned he was better than he had been for years. Cabmen and other drivers in the streets preferred Turkish delight for keeping away the cold, and probably these men were suffering from gouty glycosuria. In the case of diabetes in children there was an entirely different condition. The first form he believed was due to faulty metabolism, but in the second form there was something wrong with the internal secretion—whether of the pancreas or of the thyroid he could not say—and the sugar was then derived from the proteids of the body. Dr. Bodman mentioned a rapidly fatal case in a boy. A short time ago a case came under his (Dr. Byres Moir's) notice, in a girl of 17 years of age. On Friday she was in the country, having been, apparently, in perfect health, and in the afternoon played hockey. On Saturday her mother, who was a nervous woman, noticed that the girl did not look well, and had a doctor to see her. She had white tongue and seemed heavy, and not her usual self. Sugar was found in the urine. As Dr. Moir had seen the girl previously, she was brought to him in London. He found her breath strong, that she was wasting rapidly, and was passing large quantities of water. He gave the worst prognosis he could, and said he would like Sir William Roberts, who had been recommended to the patient, to see her at once, as he did not think she would live long. The girl died on the Sunday. He agreed that in such a case as that a great deal of harm would be done by a strict diet, for by that means the chance of the patient getting better was taken away.

Dr. Roberson Day confined his remarks to a few cases, each of which illustrated some particular feature of the disease. There was so much

confusion of thought as to the real cause of the disease that it could be readily understood why some physicians obtained results very different from those of others. One often met with a case of physiological diabetes or physiological glycosuria, where considerable quantities of sugar were passed, and which might have been mistaken for genuine diabetes, although no attendant symptoms were evident. With regard to the disease in children, he could quote some figures from Holt's book, in which several authors were cited who had met with large numbers of cases. Pavy found that out of 1,360 cases only eight were under 10 years of age. Prout, out of 700 cases, had only one under 10 years. Myers gave 360 cases, only one of which was under 10. Not long ago a girl of 13 was brought to him severely ill with diabetes. She had been to Dr. Pavy previously. The disease had come on insidiously during the last four months. The chief symptoms noticed were lack of energy and wasting. The local doctor, at the second interview, hearing that she was very thirsty, examined her urine, and found a large quantity of sugar. Dr. Pavy pronounced a very grave prognosis—only eighteen months to live, and the girl was brought to Dr. Day. The urine, on three separate analyses, gave 33, 37, and 39 grains of sugar. He prescribed phosphoric acid, but it was a rapidly progressive case. She improved after the phosphoric acid, but it was soon found impossible to keep her to a strict diet. She lived for four and a half years, and latterly used to eat almost anything, but always large quantities of meat. She finally died of coma, which came on very suddenly without any warning, and while her parents were away from home. The family history was instructive, phthisis was marked on the father's side, two of the patient's sisters having died of it; and a connection with phthisis was not infrequent. He had met cases of glycosuria associated with phthisis when he was at Brompton Hospital as house physician. Another case was that of a body, aged 18, where the disease was traumatic in origin, the boy having hit his head against a chandelier. That gave great trouble at first, from severe pain in the head, and subsequently glycosuria developed, and in spite of treatment it ended fatally. The boy was previously healthy. Another case which came under his notice was one in which there was death from coma. Coma was the first indication of anything wrong. It was supposed at the time that the patient must have taken an overdose of laudanum, and not until sugar was discovered in the urine was the cause known. Another instance was that of a boy, aged 15, who acted as newspaper boy at a Smith's stall, where his appearance as a "living skeleton" attracted attention. He (Dr. Day) spoke to the boy on the station, and was told that he had diabetes and was under treatment at a hospital. Ultimately the boy disappeared; but he seemed to have mental energy so long as he had any strength left. The next case was that of a gentleman, aged 61, who had had diabetes for ten years. So long as he lived carefully he went on well. He came over to England without sufficient clothing, and on May 10 caught a severe chill; after that the disease came on with increased violence. The temperature sank, and that was a grave omen when associated with sugar. There were 19·3 grains per ounce of urine, the pulse rate was increased, the temperature continuing subnormal. He tried transfusion in that case, and he had the advantage of seeing Dr. Dyce Brown in consultation. The diet was modified in accordance with the views of that gentleman, and phosphoric acid and belladonna were given chiefly. The patient rapidly became comatose.

Dr. Byrne Moir remarked that the mother of the patient he had referred to weighed 24 st., and that an aunt had just died of diabetes. So the family history in that case was very strongly in favour of the occurrence of diabetes.

Dr. NEATBY expressed his warm thanks to the authors of the papers. Until he saw Dr. Blackley's synopsis he had never heard of "conjugal diabetes," but it brought to his mind cases of glycosuria in two elderly people whom he had had an opportunity of watching. Both were thin persons. The husband developed carbuncles on the nape, and shortly afterwards the wife developed boils about the vulva. The man lost all his sugar, and eventually died from an attack of bronchitis. The woman had persistent glycosuria and loss of flesh, developed vertigo, then mental delusions, and died from acute mania. Dr. Moir had gone to the root of the matter in regard to diet; there were different diseases giving much the same symptoms, and it was of no use to make fixed rules as to diet; in fact, the same patients might require different diet at various times. He had observed the truth of the advice he received from Dr. Sutton in his student days to be very chary about modifying the diet of elderly people. So he encouraged such patients to eat with reasonable freedom. But even this advice must not be slavishly followed. He remembered one case where it was prescribed, and after a time he noticed that the health had greatly deteriorated, and the patient became so weak that he could scarcely walk across the room. He then found that the sugar had increased from 50 to 1,400 grains a day. He was therefore put upon a very rigid diet, and very rapidly recovered his tone and voice. The patient was now over 80 years of age; he saw him occasionally, and he was quite well. While that patient was under observation, with thirst, a red, parched tongue, and polyuria to the extent of 100 ozs., he also suffered from an enlarged prostate, and, on theoretic grounds, he thought testicular extract might do good, but he had not heard of it having been used. He also gave adrenalin, because the frequent use of the catheter caused considerable bleeding. That combination brought about a remarkable improvement in the patient's condition. He also had had a case which bore upon Dr. Watkins' paper, and was ultimately supposed to be acute inflammation of the pancreas. He was called to see a patient of Dr. Croucher, of Eastbourne, for what appeared to be acute intestinal obstruction; there was a rapid pulse, great abdominal distention, and constant vomiting and cyanosis. The abdomen was opened, and the intestines carefully inspected, but no obstruction was found, though there was much thickening about the head of the pancreas. The patient died a short time afterwards, and the autopsy showed acute inflammation and much swelling of the pancreas.

Dr. STONHAM asked whether the acid in the blood was not in great measure due to the decomposition of the sugar, and whether that was not an argument in favour of strict diet. Where the blood was obviously saturated with acid, and there was danger of the onset of coma, surely the diet should be strictly limited, especially as to sugar. He would like to hear if any one present had had experience of nitrate of silver in diabetes it had been recommended by different authorities in homœopathic literature. The pathogenesis of nitrate of silver showed a desire for sugar, and complaints were made worse by taking sugar. Another symptom was polyuria, but not, he believed, glycosuria.

Dr. MACNISH referred to a patient who had suffered from diabetes of a pronounced degree, and had a very large axillary abscess. She was comatose when he was called to see her, and, from the symptoms, he gave pyrogenium 30. She was now having rhus aromatica. Though the sugar was still in excess, she was comparatively well.

Dr. BLACKLEY, in reply, said he had been somewhat surprised at Dr. Dyce Brown's sweeping condemnation of restricted diet for diabetics. He thought Dr. Dyce Brown must at times have had cases which had been on a restricted diet for a long time and done very well, but who, on some

slight indulgence in sugar or other carbohydrate had had a relapse and had manifested far more sugar in the urine than could be accounted for by the quantity of sugar ingested. It appeared as if the system were in a state of unstable equilibrium, so that very little indulgence was sufficient to upset it. He himself frequently had a feeling that, after all, it was not worth while strictly combating the disease, and that the patient might as well be allowed to enjoy life, or the little which remained to him; but those feelings could not be indulged in practice. He was also surprised to hear Dr. Moir say that the obese glycosuric was not usually a thirsty person. That he thought, was precisely the type of person who was thirsty, and instanced the case of a man at present an inmate of Hahnemann Ward. He now weighed 18 st., but less than twelve months ago turned the scale at 20 st. He was passing from six to nine pints of urine, containing a large proportion of glucose. The quantity of liquid ingested was never less than six pints, and, if allowed, the patient says he could drink twice the quantity. He agreed with the idea of there being at least two essentially different diseases. He had no experience of argentum nitricum for the disease.

Dr. BODMAN thanked those who had discussed his paper. One pint of saline solution was injected, but, as the patient was moribund and practically dying, no further quantity was used. The general opinion seemed to be that transfusion was but a temporary measure. Since Mr. Dudley Wright has shown that the effect of acids is to increase the alkalinity of the blood, while the latter is greatly lowered previous to, and during the occurrence of diabetic coma, one would except more result from the administration of phosphoric acid.

Dr. WATKINS, in reply, said that in a case which was under the care of Mr. Wilkinson, of Windsor, he made examinations of the urine for Mr. Wilkinson several times. The first time there was about 5 per cent. of sugar in it. The following week it only just gave a reaction to Fehling's solution. Other samples since received were free of sugar. Two drops of adrenalin solution were given three times a day. He thought one other organ was sometimes at fault in the disease under consideration, besides those mentioned by Dr. Moir, namely, the kidney. The phloridzine glycosuria differed from all other kinds in two respects: the blood contained less glycogen and glucose than normal, and also gave no reaction with Williamson's and Bremer's tests. These tests are constant in all other kinds of glycosuria. The conclusion was that the kidneys had lost their power of damming back the sugar in the blood. Clay, Paget and Co. were making a milk which contained no lactose, and he had two breads highly recommended to him because of their palatability, which contained no starch. They were called protein and casoid. He thanked the members for the way they had listened to and discussed the subject.
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Acknowledgments.

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