MATERIA MEDICA OF INDIAN DRUGS

(Indigenous System of Medicine)

BY

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Foreword

India, one of the developing countries in the world is our motherland. Although she is rich in many forest and mineral resources, inhabitants of this country are being disregarded as they failed to evaluate their indigenous herbs under the influence of western Drugs. Now is the time to have a careful look into our indigenous system of Medicine for maximum benefit.

According to the holy 'Veda' the plant kingdom may be separated in four groups viz. Vanaspati (tree bearing fruit apparently without any blossoms), Baanaspati (tree bearing flowers only), Virud and Oshadhi (medicinal plant). Medicinal Plant may be understood as herbaceous plant whose stem is soft and dies down after flowering or fruiting or, may be defined as the plant whose leaves etc. are used for food and medicine.

After Vedic age, later developments on herbal plants were found in 'Charaka Samhita' and 'Shusrut Samhita'. Then in the eleventh century, Chakrapani, a noble man of genius, discussed about the medicinal properties of Indian herbs on purely scientific basis.

Many Indians wers aware of the medicinal properties of herbs but their scope of explaining and expanding the knowledge was limited as most of the population had a prosaic view of these things due to absence of a systematic study course (or, collection of knowledges); on the otherhand, many ancient preceptors indulged in the superstition of withholding the knowledge in secret. But it was a strange thing that in the British period, the foreign physicians showed interest in Indian drugs and had carried on several research works in new techniques. Among the foreigners : (Drs.) Watt, Everson, Stuart Reedy, Walich, Dymock, Wilson, Bird, Wood, Powell, David Prain, Voigt and Hooker are notable. Besides, among the Indians : (Drs.) Kanailal Dey, Kirtiker, Major B. D. Basu, R. N. Chopra, Nadkarni etc. are worth mentioning.

The plant species offer many starting materials for medicines and pharmaceuticals, chief source of which are forests and gardens. One group of significant drugs, alkaloids, are derived from nitrogenous substances found in certain plants. To date, a mere 2 percent of the planet's estimated 2,00,000 flowering-plant species have been screened for alkaloids, producing nonetheless about 1000 different forms. The pyrrolizidine and acronycine alkaloids seem likely to prove active against several forms of tumourous cancer, while other recently discovered alkaloids are used to treat leukemia. The glycoside alkaloids are used for cardiac complaints, while still others show therapeutic promise

against hypertension. The most abundant sources of alkaloid-producing plants are found in tropical forests.

However, though Chemical Composition of each drug has been mentioned in this book but study of a purely chemical nature of the drugs may be said now-a-days to be distinct and separate and have, therefore, been considered outside the scope of this book. Much emphasis has been put simply on use or, application of the drugs in appropriate cases of diseases. I want to remind the readers that even in this age of chloramphenicol or, antibiotics, Indian drugs are capable of removing diseases effectively without any adverse actions as we have now been surprised by observing the immense and excellent curing power of indigenous drugs. We further know how wonderful results are obtainable by intake of Amlaki (Emblic myrobalan) in case of acidity, Kurchi in dysentery, Vasaka in cough etc. Excellent results by administering indigenous drugs in chronic diseases are beyond the capacity of expression in ordinary language.

I believe this book will serve both as a landmark in the recording of the progress of the Hindu Science of Medicine and as a stimulus to further investigation and research to advance the frontiers of our knowledge in the future.

Among the distinguished scholars to whom I have been acquainted with in compilation of this book.—Dr. B. Mukerji (Padmasree), an internationally famous researcher in drugs

and medicines and Sri Shivakali Bhattacharyya (Ayurveda-charyya), a famous and respectable genius of the Indian medical domain, are worth mentioning.

My warm thanks to those who have favoured me with their valuable advices and sincere assistance in successful compilation of this book, among whom I must remember my adorable father Dr. Pulin Behari Banerjee (Vice-principal, M. Bhattacharyya Homoeopathic Medical College, Howrah), a friend Dr. Gurupada Das, Dr. S. M. Nurul Huda, Dr. S. Ghosh, MBBS, Dr. R. K. Banerji, Dr. N. Paul, MASF, Dr. N. Biswas, MBBS, Dr. S. Prokash, DMS, Dr. Asim Hazra, MASF, Dr. Dhirendra Nath Ghosh, Dr. M. Biswas, Dr. Shivaprosad Paul and Kvj. Ananta Krishna Sen Sharma, well versed in the Hindu Science of Medicine.

In fine, I owe thanks and gratitude to Sri Monojit Sen Gupta who placed at my service his many valuable hours and much practical assistance in all aspects. Sri Bikash Chandra Bhattacharyya also deserves appreciation for some actions.

23rd January, 1977.

Shivadham,
19, M. C. Ghosh Lane,
Howrah-711101.

With best compliments of :

Dr. **Prosad Banerjee.**

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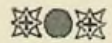


MATERIA MEDICA OF INDIAN DRUGS

(Indigenous System of Medicine)

ABROMA AUGUSTA (Devil's Cotton)

Plant Introduction :

It grows in various states of India ; a small genus of low evergreen tree leaf blade is wavy, broad, having hairy feel on the dorsal side. It grows in various states of India.

Name :

In Sanskrit it is known as Peewri or, Josbini or, Drumotpol ; in Bengali—Olot Kambol ; in Hindi—Ulat Kambol ; in Enslish Devil's Cotton and in Latin—Abroma Angusta.

Pharmaceutical use : Leaves and root,

:Family ; Sterculiaceae.

Chemical Composition : Alkaloid (traces 0,01%), Magnesium Salt., Water soluble Base (0.1%)

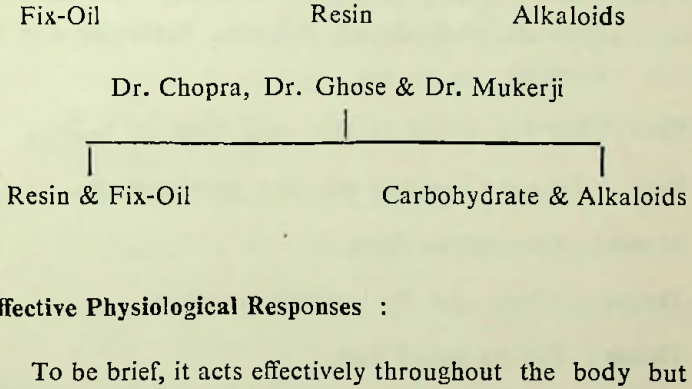
Therapeutic actions– Regulates menstrual flux, allays pain, cures diabetes. It is often used in the treatment of wounds, absces and carbuncle of the diabetic patients. In albuminuria it gives wonderful result.

How it has been approved in the Allopathy and Homoeopathy ?

It is widely being used in 'Ayurveda' the Hindu Science of Medicine. In the year 1872, Dr, Bhuban Mohan Sarkar invited atiention of British doctors by writing an article in the 'Medical Gazette' on therapeutic actions of this drug. Then Dr. Kirton and Dr. Watt noted it in the 'Dictionary of the Economic Products of India.' Dr. Avarse, Dr. M'cloid. Dr. Thornton, the then famous physicians approved it as the nice medicine for diseases of uterus. Dr. Evars said "It has never failed in my hands in specially relieving painful dysmenorrhoea." Dr. M'cloid said that intake of root-pulp with pepper from seven days preceding menatruation till the commencement of discharge, prevents painful dysmenorrhoea.

The name of this plant was mentioned in the 'Indian Homoeopathic Review' in 1919. In 1925, Dr. S. Sarkar of Dacca observed the existence of sufficient Magnesium salt in it whilc he was carrying on researches with this drug.

He prepared Alcohol Extract and thought that the utility of Abr. Aug. in the treatment of uterine haemorrhage might be due to presence of Magnesium salt. In 1929, Dr. Henry carried on experiments with the said plant (vide page 2721, Journal of American Chemical). In 1929, Dr. Chopra, Dr. Ghosh and Dr. B. Mukerji. after carrying out their works on the same drug found Petroleum Ether, Fix-Oil and Alkaloid (traces), Magnesium salt, and water soluble base.



Effective Physiological Responses :

To be brief, it acts effectively throughout the body but in cases of pains, dysmenorrhoea, skin diseases, diabetes, Insomnia weakness, rheumatic pain, giddiness, albuminuria etc., the effectivity is much better.

Physio-Chemical action :

This drug is used as an uterine tonic ; in the treatment of congestion, neuratic and various dysmenorrhoea. It regulates the menstrual flow.

Symptomps

Mind : Hot tempered, fretful, easily irritated ; insomnia ; can not concentrate mind.

Head : Giddiness, tendency to vomit, burdened or emptiness of the head ; headache.

Eyes : Weak-sightedness due to suffering from diabetes, eyes are often closed, paleness, heaviness due to insomnia.

Ears : Buzzing sound in the ears, hard of hearing.

Nose : Frequent sneezing attended with headache.

Mouth : Tremendous thirst.

Tongue : Clean and dry ; painful swallow.

Throat : Prefers liquid diet.

Lungs : Throbbing sensation with heaviness as if something has been put on the chest.

Heart : Palpitation, acute pain.

Appetite : Too much ; tendency to take food continuously ; non appeasing of hunger.

Belly : Painful, formation of wind.

Stool : Constipation ; stiff stool in black lumps.

Urine : Diabetes , urinal discharge (imperceptively), thirst, starchy urine ; Urine of high specific gravity.

Male gen. organ : Wound of the urethra caused by urine containing starch and sore of the foreskin ; frequent urination at night.

Female Rep. organ : Irregular menstruation, severe pain of the pelvis during menstrual discharge ; scanty discharge of clots of dark red blood ; nausea ; virtigo ; pain in the hands and legs followed by weakness ; painful dysmenorrhoea. The patient lacks energy to leave bed ; sometimes convulsion like hysteria ; ovaritis, ovarian neuralgia, vaginismus, menstrual colic etc.

Spinal cord : Weakness and backache.

Limbs : Feeling of thinness, lack of energy ; pain.

Skin : Dry skin with scabies, aggravation at night ; small pimples, carbuncle, Skin disease of the diabetic patient.

Sleep : Not enough, drowsiness, headache.

Dose : 10-25 minims or Powder form 5-6 grain four times a day.

ABROMA RADIX

(Root of Abroma Augusta)

This drug resembles Abroma Aug. and helps in the treatment of dysmenorrhoea (as a sedative) as it contains Magnesium salt.

This is very helpful to those women who suffer from pelvic pain ; giddiness with tendency to lie up ; painful discharge with tears in the eyes ; restlessness, weakness and heaviness during discharge. The patient is hot-tempered and conceited. The said drug removes after birth pain and is prescribed in the treatment of leucorrhoea (watery) of lean and thin girls who prefer warmth and show aggravation in cold.

Dose : 10-30 minims with tepid water, thrice daily.

ACALYPHA INDICA

(Indian Acaliphy)

Plant introduction :

It is available in Bengal and eastern India in plenty. The plant attains a maximum height of 2-4 ft having orbi-

cular lamina. Some where it Is knows as 'Cat-mew'. Leaves are collected in rainy season when the plant matures and looks like sacred basil (Tulsi) with apetalous flowers.

Name :

In Sanskrit—Arikta Manjari, Bengali—Mukta-jhuri, Mukta-barshi ; Hindi—Kupi ; Gujarati—Vanelik-cande ; English—Indian Acaliphy ; Latin—Acalypha Indica.

Family—Gramineae (Another kind spurge family 'Euphorbiaceae'.)

Pharmaceutical use : leaves, (green).

Chemical Composition :

Alkaloid acalyphine, resin, tannin and volatile oil. It also contains a cyanogenetic glycoside.

Physio-Chemical action :

Oxygenate, Anti Spasmodic.

Therapeutic actions :

It is laxative, useful in cough. This drug is being prescribed widely by Allopaths, Homœopaths and Ionians (or Greeks) in the treatment of flatulence, fever etc. It can be called as Indian suppository (due to laxative property).

Therapeutic actions :

It works well throughout the body but better functioning in the upper helf portion has been noted.

History :

Physicians (Ayurvedic) of our country had been using it since a long time. It causes nausea ; on the other hand, stops bleeding, prevents fever, cough, flatulence and dyspnoea. In case of painful micturition—application of the wet pulp of leaves in the pelvic region has been found successful. Wet pulp my also be applied into the anus as glycerine suppositor (mixed with old ghee).

Wet pulp mixed with old ghee is often introduced into the rectum of a child to remove constipation.

An article on its therapeutic actions, was published by a famous English physician Dr. Henry Thomas, M. D. in London in the year 1858. He was a great hunter too. He came into the forest of Assam for hunting purpose where his assistant suddenly fell ill and started vomiting of blood the following day. Dr. Thomas tried his best with medicines but could not succeed. Simultaneously, constipation also occured. Then he asked the local medical practitioners to help him. At that time Kaviraj Binod Majumder was famous in Assam. He used this drug successfully. In 1860, an American physician Dr. Hall advised to accept it in American Pharmacopoeia by observing its therapeutic actions. Dr. Boerick obtained successful utility by administering the same on T. B. patients.

Symptomps

Mind : Worried : rude, hot tempered even at trifles, afraid ; hates others.

Head : Throbbing sensation in the head as if some one is striking on it ; pain in the skull.

Eyes : Reddish, inflammation of the eyes, weak sightedness ; nausea, particularly by seeing moving things.

Face : Gloomy, dry and red face.

Nose : Bleeding from the nose, polypus, chocked nose, dyspnoea.

Tongue : Generally clean.

Stomach : Vomit after taking meal, vomiting tendency persists.

Stool : Black stool with mucus and froth.

Lungs : Haematemesis with cough ; rattling sound of the throat ; Vomit contains dark red clots of blood ; smarting pain of the chest ; heaviness ; cough followed by weakness and emptiness, after having done physical exercise.

Fever : Fever attended with chilliness ; nausea and haematemesis.

Sleep : somnia due to weakness and worry ; drowsiness.

Limbs : Light sensation of the body, weakness ; difficult movements.

Dose : Tincture 5-20 minims. More quantity may be prescribed according to the severity of the disease (with cold water).

ACHYRANTHES ASPERA

(Apamarga)

Plant Introduction :

This plant is found all over India, generally in high lands. Plenty grow in old houses. Germination occurs in rainy season ; florescence in winter (white or silvery spicate flowers) when it gets matured ; finally, it becomes dried with ripe fruits in summer. The plant is 3-4 ft high having small and wavy stalk of leaf. It is found in two varieties—white and red. Red spots are seen on the lamina, the branches also being red in colour ; flower-spikes of both the varieties are long and stiff. 'Teyapamarga' another kind of Ach. Aspera is useful in the treatment of diseases of sinus ; also useful in cough, rheumatism etc.

Name :

In Sanskrit—Apamarga ; Bengali—Apang ; Hindi—Chirchira or Latjira ; Punjabi—Kutri ; Marathi—Aghoda ; Gujarati—Safed Aghoda ; Telegu—Uttareel.

Family : Amaranthaceae.

Useful parts : Root, branches and seeds.

Chemical composition :

Contains a large percentage of alkaline ash pregnant with potash.

Therapeutic actions :

It is diuretic, appetizer, anticatarrh. Also effective in cough, flatulence, heart disease, piles, pain and night-blindness.

Opinions of different scholars (symposium)

Charak said : Snuff of this drug causes mucuos discharge from nose.

Sushruta : Peel of its root is useful in the treatment of piles and is a good vermicide.

Chakra Dutta : Early stage of opthalmia and bleeding from absces or boil may be removed by this drug.

Bhavaprakash : In cholera and severe diarrhoea.

Shankhdhar : In piles and haemorrhage (Blumia Odo, Durba).

Hurit : In general dropsy (Aegle fol.)

Banga Sen : Insanity is curable with this drug.

Dr. Dymock has obtained wonderful result by administering this medicine in dropsy.

Reputed physician Dr. Mahendra Lal Sarkar obtained effective results on cholera and diarrhoea by carrying on researches with the tincture. I also prescribe in the case of cholera like watery diarrhoea and am getting very fruitfull result.

Symptomps

Mind : Impatient, hesty, Fearful.

Head : Headache due to suppression of cough ; heaviness ; relief after mucus discharge ; Insomnia.

Eyes : Opthalmia ; eyes are red and full of tears ; Twinging sensation of the eyes with swelling ; night-blindness.

Ears : Buzzing sound in the ears ; hard of hearing.

Throat : Dry cough which is continuous. This medicine expels phlegm and relieves painful catarrh.

Face : Small boils or pimples on the face with irritation.

Belly : Very loose bowels like water but not Cholerin or, English cholera ; rumble in the bowels ; blood dysentery. Pain in the rectum with four or five excretions. Diarrhoea followed by dysentery with pain. Bleeding from piles is the most important symptom while prescribing this medicine. It can safely be used in case of cholera but dose must be heavy.

Female Rep organ : It has astringent effect on uterus. It gives fine result in abnormal menstruation or menorrhagia and regulates after birth discharge and removes pain during abortion.

Skin : This medicine is applicable both internally and externally in case of ring-worm, also it has been recommended for dropsy (Aegle folia).

Special Prescriptions : In case of dog-bite, small pieces of this plant is applied on the affected wound to antidote the poison ; suppurated boil which do not easily split up, may be made to split by applying the wet pulp mixed with ground sunned rice.

It is a febrifuge and expels black-fever. External application of the root extract abates pain of wasp or hornet sting. (Lemon, Ammonium Chloride, Onion).

ACONITE NAPELLUS

Plant Introduction :

It grows at the height of 10,000-15,000 ft in Chumba or its neighbouring area in the Himalayan range of mountains but it also grows in Europe, various parts of Asia and Asiatic polar regions or temperate regions.

It is a kind of shrub ; stem height is 2-3 ft, root looks like the plantain flower which is the tap root where from tertiary roots of 2-3 inch length grow. New leaves come out from the leaf base of the stem when the plant dies every year. Leaf blade is 3-4 inch long, patmately divided. The plant yields very irregular blue, purple or yellow flowers, resembles tube rose and root strong scented. Dry root has a sweetish smell. There are three vars in the book of flora of British India viz.—VarRigidum, Var Multifidum, and Var Rottndifolium.

Name of the plant :

In Sanskrit—Bish ; Bengali—Kath Bish ; Hindi & Urdu —Mitha Jahar or Dudhia Bish. English & Latin—Aconite Napellus.

Family : Rununculaceae.

Useful part of the Plant used as drug : root

Chemical Composition :

Aconitine, Nespelline—a bitter Alkaloid.

Physio—Chemical Action : Oxygenate.

Therapeutic actions :

Febrifuge, sedative, prevents neurasthemia ; relieves from rheumatism and heart diseases ; checks restlessness. Excessive dose may cause poisoning ; so, administration of small dose is very necessary.

Symptomps

Mind : Very fearful, restless, anxious ; fear of death. The patient thinks about death even by small suffering as if he is going to face death immediately ; startness ; talks incoherently in fever.

Head : Headache ; heaviness ; hotness of the fore head ; throbbing sensation as if some one is gripping the head ; fear of falling down.

Eyes : Redness, swollen eye lids which are inflammed and incapable of tolerating light ; dim-sightedness ; hot tears trickle down the cheeks.

Ears : pain of the ear ; redness of the region surrounding ear which is hot and tumescent ; ear-ache with throbbing sensation.

Nose : Running at nose with sneezing ; pain of the nose ; some times crimson red bleeding.

Face : Hot, red and swelled cheeks ; restlessness attended with pain.

Mouth : Dry and swollen tongue with white coating ; teeth can not endure cold ; irritated and tumescent gum.

Throat : Red, dry, contracted and painful ; pain of tonsil.

Stomach : Vomit with fear, tremendous thirst for cold water with bitter taste of the mouth ; fear of death ; perspiration.

Abdomen : Hotness of the pelvic region ; also stiffness and flatulence. The patient can not endure touch.

Stinging pain in the navel. It marvellously acts on sudden unbearable abdominal pain. It acts like spasmindon, *Baralgan*, of allopathic drugs for relieving pain.

Stool : Like the remaining of the rice—wash ; pain at bowels with vomit; thirst and restlessness ; irritation of the rectum and piles ; piles or haemoroids. It can check unbearable burning pain of the piles ; (often after passing stool.)

Urine : Scanty, red, warm. Irritation and smarting pain of the kidney mouth. Painful micturition and the patient screams. **Male Gen. Organ :** Creeping sensation like ant move and stinging pain of the penis. Both the scrota swell up and become stiff.

Female Rep. Organ : Vaginal path remains dry, hot and sensitive to touch. Stoppage of menstrual flux of the cold affected women having catarrh. The patient becomes fretful and experiences stinging pain in the vagina ; after-delivery pain attended with fever and restlessness.

Lungs : Can not take breath due to cold ; dyspnoea ; presses neck while coughing ; creeping sensation of the throat ; cough aggravate at night.

Heart : Fast palpitation, shooting pain in the heart.

Angina Pectoris. Early stage of *coronary thrombosis*; palpitation with anxiety. Weak pulse.

Back : Pain on the shoulder ; benumbed and creeping sensation as if ants move ; benumbed by pain.

Limbs : Tingling pain attended with coldness, wavering knees ; irritation with pain in the joints ; aggravation at night. Affected part becomes warm.

Sleep : Insomnia ; exciting dream ; heaviness ; the patient jumps up of the bed during sleep.

Fever : Thirst and fever with restlessness ; sweating; aggravation at night.

Dose : Tincture 5-10 minims thrice or four times a day.

AEGLE FOLIA (Leaf of Bengal Quince)

Plant Introduction :

It is a small genus of spiny trees of the rue family of Java, Africa and tropical India allied to orange tree (cirtrus), but having compound and trifoliate leaves,

greenish white flowers and orange like fruits. It grows in all over India ; also can be seen in the Himalayan region, Bengal, Bihar, M. P. and various parts of Southern India. The leaves fall during the end of winter and new leaves grow in the spring. Matured leaf is more useful in the preparation of drug than new leaf.

This tree receives the best regards from the Hindus of India because, Lord Shiva is supposed to be fond of leaves of this tree. Leaves of Bengal Quince or bael or *bel* is essential in the worship of Shiva; so, this tree is found beside each and every Shiva Temple. Atmosphere surrounding this tree is healthful.

Name : In Sanskrit—Billwapatra ; Bengali—Bel pata ; Hindi—Billwapatra ; Gujarati-Bilinupatra ; English—Leaf of Bengal Quince ; Latin—Aegle Folia.

Family : Rutaceae.

Pharmaceutical use : Matured leaves.

Chemical Comp : Volatile Oil, Bitter Principle, Pectin and Sodium Compounds.

Physio Chemical action : Oxygenate

Therapeutic actions : Leaf of Bel is a febrifuge and useful in running at nose, dropsy and rheumatism.

Results of researches of several scholars and physicians

Besides, the work of noble Charak, Sushrut and Bagabhatta, Dr Brown, Royal Society of Tropical Medicine and Hygiene, (Vol xvii p 378) in the year 1923 and Dr. Dikshit and Dr. Dutta in 1930 performed many experiments on this drug and published some new developments in the Journal of Indian Chemal Society, vol vii p 759.

Symptoms

Mind : Worried ; apathetic ; oblivious ; makes mistakes in work ; delirious.

Head : Headache due to sun burn and suppression of phlegm, also due to congestion and catch of cold.

Eyes : Tear trickling down the cheeks due to cold ; dim-sightedness and tumescent eyes (lower eye lid).

Nose : nose runs ; sneezing ; bleeding by the suppression of catarrh (Acalypha Ind.).

Face : Reddish, gloomy ; experience of spasm and neuralgia.

Tongue : dry, reddish, sometimes with white coating.

Thaoat : Swollen Tonsil, reddish ; sensation as if some thing is being stuck ; difficult to swallow food ; pain.

Stomach & Abdomen : Loss of appetite, colicky pain in the upper stomach, sensitiveness ; intended to drink cold water ; belching ; hiccough, nausea ; flatulence ; dropsy ; acidity ; dyspepsia and anaemia.

Stool : Constipation, loose hard bowels with mucus ; pain in the rectum ; piles : constipation of the old patient.

Urine : Clean and smooth urination ; sometimes abnormal ; urine contains albumen ; turbid and scanty discharge of urine.

Male Gen Organ : Spermatorrhoea ; frequent nocturnal emission ; very weak and watery discharge ; incapability of cohabitation ; loose penis ; indomitable sexual desire.

Female Rep. Organ : Sensitiveness of the vagina, dryness, lack of sexual desire, painful breasts ; worried about own health.

Lungs : Pneumonia ; bronchitis ; cramping sensation like asthma ; cough or, catarrh is difficult to expel ; dyspnoea.
Heart : Bery bery ; dropsy ; diabetes ; weakness of the heart due to blood sugar; palpitation and pain ; *hydra-pericardium.*

Limbs : Dropsy of hands and legs, pain of the knees and hip ; pain in the spinal cord. It is very effective in the case of Dropsy but main symptom is the patient must be constipated.

Skin disease : In various skin diseases and particlarly, in the skin disease of diabetic patients, this medicine must be noted.

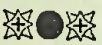
Therapeutic actions :

1) In any type of dropsy but symptom of *constipation* must be present.

2) In all types of fever, influenza, typhoid, broncho-pneumonia etc.

3) In diabetes, blood sugar, blood urea—this medicine may be used without hesitation.

Dose : 5-30 minims (tinc.) in tepid or cold water 3 to 4 times a day according to the nature of patient.



AEGLE MARMELOS

(Bengal Quince)

Name of this medicine in Bengali is Bel sunt, English Bengal Quince, Latin—Aegle Marmelos, Hindi-Sukha Beal, Sanskrit—Billwa Peshika, another name is Shree phal.

Chemical Composition : In the kernel and seed-mucilage, Pectin, sugar, tannin, bitter principle, mermelosin, Enzyme, and alkaline easily digestable Calcium Phosphate, appetizinn Vitamin A. C. B_{12}, and Iron are present in sufficient quantities.

Physio Chemical action :

It is a laxative due to existence of mucilage ; a stomach refresher ; removes wind ; checks bowels.

Chemical Composition :

A greenish oily laxative is obtained by grinding and extracting the principle with Petroleum Ether,

Opinions of different (Ayurved) Physicians

Noble Charak said—effective results may be had in piles and fever.

Sushrut said—In blood dysentery

Chakradutta—In chronic dysentery.

According to Allopathy :

The ripe fruit is nutritious, delicious, aromatic, alternative and laxative. It prevents the growth of piles and removes habitual constipation. The leaves are applied to the chest in acute bronchitis. The beal fruit is a household

remedy for diarrhoea and dysentery (Dr. R. N. Khory, Mat. Medica of India, vol iii p. 128).

Therapeutic uses :

The British Pharmacopoeia says—three preparations commonly used—

1. Extract of the beal made from fresh unripe fruit given in half to one drachm doses several times a day.

2. Liquid extract of beal prepared from dry slices of unripe fruit prescribed in doses of one to two drachms.

3. Powdered dried pulp in air tight bottles given in doses of half to one drachm.

If beal is continued for sometime, the mucus is also decreased and may disappear. It is very useful in patients suffering from chronic dysenteric condition charactarised by alternate diarrhoea and constipation. Claims have also been made that it relieves flatulent colic in patients suffering from a condition of chronic gastro-intestinal catarrh. In the after treatment of bacillary dysentery, beal is an useful adjurant.

Therapeutic uses :

In diarrhoea—watery excrementation, 10-15 times a day.

In dysentery—can be administered in early or chronic dysentery. It is claimed that this drug is very useful if there exists tendency to frequent bowels and inability to hold excremental pressure.

Chronic acidity—very effective result may be had with this drug; why? because it is alkaline in nature and neutralises hydro-acids.

Diarrhoea of children—Watery and diarrhoic bowels with force; the child becomes weak and suffers indigestion; food is not retained by stomach. The disease can be cured soon by prescribing decoction of beal with barley or zedoary.

Chronic diarrhoea—beal is effective but wonderful result may be had with *Kurchi*.

Blood dysentery—to be taken with Blumia Odor.

Peptic or. gastric ulcer is also relieved.

Dose: 5-20 minims.

N. B.—Cold water should not be mixed with the drug; otherwise, acid may form. Taking burnt beal with molasses is useful.

ALLIUM CEPA

(Onion)

Plant Introduction :

It grows in Bengal, Bihar and almost all states of India. It can be seen in three forms with tunicated bulb. The first is white bulb, second is greater in size than the first and the rest is red bulb. The scale leaves are confined in a tunic membrane in each case ; adventious roots grow from the bulb. The small white bulb is known as onion. The seeds do not remain perfect after one year and preserved in dry place.

Name :

In Sanskrit—Palandu ; Bengali—Peyanj Hindi - Piyaj; Marathi—Swet Kanda ; Arab—Basal ; English Allium Linn ; Latin—Allium Cepa.

Family : Lilliaceae.

Pharmaceutical use : scale leaves and seeds.

Chemical Composition :

A particular carbohydrate, Sinistrin, sugar, Mucilage and Citrate of Calcium salt, Organic Sulphides, Amino Compounds.

Pharmaceutical use :

The sweet extract gives energy, strength, helps pass urine, regulates menstrual discharge. expels catarrh, causes sexual excitement, reduces flatulence and removes dysentery. Over dose causes haematuria and affects heart.

Symptomps

Head .Headache : pain due to catarrh ; aggravation in hot or, sun ray.

Eyes : Red eyes ; irritation ; stream of warm tears from eyes ; sensation of heaviness ; intolerance of light.

Ears : Earache, hot radiation from ears due to catch of cold. Sneezing ; running nose with hot discharge ; headache ; polypus of nose.

Stomach : Tremendous appetite, thirst ; flatulence, nausea, rumble in the bowels, hot wind ; constipation.

Kidneys : Clean and smooth urinal flow ; quantity of discharge increases in presence of catarrh ; sometimes scanty discharge ; irritation of the urethra.

Limbs : Pain of the joints, particularly after influenza, weakness ; pain of the abdomen.

Speeial cases :

It is applied in the cases of :

1) Stinges of wasp. hornet or scorpin to remove pain.

2) Driving away the snakes.

3) Ear-ache (warm decoction is preferred).

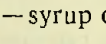
4) Night blindness— squeezed extract is useful.

5) Pulp of onion if held at the nose of hysteric patient, relief may be experienced at a glance.

6) Pain—decoction in mustard oil gives relief.

Dr. R. N. Khory said—syrup of onion is very helpful in loose cough and thread like discharge of phlegm.

Dose : 5-10 minims 3 to 4 times a day.



ALLIUM SATIVA

(Rasoon)

Plant Introduction :

It is a very large genus of bulbous herbs of the lily family distinguished by the characteristic odour, sheathing basal leaves and unbellate white, yellow or red flowers.

It is cultivated all over India. In U.P. this plant is found in plenty. The stem consists of layers of scale leaves confined in a tunic membrane. Tertiary roots grow from the tap root. The scales are fibrous ; leaves are flat ; peducle is soft. Florescence and fructification take place in winter.

Name :

In Sanskrit—Rason. Mahousad ; Bengali—Rasoon ; Hindi—Lasoon ; Marathi—Lasnoo ; English—Garlic ; Latin – Allium Sativa.

Family—Liliaceae.

Pharmaceutical use : Cellular garlic,

Chemical composition :

An acrid volatile oil, starch, mucilage, albumen, sugar and little Potassium.

Why the name 'Rason' ? — as it contains five other juices except acid juice ; so, consuming acidic food after taking garlic is effective.

It has five tastes at the same time, viz,—sweetness, saltiness, metallic taste. pungency and bitterness which are helpful in increasing digestive power, strength and merit. It is also nutritious, refreshing, purgative and favourable to eyes ; relieves catarrh and rheumatism.

Intake of overdose :

Giddiness, vomit, diarrhoea. Garlic in appropriate quantity removes chronic dyspepia, flatulence, colic pain and skin disease. The pod or flake—sex exciting, anti—phlegmatic, febrifuge, anthelmintic ; also effective in heart disease and dropsy.

There are two kinds of this drug—White and red.

White garlic (Allium Sat.)—Bitter, slippery, difficult to digest, strong ; favours memory, voice, complexion, eyes. It sets fractured bones or dislocated bones.

Red variety : Cures heart disease, dyspepsia, loss of appetite, dropsy, piles, leprosy, boils, flatulence, catarrh and is a febrifuge ; has anthelmentic action.

Opinions of several scholars and physicians

Charaka Said — In rheumatic fever and neuralgia, epilepsy,—administration of garlic is prescribed for excellent effect. Administration of garlic with sesamum oil to epileptic patients had been found wonderful.

Shusrut : In severe attack of fever and dropsy.

Chakradutta : In rheumatic fever, garlic may be given in wine for intake in the morning.

Bangasen : Eating boiled rice with cow butter and garlic pulp brings effective result in rheumatism.

Bhavaprakash has advised the intake of garlic for patients suffering from ulcer of intestine caused by existence of worms. Dr. R. N. Chopra said—garlic is an excellent medicine for several types of atonic dyspepsia. Garlic is antiseptic and antispasmodic.

Dr. Lamb (1925) recommended this drug in the form of tincture either alone or as expectorant when there exists any gastro-intestinal catarrh. Rubbing of garlic as ointment is very effective for abdomen portion of the body.

According to Minchin (1916), garlic is a remedy for many diseases like typhoid and diptheria.

In 1918, Dr. Erossman declared that administration of garlic in over dose is an invaluable remedy for Pneumonia.

In 1953 Hon. Dr. Bishnupada Mukherji, a famous medical scientist, while mentioning the usefulness of this drug said that administration of the same in the cases of T.B., Bronchitis, wound of the throat etc. had showed efficacious results. Besides, he added that the drug might be used as poultice or, simply be rubbed on the inflamed part. He warned that application of garlic on children might be risky as the same caused adverse effects.

In the Indian Pharmacopoeia Syrup Alli has been mentioned (contains Allium extract 2oz, Sugar 8 oz. and Acetic acid 2oz.).

Symptomps

Mind : The patient is very hot-tempered and annoyed.

Head : Virtigo ; headache, as if some one is striking on head ; heaviness due to suffering from cough.

Nose : Bleeding from nose with cough.

Eyes : Painful eyes which can not be touched by hands; tearful eyes.

Mouth : Sweetish taste of the mouth after taking meals; creeping sensation as if a piece of hair has been sticked to the tongue.

Stomach : Colicky pain with constipation ; appetite; burning sensation during belch ; heaviness.

Lungs : Cough at the time of awake ; sticky phlegm ; rattle in the throat ; helitosis ; pain of the heart ; heaviness of the chest ; asthma.

Female Rep. organ : Stoppage of menstruation ; heaviness and pain of the chest ; pain in the vagina.

Limbs : Pain in the lower half of the body ; difficult movements ; constipation.

Therapeutic actions :

Garlic gives warmth and is a digestive agent. It prevents flatulence, colicky pain and is diuretic. It is a tonic and useful in case of irregular menstruation ; extract is invaluable remedy for earache and other ear diseases. It has anthelmintic action and prescribed in asthma, paralysis and gout. Garlic mixed with mustard oil is generally rubbed on the body in case of convulsion of infants. Application of its poultice is effective in the disorders of urinary bladder or, *strangury*. It is an infallible remedy for fever, diarrhoea, cholera, rheumatism, catarrh, gonorrhoea and piles. Flower of garlic if chewed, checks low blood pressure. Application of garlic cancels the poison of snake bite.

Taking of garlic followed by eating up acidic food like meat, wine etc. is very favourable to health and easy of digestion.

ANDROGRAPHIS PANICULATA *OR* WALL

(Kalmegh)

Plant Introduction :

This plant is generally 1—3 ft high, having dichotomous helicoid branch arrangement. Leaf blades are 2—3 inch long with thin stalk and acute formation. Each lamina contains 4—6 veins. Stalk is 1/4 inch long. Flowers are small in size and appear one by one ; florescence takes place from the end of rainy season to winter.

Growing Places :

Found all over India. In West Bengal—Howrah, Shibpore Botanical Garden, Hoogly, 24—Parganas, Medinipur, Bankura ; in Lucknow, Assam etc.

Name :

In Sanskrit—Mahatikta ; Tamil & Telegu-Neelabhemu ; Bengali—Kalmegh ; Hindi—Kiriyat, Mahatita ; Marathi—Olikirata, English and Latin—Andrographis Paniculata or Wall. Arab Quasabuzzarfah.

Family : Acanthaceae.

Chemical Composition :

We find in Dr. Chopra's book—Dymock and his co-workers found a large quantity of Potassium salts. Dr.

Gorter (1911) thought that the bitter substance in the leaves was a lactone of 'andrographoide' or andrographolic acid of the formula C_{20} H_{30} O_5 and C_{20} H_{32} O_6 In 1914 Dr. Bhaduri showed that the leaves contained two bitter substances and traces of an essential oil. First he found alkaloid and glucosides and secondly he found amorphous form which was named Kalmegh in C_{19} H_{51} O_5 M. P. 185.

Time of collection of plant : End of the rainy season.

Pharmaceutical use : The whole tree.

Therapeutic uses :

The extract is strengthening, anthelmintic and a remedy for diarrhoea and dysentery ; also useful in weakness.

Macroscopic structure :

The transverse section of the stem shows a thick woody region surrounded by a thin outer bark.

Symptoms

Mind : The patient is forgetful, can not remember anything, absent minded, dejected ; does no want to speak ; hot tempered.

Head : Heaviness of the head, particulary in the afternoon ; headache ; drowsiness ; giddiness.

Nose : Creeping sensation of the nose, pricking sensation, the nose runs.

Eyes : Yellowish eyes with tears ; dim-sightedness.

Face : Pale and yellow face.

Tongue : Yellowish ; bitter taste ; sticky salivation ; halitosis.

Stomach : Nausea ; prefers hot or warm food ; pain in the right belly ; relief after taking food.

Abdomen : Janudice due to hindrance in the function of lever and gall-bladder, flatulence, enlargement of the spleen; takes food reluctantly ; weakness ; worms in the intestine.

Urine : Yellow and turbid ; contains froth.

Stool : Hard, bright coloured like clay ; pellet formed; irritation of the rectum.

Lungs : Dyspnoea ; sighness ; pain in the right chest ; cough; rattle in the throat ; aphonia-particularly in the afternoon.

Back : Pain in the right back ; neck is benumbed by pain.

Limbs : Pain in the hands and legs ; weakness ; painful movments ; cold feet ; pain in the knees and toes ; emptiness.

Skin : Scabies ; dry and yellowish skin ; painful pimples; unpleasant odour of the body.

Dose : 5 to 10 minims thrice daily.

ANDERSONIA ROHITAKA *OR* AMOORA ROHITAKA

(Rohitak)

Plant introduction :

It is a big tree. Many people know its properties. It grows in forest, villages, and gardens. This tree can be found in two varieties., One bearing white flowers and the other red flowers. The stem is straight ; leaves are ordinary. Florescence takes place in bunches in the season of spring. Fruits are round shaped and yellowish. The tree is some times distinguished by the terms *male* or *female.*

Name :

In Sanskrit—Rohitak ; Bengali—Raina, Rohitak, Rarha, Pitaraj, Harin Hara ; Hindi and Urdu—Reherha or Rahara ; Gujrati—Rohido ; English and Latin—Andersonia Rohitaka or, Amoora Rohitaka.

Family : Maliaceae.

Time of collection :

In spring and during end of rainy season.

Chemical Composition :

In the yellow bark—Resin, glucose, Tannin salt and Colouring matter are present.

Pharamacological use : the bark.

Therapeutic actions :

Refresher ; tasteful ; blood purifier ; remedy for enlargement of the spleen and lever ; abdominal tumour ; worms ; eye diseases and diarrhoea.

Symptomps

Mind : The patient is forgetful : commits mistakes in writing ; absent minded ; can not concentrate mind.

Head : Heaviness of the head ; giddiness ; headache-particularly in the afternoon.

Eyes : Heaviness ; dim-sightedness at night ; symptom of constipation must be present ; difficulty in reading and writing.

Mouth : dry tongue with yellow coating ; thirst ; prefers cold drinking water ; bitter and insipid taste of the mouth.

Abdomen : enlargement of the spleen, irritation ; pain in the left side ; stiffness of the spleen ; the patient can not change side in the left ; dyspnoea ; fever ; some times diarrhoea or, constipation may be present.

Urine : Continuous flow of urine with tendency to frequent urination ; colour—green or, turbid yellow, frothy.

Stool : Constipation ; loss of excremental pressure ; painful evacuation ; piles ; stiff bowels with mucus.

Limbs : Shooting pain in the hands and legs.

Dose : 5-10 minims with warm water.

ARJUNA *OR* TERMINALIA ARJUNA
(Arjun)

Plant Introduction :

The tree is high and attains a height of 30—32 ft. The stem is thick. Leaf blade is elliptical and notched. Flowers are yellowish white ; fructification happens in winter.

Time of collection : Rainy season and winter,

Name :

Sanskrit—Arjun or Kokab ; Bengali—Arjun ; Hindi—Koi ; English—Arjun tree ; Latin—Terminalia Arjuna.

Family : Combretaceae.

Pharmaceutical use : Bark and leaves of tree.

Chemical Composition :

Caystalline compounds viz—Arjunine, Arjunatin, lactonic constituents, Essential oil ; Tannin Reducing Sugar.

Physio Chemical action :

Through out the body but most effective region is head to bust.

Therapeutic uses :

Strengthens the heart ; blood purifier ; conjunctive to cracked bone ; useful in haematemesis, ulcers and is a good expectorant.

Opinions of differnt scholars and physicians

Charak said—It is useful in sanguinary cough and boils.

Bagabhatta—Useful in diabetes.

Chakradutta—In fracture of bones and heart diseases.

Bhavaprakash—In cough of T. B. patient.

Sushrut—In spermatorrhoea.

Dr. Everson obtained wonderful result by administering it in the heart diseases in the year 1890.

Symptomps

Mind —Always anxious : worried ; prefers loneliness ; palpitation.

Head :—Heaviness of the head ; especially, in the rear portion.

Ears :—Sensation of drum beat ; buzzing sound in the ears.

Mouth :—Tastelessness, bitter taste ; dryness ; thirst.

Stomach :—Loss of appetite ; nausea.

Stool :—Constipation.

Urine :—Trickling discharge with irritation.

Lungs : Gripping Sensation ; dyspnoea ; always puts hands on the chest ; feels trouble in ascending through steps of the staircase ; sigh ; pain ; relief on pressure ; pleasure in cold atmosphere or fan air.

Heart : Throbbing sensation, suffocation ; cough ; stinging pain and palpitation ; *angina pectoris*. This medicine is quite helpful in cases of weakness of the heart caused by *bery bery* or any other complicated disease and may be administered in high or violent fever. To be taken in milk.
Sleep : Insomnia ; dream in the hole night viz.—fighting scene, suicide scene ; fear on closing the eyes.

Male gen. organ : Pulpitation during inter course ; fails to copulate perfectly ; fearfulness.

Female Rep. Organ : Lack of sexual desire ; fearfulness by hearing the proposal of inter course ; fear and anxiety during menstrual discharge ; leucorrhoea or catamenia follwed by weakness of the body.

Therapeutic uses : In *cough* — to be taken with Vasaka Tinc. in case of suffering from T. B. Acalypha Ind. and Vasaka are worth mentioning in haematemesis. Most dependable Drug for Low Blood Pressure.

To stop *bleeding* — applied with durba grass to the injury caused either by hurt or any other reason.

This drug works like the Allopathic **Tendrill, Analgin**; Homoeopathic—Arnica, Ruta, Hypericum, Symphytum etc. According to Dr. Evin, application of this drug is very useful in case of fracture or injury of bone. Application of Arjun bark and garlic pulp in wet form sets bone (in combination with butter.).

Charak has advised application of this drug on pimples.

I think that Arjun gives efficacious result in *low blood pressure* but it should be taken with milk, at least twice daily.

Dose : 5-20 minims according to the nature and age of patient.

ASHOKA *OR* JENOSIA ASHOKA *OR* SACARA IND.

Plant Introduction :

It is an evergreen plant having helicoid, uniparous lateral branching. Leaves are broad and 9-10 inch long ; flowers appear in clusters ; first it is seen orange coloured which gradually changes to red. The tree looks beautiful in the spring during the florescence.

Family : Leguminaceae.

Name :

In Sanskrit ;—Ashoka or Raktapallava ; Bengali, Hindi, oriya and Telegu—Ashok ; Gujrati—Ashupani ; Tamil and Malayalam—Ashogam ; Latin—Sacara Ind or Jehosia Ashoka.

Pharmaceutical use : bark and seeds.

Chemical composition :

Acid Tannin, Catechin Bitter Principle.

Growing place :

In Bengal and central and eastern Himalayan region.

Physio-Chemical action :

It is a remedy for vitiated state of bile, blood and phlegm ; is a refresher ; retains complexion ; has anthelmintic action ; astringent and strengthening agent.

Has ever been this medicine approved by the Therapeutics ?

—yes ; it has been accepted by the therapies of Allopathy, Homoeopathy, Hekimi etc. with the names of Ashoka Gordiel ; Tin Ashoka ; vibro Ashoka ; Ashoka compound.

Therapeutic actions : Lower abdomen, kidney, vagina.

Administration of medicine :

Disorder of menses—Ashoka Tinc. has shown wonderful action in any menstrual disorder. According to Ayurveda, intake of bark of Ashoka with boiled milk is a remedy for menstrual disorders. It is also helpful in dysmenorrhoea. Regular intake of this drug helps in conception of barren woman. It strengthens the fellopian tube in order that it may hold the ovum properly during ovulation.

Ashok Shasthi :

This is the worship on the sixth day of bright fortnight in the spring because at that thime, a kind of toximia is accumulated in the fellopian tube of woman body and is responsible for menstrual disorders. So, intake of Ashoka flower with curd prevents depostion of toximia and helps maintain health and favours conception. That is why it is also known as a nourishing tonic for uterus.

Opininion of different scholars :

Chakradutta has praised a lot regarding this drug. According to him the drug is suiltable for any kind of vaginal diseases. The extract of Ashoka helps in the treatments of leucorrhoea and menorrhagia ; washing vagina with root peel extract cures vaginal wound or ulcer. In case of painful, micturition wet pulp of seeds is applied. Root extract is useful in piles of women. Keeping Ashoka root in the right arm of men and left arm of women, have been noted efficacious in the cure of piles. A litte excess dose checks the stoppage of monthly course of women.

Symptomps

Mind : Tired easily ; can not work for a long time ; fearful ; tendency to weep ; becomes angry at trifles ; whimsical ;

prefers cold ; changing idead and thoughts ; can not endure pain ; impatient.

Head : Headache due to cogestion of blood caused by uteric disorders : nausea : loss of appetite ; relief in the cold ; slight discharge ; headache disappears after eating.

Eyes : Can not endure light ; tearful eyes with inflammation.

Ears : Earache.

Nose : Sneezing with running at nose which some time becomes chocked.; loss of smelling power.

Face : Pimples or boils.

Mouth : Dry tongue ; thirst ; tongue white coated ; bleeding from the teeth.

Throat : Catches cold easily, painful swallow ; enlargement of the tonsil.

Appetite : do not want to take milk ; prefers sourish food ; loss of appetite ; thirst.

Stomach : Bile vomiting.

Belly : Stiffness ; flatulence ; foul fart ; colicky pain.

Stool : Constipation ; stiff bowels ; strain at voiding stool.

ATISTA INDICA

Plant Introduction :

This plant can be seen in almost all the villages of of India. Although it is a kind of neglected tree, deserves the power of curing diseases. The tree is big and high. whole of the tree is used in medicine. It is a kind of wild tree.

Name :

In Sanskrit—Banmenibuk, Bengali—Ash sheora; Hindi—Bananimbu ; Western Indians—Kimira ; Latin—Atista Indica.

Family : Rutaceae.

Pharmaceutical use : leaves, root, branches etc.

Time of collection : in every season.

Chemical Composition :

Full of alkaline substances.

Therapeutical uses :

In fever, ulcer, diseases of the teeth, ulcer of the throat, jaundice, enlargement of the pleen.

Symptomps

Mind : Gloomy ; indolent ; weak memory ; can not remember anything.

Head : Giddiness ; headache as if something is being rotated around the head ; creeping sensation ; pain moves from one side to the other.

Eyes : Can not endure light ; irritation of the eyes and the patient compels to shut them.

Ears : Throbbing sensation.

Teeth : Week gum ; swollen ; bleeding from the pyorrhoea ; bad breath.

Tongue : Fever, white coating with bitter taste.

Mouth : Dry and thirsty.

Throat : ulcer of throat ; irritation, pain and enlargement of the tonsil ; septic tonsil ; can not swallow any food ; cancer of the throat.

Stomach : Heaviness ; flatulence ; pain of the spleen ; enlargement of the spleen ; relief after belching ; smarting pain on the navel ; heaviness after taking meal. abnormal spitting ; heart-burn ; bitter belch ; chronic dysentery ; colicky pain.

Appetite : tremendous appetite ; prefers dry or stiff food ; does not like liquid food ; fond of sweets or sourish food.

Stool : Constipation ; diarrhoea ; bowels with mucus ; dysentery ; blood dysentery ; colicky pain before evacuation ; can not resist the excremental pressure ; runs towards the lavatory immediately after rising from bed in the morning ; tendency to evacnate the bowels after meals.

Limbs : Weakness and pain in the hands and legs, joints ; feels own hands and legs as those of other's.

Sleep : less sleep ; becomes annoyed after rising from bed ; vision of waving flame.

Special prescriptions

In *fever*—anteric fever 102°—103° f, flactuating ;coldness of hands and feet, flatulence ; foul farting ; white coated tongue ; enlargement of the spleen ; pain of the lever ; thirst ; semiconsciousness ; talking coherently ; intestinal worms ; yellow stool with mucus ; constipation.

In *diseases of the teeth* -Pyorrhoea, loose gum or spongy gum which bleeds easily ; bad breath ; pus.

In *jaundice*—yellowish eyes ; yellow urine, weakness ; jaundice after turning a corner from dysentery or by taking excessive antibiotic drugs. This drug is antibilious.

In *intestinal worm*—Itching of the nose ; gnashing the teeth while sleeping ; secretion of saliva during sleep ; eager to take sweets.

In *ulcer*—It is an infallible remedy for any kind of chronic ulcer particularly of the throat ; also useful in septic ulcer or cancer of the throat, mucous membrane, ovula, anterior piller, posterior piller ; tonsil ; tongue with bad smelling saliva and inflammation.

Smoking the cheroot of Atista Ind. is helpful in all cases.

Process of making the Cheroot : The substance of the root and fruit are taken in equal proportions and cooked with ghee and cooled. Then dried to eliminate moisture under care.

Application of the pulp of cheroot substance as mentioned above is useful in ulcer or gonorrhoea, syphilis and wound of scabies.

Gargling : gargling with the decoctin (diluted with water) of this drug relieves ulcer of the throat and tonsil.

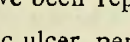
Dose : 5—15 minim or, powder form 10 gr per dose.

ATISTA RADIX

(Root of Atista Indica)

Symptoms of this drug resemble those of Atista Ind. but the special characteristic symptom is pain surroundiong navel. Generally it acts well in intestinal region in the lower or upper abdomen. Besides, it is practically neutral to other parts of the body. This drug may also be recommended in cases of blood dysentery, colicky pain due to existence of intestinal worms and excessive travelling by bus or tram. Very wonderful results have been reported by administering this drug in cases of gastric ulcer, peptic ulcer, acidity, bilious pain, diarrhoea and when the patient often takes allopathic medicines viz. **Baralgan, Spasmidon** etc.

Dose : Tincture form 10 to 20 minims per dose.



AVENA SATIVA

(Common Oat)

Plant introduction :

It is a hardy cereal grown in cool climates as food, a genus of grasses (family—Poaceae), having deeply furrowed

grains enclosed in the glumes nad sometimes adherent to them· The stem is hairy and 3ft high. Lamina is glaucous with smooth stalk. Peduncle is 6-10 inch long. The fruits are seen in bunches, having ¼ inch prickles. Florescence and fructification take place in winter.

Name :

in Sanskrit—Prasadhika ; Bengali—Joi ; Hindi—Neebar ; Marathi—Jab ; English—Common Oat ; Latin—Avena Sativa.

Growing places : The north western Himalayan Region, Punjab, Sikkim, Bihar and West Bengal.

Family : Gramineae.

Time of collection : winter.

Chemical Composition :

Ether—7%, Carbo Hyd.—6·7%, Albuminoid—44·13%, Fixed oil—14%, Fibre—3.8%, Ash—2.15%, Water—6.93%, Enzyme protein—14% (Amylase, Protosa, Lipase, Thyted etc). Vit A, very low percentage, Vit B_1 and B_2 (480—1030 micro gram), Vit E.

Therapeutic uses :

It is antibilious, removes phlegm and cough, weakness and works as stimulant and purgative.

Symptoms

Mind : The patient can not concentrate mind ; unrest; can not remember anything.

Head . Lightness, Neurasthenia, headache, irritation of the vertex, giddiness after intercourse, heaviness.

Eyes : Dim-sightedness, floating sensation.

Mouth : Tastelessness, loss of appetite ;

Lungs : Palpitation due to weakness ; takes breath very fast ; pain in the heart ; emptiness.

Male Gen Organ : Slackened penis. neurasthenia : unable to cohabit due to weakness ; spermatorrhoea ; easily discharges ; unintentional seminal efflux ; nocturnal emission; aggravation after copulation, abdominal pain ; tremendous desire for sex.

Female Rep. organ : abnormal leucorrheal discharge like water followed by weakness ; giddiness ; pain ; palpitation; chronic leucorrhoea ; lack of desire or tremendous desire for sex ; aggravation after having an intercourse.

Limbs : Weakness of the limbs ; pain in the veins and abdomen, knees and back ; aggravation after cohabitation.

This drug abates the addiction to opium, biri and cigarettes.

Dose : 15—30 minims with warm water.

AZADIRACTA INDICA *OR* MELIA AZADIRACTA
(Margosa)

Plant Introduction :

This tree has manyfold pharmaceutical uses and has long been used ; grown in almost all states of India and every person is more or less aware of its properties.

Name :

In Sanskrit—Nimba ; Bengali-Hindi and Punjabi Nim (neem), Telegu-Vepa ; English-Margosa or Nim Tree ; Latin—Azadiracta Ind. or Melia Azadiracta or Azadirachta.

Family—Meliaceae.

Pharmaceutical use :

The bark, leaves and flowers.

Chemical Composition :

Contains steam bath, bitter principle Margosin, Nimbidin, Nimbin, Nimbinin, Nimbesterol, essential oil Tannin (Stearic acid, Lauric acid, Oleic acid) glucoside, Sulphur 0.427%.

Opinions of different physicians (symposium)

According to Charak—External application of this drug is useful in leprosy or such skin disease.

Shusruta—may be used in skin diseases and is very effective in bilious fever and gonorrhoea.

Chakradutta—May be used in eczema, gangrenous ulcer, ring worm etc. and in jaundice.

Hareet—It is effective in any skin disease.

Bangasen obtained wonderful result by administering it in sciatica.

Dr. Dymock in the year 1847 performed experiments on it and published his report in Indian Medicinal Plant (page 204).

What did he obtain ?

He observed that due to existence of Sulphur, Silica, sodium, Fixed oil in it,—the drug may be used freely in any poisonous gangrene, skin disease ; even in case of syphilitic ulcer.

In 1836 Maj. Cornish carried on researches and found Margosic acid and Sulphur.

In 1873, Mr. Broughton proved that Bitter Fixed oil (31%) which was obtained by sqeezing boiled bark, was capable of rendering the juice of ulcer alkaline, if applied.

In 1878 Dr. Warden obtained the specific gravity of the drug equivalent to 0·9235.

In 1917 Dr. Chatterji and Dr. Roy carried on experiments and were successful in proving that the drug contains 0.427% Sulphur, Fatty acid. Glucoside, Sodium, Potassium etc. (Journal of Medicinal Research Vol. V page 656).

In 1923 Dr. Watson proclaimed that the reason of activity of Nim oil was the functions of Sulphur and acidic complexes, present in the drug.

Pharmacological actions :

Pharmacological action of Melia Azadiracta was studied by Dr. Chatterji and Dr. Roy. They found a powerful action against protozoa, a solutation of 1 in 10,000 killing the flagellate protozoa in 5 minutes. The results obtained by these workers are as follows :

Drug used	Dilution which kill the protozoa in 5 minutes
Quinnie Sulph	1 in 100,000
Emetinne	1 in 10,000
Tartar Emetic	1 in 500
Sodi Margosate	1 in 10,000

Therapeutic actions :

In therapeutic uses it is a preventive for frequent bowels ; a good appetizer ; useful in phlegm, bile disorders,

skin diseases, leprosy, pimples, dropsy, fever, thirst, gonorrhoea, loss of appetite. etc.

Symptomps

Mind : can not remember anything, commits mistakes always.

Head : headache, throbbing sensation of the right temple; pain in the skull ; throbbing in the veins ; haedache caused by congestion of biles.

Eyes : inflammation of the eyes, heaviness, fever ; especially the right eye is attacked. Saccadic movement of the eyes.

Ears : Buzzing sound in the ears ; creeping sensation.

Nose : Running at nose ; aggravtion in the morning., relief is experienced as the day grows late in the morning.

Face : pale and warm face.

Mouth : Loss of thirst ; sticky sensation ; tastelessness; irritation of the tongue with prickling sensation ; ulcer of the mouth ; pyorrhoea; bad breath ; bitter taste.

Throat : Bitter taste due co congestion of biles ; pain in the right portion of throat ; dry cough ; aggravation in the afternoon.

Stomach : Tremendous thirst ; heart-burn ; water bubles up with vomit ; bitterness.

Belly : Flatulence with rumble in the bowels ; smarting pain in the abdomen ; comfort on pressing ; uneasiness of the belly.

Stool : Stiff and pellet formed ; very small excretion with difficulty ; constipation ; loose stool ; comfort after evacuation.

Male Gen. Organ : Highly excited but loss of vigour ;

Female Rep. Organ :

Little bleeding ; catamenia or, bloody leucorrhoea ; pain in the pelvic region ; after-birth discharge persists for a long time ; bad smelling discharge.

Urine : Turbid with reddish sedimentation ; irritation ; discharged quantity is less or more, not certain.

Lungs : Sigh ; distressing cough in the mid-day ; grayish phlegmatic discharge with pain in the right chest.

Limbs : Senselessness ; paralysed ; sometimes burning sensation in the palm and toe (right side).

Sleep : Dreaming of quarrel and fight ; paralysing sensation with insomnia ; rolling about in the bed ; dream,— whenever feels drowsy.

Fever : Evening sickness ; irritation of the eyes and limbs loss of thirst ; cough caused by misuse of Quinine or antibioticts; patient can not get relieved in open atmosphere ; beads of perspiration on the fore-head but not in the lower part of the body ; fever and spermatorrhoea ; gonorrhoea. This drug is very helpful in case of enlargement of the spleen or lever. (Kalmegh).

Skin : Useful in many skin diseases.

Aggravation : in open atmosphere and in the afternoon.

Special Characteristics :

It is anti-Malarial. Nim is infallible drug in sinus or any ulcer for the purpose of healing (to be applied with ghee).

In the early stage of any boil, it is applied to suppress the boil. If it is too late, then it helps to crack the boil. Nim Oil is a contraceptive and is a household remedy for skin diseases. Soup of nim is a remedy for *pox.*

Dose : 5—10 minims.

BLUMIA ODORATA
(Blumia Balsamifera)

Plant Introduction :

Blumea is a genus of tropical Australian and African herbs or shrubs (family-carduaceae), with simple alternate leaves and discoid purple or yellow flower heads. B. Balsamifera plant grows in the lands of Bengal. Assam, Madras etc. The plants are not high enough. Leaves are apparently like the tobacco leaves. The plant matures in the rainy season. Content of Chlorophil is maximum at that stage and the plant yields ngai Comphor. Syn. Placns.

Name :

In Sanskrit—Kukunder ; Bengali—Kukshima or Kukur Sonka or Kukur Mota ; Hindi— Kukranbha ; English—Blumia Balsamifera or Blumea Balsamifera ; Latin—Blumia Odorata or Blumia Densiflora.

Family : Compositae.

Pharmaceutical use :

Leaves and root but leaves are used widely.

Therapeutic uses :

It is a blood purifier ; removes catarrh ; Expels fever and haematemesis ; also effective in diarrhoea, dysentery etc.

Chemical Composition : Iron, Oxygen—alkaline substances

Effective parts :

Functions well in almost all parts of the body, particularly in the lower part.

Mind : Anxious, worried, suffering from insomnia.

Head : Emptiness due to haemorrhage ; headache, moves from one side to the other.

Eyes : Smarting pain ; red eyes ; the veins are saturared with blood as if they would protrude out of the body ; weakness.

Nose : Polypus ; bleeding from the nose ; blood does not coagulate easily ; shooting pain of the nose.

Throat : Voluntary cough by way of warning (hawking), creeping sensation of the throat with vomit of blood.

Belly : Colicky pain with diarrhoea : dysentery ; blood dysentery ; frequent tendeney to bowels ; clots of blood with mucus ; worms may also present ; piles with wound ; excessive bleeding either due to peptic ulcer or gastric ulcer.

Stool : Diarrhoea ; frequent bowels ; throbbing sensation with mucous excreta. Very effective in Bood Dysentery. I presecribed to many pateints and got very fruitful results.

Urine : Blood urine ; some times irritation with pain in the pelvic region

Female Rep. Organ : Bleeding from the uterus ; pain in the abdomen. This drug has an astringent effect on uterus to stop bleeding. Some time red or dark red discharge with foul odour during the post delivery period.

Male Gen. organ : Bleeding during intercourse with irritation and pain ; sensation of itching.

Vocal Organ : Cough with blood, creeping sensation (Acalypha Ind), spasmodic pain.

Limbs : Tiredness of the hands and legs,; difficult movement benumbed by pain of the joints.

Skin : Pale ; anaemic.

Dose : 5—20 minim according to age and severity of the disease

BALSAMODERNDROM MUKUL

Plant introduction :

It is a kind of wood-gum grown in the deserts or sandy places in summer. In winter, the gum exudes out the tree which is known as bdellium or olibanum (guggul).

Process of collection :

The stem of the tree is cut at a place and a vessel is held under it ; the viscous fluid or gum collects in the vessel and is commonly known as bdellium. It remains equally active upto three to four months after collection.

This drug is of five kinds :

Viz. Mahisakhsa, Mahanil, Kumud, Padma Hiranya ; In Ionani book—four kinds have been mentioned viz. Sakalari, Mukul-e-Arab, Mukul-e-Ajrak and Mukul-e-Ahud.

For the purpose of use by the mankind, golden variety is preferable.

Name :

in Sanskrit—Kumbha ; Kaushil or Guggul ; Bengali —Guggul ; Hindi—Gugal, Urdu—Sakalri or Mukul-e-Arab ; Assamese—Muskule Arjak ; Gujarati—Gugul ; English and Latin—Balsamoderndrom Mukul.

Growing Places :

Rajasthan, Maharashtra, Assam, Bengal, Arabia and Africa. Among them, mukul of Arabia is considered best.

Chemical composition :

This drug contains Essential oil, Resin, sweet and bitter Principle.

Therapeutic action :

It is a light, spermatic and slippery substance ; very effective appetizer ; prevents flatulence, bile disorders, phlegm and intestinal worms. Relieves from gonorrhoeal suffering and pain of the glands, piles, rheumatism. Removes dropsy and urticaria.

It contains a sweet complex-very useful in cough and biles.

Pharmaceutical use : only gum.

Symptomps

Mind : Worried ; disappiontment ; anxiety ; thinking of the present ; absent minded and does not think about the future. Fear of public, can not face or like crowd ; gloomy ; tendency to commit suicide.

Head : Throbbing Sensation of the head due to plethora ; virtigo ; heaviness if head is bent ; aggravation in hot.

Eyes : Tears trickling down the cheeks at trifles. The eye balls revolve very fast.; inflammation of the eyes.

Nose : Polypus and hard breath ; choked nose.

Mouth : Weak teeth gum ; bleeds easily ; bad breath.

Throat : enlargement of the glands ; difficult swallow ; swollen glands of the jaw and vocal organ ; enlargement of tonsil ; benumbed by irritation of the uchestian tube.

Stomach : abnormal appetite ; always seeks food but can not digest ; the body remains lean and thin ; annoyed,—if food is not given ; throbbing sensation in the stomach.

Belly : Enlargement of the liver and spleen ; pain in the abdomen.

Stool : stiffy ; constipation ; some times diarrhoea may be present.

Urine : Painful and frequent urination.

Male Gen Organ : Painful micturition marked by enlargement of the prostrate gland ; hydrocele ; testes dangle loosely ; sometimes the testicles become stiff and swollen.

Female Rep. organ : Irritation of the ovaries ; shrunk or loose breasts often become painful and stiff ; weakness during menstruation.

Lungs : The noble physician Bagabhatta has appreciated this drug for its excellent action in dyspnoea ; he advised to take this medicine with ghee ; Effective relief has been marked by the inhalation of the smoke of (pulp) mukul in ghee in case of asthma. It also functions well in hard breath either due to tonsil or irritation of the throat.

Limbs : Pain in the hands and legs ; rheumatism : gonnorrhoeal gout ; coldness of limbs ; aggravation at night.

Dose : Ground powder to be administered (5—15 grains) every four hour.

BOERHAAVIA DIFFUSA
(Spreading hog-wide)

Plant Introduction :

Boerhaavia is a large genus of widely distributed pubescent or, glandular tropical herbs of the four-o'clock family having small apetalous flowers and club-shaped ribbed fruit. The roots of some species are used as laxatives and vermifuge.

There are three kinds of this drug viz. white, red and blue varieties. Among them only white variety is known as effective. Although some body say that usefulness of all kinds of this plant is same. It is a dense branched vine

having thick root. The tap root is as thick as a hard log. The height of the plant is 2-3 ft. It is soft and spreads over the groung. Lamina is elliptical and bifoliate, heavy, 1—½ inch long.

The plant is seen all over India ; also in West Bengal—in the untilled lands in rainy season ; generally the plant grows in cold places.

Name :

In Sanskrit—Punarnabha ; Sothgni : Bengali—Punarnaba, Sepune. Hindi & Urdu—Beshkapur. Shibakpara, gadahpurna ; Marathi—Pantara Ghentuli ; Telegu—Atata samidi ; Tamil—Sukar Tekire ; Arabic—Hand kuki ; English—Spreading hog-wide ; Latin—Boerhaavia Diffusa.

Family : Nyctagineae-Re, or Nyctaginaceae.

Time of collection : rainy season but also available in all seasons. Florescence and fructification take place in winter.

Pharamacological action : The bitter extract is anti-phlegmatic and antidote to poisons ; cures cough, heart disease, colicky pain, Janudice, dropsy, flatulence. Red hog-wide is useful in the latter case.

Therapeutic actions : It is a good agent for the treatment of strangury, indigestion ; a good expectorant and is a remedy for asthma and dropsy of anaemic patients.

Chemical composition :

Punarnavine 0.01%, Alkaloid 6.5%, Pot. Nit, Sodium Sulphate, Chloride, Fatty acid (Dr. Ghosal, 1910).

Macroscopic structure : The tap root is tuberous, cylinderical to narroly fusiform to conical or tapering and occasionally branched, light yellow, brown or brownish gray coloured. The transverse section shows a distinct region i. e. covek, bark and wood.

Pharmacological Action :

The active principle is diuretic chiefly acting on the kidneys increasing the heart beat and strengthen the heart, regulates the blood pressure and increases the R. B. C.

Physio Chemical Action : It is an alkaloid and oxygenate.

Opinions of different Physicians (symposium)

Dhannantari says—it is a purgative, perspiring agent and useful is dropsy, colicky pain and anaemia ; red variety is useful is dropsy, haemorrhage and bilious disorders.

Charak says—in many skin diseases, leprosy, ring worm, dropsy and kidney stone—the medicine is effective,

Shusruta—may be admininistered in dropsy, stone formation and disorders of the bowels.

Chakradutta—It antidotes the infection from snake-bite.

Bangasen—In quartan fever with chill and urticaria,—it gives wonderful action.

According to Dr. L. M. Ghosal of medical College (1920), this drug is useful in fever, disorders of the lever, perinolitis, dropsy etc. because it contains Pot. Nit and Sodium Sulphate.

According to Dr. Chopra, Dr. R. N. Ghosh, Dr. S. Ghosh, this drug has been effectectively used when the tapping of water fails in dropsy and function of the kidney stops (Ind Mat Med. vol L viii P 203).

In 1898, Dr. Aghorenath Chakravorty, son of famous Homœopath Dr. Biharilal Chakravorty carried on experiments on some of his patients suffering from cough, phlegm, giddiness, hemicrania. etc.

Lt Col R. N. Chopra says—the green plant possesses a very high percentage of water ; the air dried plant had to be used for extraction. The plant was found to contain unusually large quantities of Potassium Nit. as the pressure of this salt may partly account for the diuretic action of the drug.

Pharmacological action :

Rai Bahadur L. M. Ghosal investigated the therapeutic properties of this drug from every point of view in 1920.

the liver ; *cerosis* of the liver ; experience of pain when pressed ; hard breath.

Stool : Diarrhoeic bowels, some times stiff, pale white ; flatulence ; rumble in the bowels ; weakness.

Urine : Turbid and scanty discharge ; difficulty in passing urine ; *nephritis*. The bladder becomes swollen ; Yellowish albuminous urine ; itching after passing urine ; loss of activation of kidney ; dropsy of the bladder

Female Rep. organ : Menstrual discharge stops ; dropsy : unconsciousness, weakness.

Breath Difficult breath ; weakness and dyspnoea marked by dropsy.

Heart : Weak and painful, palpitation ; low blood pressure ; sensation as if the breath would stop immediately ; irregular pulse and hydropericardian ; *hypertrophy of heart* etc.

Sleep : Restlessness and little sleep ; irritation of the whole body.

Swelling : Of the eyes ; dropsy of limbs and abdomen.
The drug gives wonderful result in *anaemia* and pornitious anaemia.

Therapeutic actions ;

1. This drug expels the accumulated water of dropsy.
2. Refreshes the kidneys and heart.
3. Can be used safely when R. B. C. of the blood reduces.
4. Soup of leaves can be fed to dropsical patients.
5. Removes the mitral or tricupid disorders of the heart.

Dose : 5 to 30/40 drops four or five times a day.

BERBARIS VULGARIS

(Daru Haridra)

Plant Introduction :

It is a spiny, 3-6 ft. high, evergreen leaved and soft plant. Leaves are 1-3 inch long, mucronate ; stalk is soft and twice the length of leaf. Small flowers : florescence in the spring and fructification in summer. There are many kinds of berbaris plans among which the plant of Nilgiri is

most effective. This drug grows mostly in the Himalayan regions, Bihar, and 4-10 thousand feet highlands of Nilgiri.

Name :

In Sanskrit—Darbi, Bengali—Daru Haridra ; Hindi—Daru Haldi Urdu—Jarki haldi ; Telegu—Mabipashuha ; Telegu—Marmanjil ; English and Latin—Berbaris Aciatica or Vulgaris.

Family : Berberideae.

Time of collection : When the plant gets dried—the stem, root and fruits are used.

Pharmacological use :

The bitter extract is expectorant ; useful in pimples, leucorrhoea, gonorrhoea, dropsy ; deseases of ear, erysipelas, skin diseases, scabies, eye diseases. Also very much effective in the treatment of sore, leucorrhoea, billious fever and jaundice.

Chemical Composition :

Berberine $C_{20}\ H_{19}\ NO_5$ is one of the chief constituents alkaloid, Sulphate and hydrochloride etc.

Physio-Chemical action :

Berberine is not a very toxic alkaloid.

Berberine has stimulant action on the movements of the gastro-intestinal tract.

Therapeutic uses :

The Hindu and Mohammedan physicians used this in the treatment of leprosy. snake bite, jaundice, and vomiting of pregnancy and rheumatism. In malaria it has also been used. Dr. Sabastine (1926) used Berberine as a provocative agent for the diagnosis of latent malaria. In 1927 Dr. Percy Andre advocated the hydrochloride in cases of malarial Splenomegaly. In 1927 Chopra has used berberine sulphate in patient suffering from Malaria at the Carmichael Hospital, Calcutta.

Opininion of different Physicians (Symposium)

Chark—This medicine can be prescribed in pimples and skin diseases.

Shusruta—In gonorrhoeal diseases.

Bagabhatta—In the phlegm and catarrh.

Chakradutta—In diseases of mouth, leucorrhoea. catamenia, jaundice etc.

According to my opinion, this drug has a powerful action on gall stone and is capable of dissolving it. I have administered this drug in many patients and dissolved

gall-stones. The medicine to be continued for a few days.

Dose ; 25-30 minims with tepid water thrice daily. In some cases intake for 2-3 months may be necessary. I have also observed fruitful result in the cases of Jaundice and skin diseases.

This drug may freely be recommended for any kidney troubles. Also helpful in be-coli infections.

Symptoms

Head : Heaviness, giddiness of the head as if some one has put any substance on the patient's head.

Nose : Creeping sensation marked by accumulation of phlegm in the left nostril.

Face : Pale, lean and thin, dirty, bluish shade surrounding the eyes.

Mouth : Sticky and bitter taste.

Stomach : Vomit preceding breakfast ; heart-burn ; sour belchimg ; stone ; Gall stone ; irritation of the gall-bladder ; constipation ; pain of the gall-bladder : painful Ellyum, pain in the stomach, spleen, liver to lower abdomen ; unbearable pain.

Stool : Frequent excremental pressure ; loose and earthen coloures excreta, sour smell, mixed with bile. Tearing pain in the anus.

Urine : Burning sensation during urinal flow as if a part of urine still remains in the bladder ; frequent urine with albumen. Pain in the hip and abdomen during urinal flow ; scanty discharge. Very effective in any kind of kidney disorder.

Male Gen Organ : Narrow emission of semenal fluid, burning sensation in the testes ; stinging pain in the fore skin.

Female Rep. Organ : Burning pain in the vagina ; want of sex desire ; cutting pain during intercourse. smarting and contracting sensation of the vagina ; itching sensation during leucorrheal discharge ; pain of the ovaries ; pain of the abdomen.

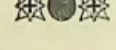
Bark : Is very helpful in unbearable pain ; stinging pain in the neck and back ; sparking pain in the neck due to disorders of the urinal organs ; difficulty in movement marked by pain ; burning sensation of the eyes and face. Pain in the limbs ; scanty flow of urine.

Skin : Eczema with or without exudation of fluid.

Fever : Fever with burning sensation of the eyes, face and limbs ; thirst during fever which persists—may be due to suffering from jaundice.

Therapeutic actions :

1. The root is effective in eye diseases and prevents nausea.
2. Useful in intermittent fever and acidity.
3. The boils are suppreseed if applied with butter and camphor.
4. Very helpful in the diseases of spleen and lever.



CAESALPINIA BONDUCELLA *OR* QUINIA INDICA

Plant Introduction :

It is a kind of creeping plant, grows mostly in the sea sore ; branches are grayish and bent down ; stem is short and yellow, covered with bent down thorns. Leaves are 1 (or more) inch long, oblong and the anterior part is thick.

Long flowers are seen in bunches ; fruits of 2-3 inch size hang from the stalk of leaves, lead coloured and contains dicotyledonous seeds in pairs. Fruits are thorny. The seeds are known as 'Kundule' seeds.

Growing place :

Generally in coastal areas, viz. Bombay, Orissa, Madras, West Bengal etc.

Name :

In Sanskrit – Natakranj, Putikran ; Bengali—Nata ; Hindi—Kataklija, Sagar Ghota ; Telegu—Gachkari ; Gujarati-Kaka-chira ; English—Fever nut or Bondok seed ; Latin—Caesalpania Bonducella or Quinine Indica.

Family : Leguminoceae.

Pharmaceutical collection :

In every season.

Chemical Composition :

Heckel and Schlagdenhauffen found that the cotyledones of the seed contain starchy matter, 25.13 percent an oily substance, 1.925 percent Bitter principle, 6.83 percent of sugar and 3.791 percent salt.

Opinions of different physicians (symposium)

Charak—According to Charak this drug can be administered in cases of piles, erysipelas and leprosy.

Shusrut—in poisonous boils, carbuncle, scabies, intestinal worms, leprosy, elephantiasis, haematemesis, colicky pain etc.

Bagabhatta—in erysipelas of glands.

Chakradutta —In inflammation of the eyes ; voluntary pox.

Bangasen—In pox with catarrh, bilious fever, dropsy and dyspepsia. Dr. Warts wrote in his Dictionary of Economic Products of India-"The seeds of the plant are very good for chronic fever and highly efficatious in curing colicky pain.

Dr. Chopra and Dr, Ghosh of Calcutta Hospital of Tropical Medicine, carried on researches and observed that the cotyledons of the seed are *febrifuge* in nature.

The following physicians had carried out the mystery of the said drug in the years as mentioned against their names.

Dr. R. N. Chopra & Dr. S. Ghosal	1929
Mr. Bacon	1906
Dr. Bhaduri	1912
Godble, Paranjpe and Shikhandi	1929
Tumin Katti	1930

Symptomps

Mind : Loss of vigour, gloomy and likes loneliness.

Head : Throbbing at the temples attended with headache. Pleasure on pressure ; nausea ; the patient is compelled to shut eyes due to pain.

Eyes : Fever with inflammation of the eyes ; particularly before fever ; relief by applying cold water ; warm tears trickle down the cheeks.

Nose : Running at nose ; feel of warmth ; sneezing ; fever.

Mouth ; Dryness of the throat during fever ; thirst ; pale face.

Tongue : Dry Tonguc with a white coating.

Belly : Pain in the lower abdomen. enlargement of the lower lobe ; pain in the hepatic region ; enlargement of the spleen.

Stool : Constipation, colour varies time to time ; some times pure yellow stool.

Urine : Warm, yellow and scanty.

Fever : Irregular and shivering fever, on the alternate days ; burning sensation of the limbs ; pain in the body ; perspiration ; *Malaria* or *Black-fever* ; the face turns pale during fever ; weakness ; feverishness during 6 p. m. to 10 p. m. ; aggravation in direct contact of sun rays.

Skin : Dry skin ; eruption like mosquito sting ; erupions with inflammation or itching.

Dose : 5-15 minims per dose.

CHIRATA *OR* GENTIANA CHIRATA

Plant introduction :

It is a kind of short and steady shrub with stem height of 2-5 ft. Leaves, are 2/3 inch long and $\frac{3}{4}$ inch wide. Comaparatively the leaves at the lower portion of the stem are greater in size than those of the upper. Branches are oval shaped or helicoid sympodial dichotomous. Lamina is multicostate with four veins. The penducle contains many leaves ; outer diameter of the flower is 1/6 th of an inch ; colour—greenish yellow.

Growing place : In the temperature zone of Himalaya, at the height of 400 to 10,000 ft. It is available in all the states of India except Kashmir, Bhutan and Nepal.

Name : In Sanskrit—Kirat Tikta ; Anarya Tikta, Katuki Bhunimba ; Bengali—Chirata ; Hindi—Chiryayta, nil kanta, Kirayit ; Marathi—Karo kirayit or kariyayit ; Telegu—Nelanebu, Nilaghembu ; English—Chiretta *or* Indian Gentian ; Latin—Swertia Ham or, Gentiana Chirata.

Family : Gentianaceae.

Pharmaceutical collection : In all seasons.

Pharmacological use : Entire plant.

Chemical Composition :

Alkaloid, Bitter principle, Oliec acid, Chiratin, a yellow bitter glucoside, resin, gum, carbonates, phosph of Potash, Lime, Magnesia etc.

Therapeutic actions :

Bitter principle is digestive, febrifuge, appetizing, antibilious anti-neuralgic ; helps in secretion of biles ; atonic ; anthelmintic ; cures skin dlseases, lever troubles and is a purifying agent for mother's milk.

Opinions of different Physicians (symposium)

Chakradutta has recommended the use of this drug in haematemesis and dropsy.

Hareet : Useful in vomiting of pregnancy.

Bagabhatta—This drug is beneficient in case of fever and different skin diseases.

R. N. Khory says in "Materia Medica of India" Vol II p 413—like Cinchona and other bitter tonics it is bitter stomachic, laxative. It excites the appetite, strengthens digestion but does not constipate ; it diminishes flatulence and hyper-acidity, removes biliousness, atonic dyspepsia, liver troubles, acidity of stomach, and gout. In combination with acids, alkalies and aromatics it is given in bilious affection and burning heat of the body.

Col R. N. Chopra has written the followiog about this herb in his work—Indigenous drugs of India, p 251—"Swertia Chirata has long been used by Hindu Physicians as a bitter tonic, stomachic, febrifuge and anthelmintic."

The Mohammedan physicians also used it extensively. They would apply this drug in different kind of fever, liver troubles, skin diseases etc.

The European practitioners in India have appreciated the vitility of Chireta (Dr. Watt's—Dictionary of Economic Products of India).

Chirata now has been recognised by British and United States Pharmacopoeia.

Symptomps

Mind : Indolence, tendency to lie up in the bed ; spiritlessness.

Head : Very sensative to touch, headache and pain of the tempmles of head ; heaviness and cool feeling ; chilliness, giddiness.

Eyes : Burning sensation of the eyes just before attack of fever ; radiation of heat from the eyes.

Ears : Sensation of noise in the ears ; buzzing sound in the ears ; dim-sightedness.

Nose : warm breath ; creeping sensation in the nose ; frequent and short breath during attack of fever.

Mouth : Tastelessness ; bitterness, particularly during fever.

Throat : Swelling of the *tonsil* ; difficulty in talking ; pain in the throat ; feels comfort after gargling with warm water.

Lungs : Dry cough ; pain of the chest by suppression of phlegm ;

Stomach : Enlargement of the liver and spleen ; stiffness and flatulence. The patient does not allow any one to touch the belly.

Stool : Pale stool with mucus ; some times the colour is green.

Urine : Yellow, with burning sensation ; pain in the bladder, especially in the right one ; some times scanty discharge of urine having a *red colour action.*

Limbs : Burning sensation and pain : some times shooting pain ; relief on press or massage ; burning sensation of the palm and sole. Pleasure in cold.

Fever : Bile-fever ; burning sensation of the eyes, feet and hands. There is no definite time for attack of fever ; thirstlessness ; the patient is intended in drinking warm water ; perspiration after 2-3 hour continuation of fever. The drug gives excellent result in *Malaria*, *Influenza* and *Typhoid* etc. Chilliness and *haematemesis* also have been marked during fever. The most important point to be noted is that *burning sensation* of the body must be present during attack of fever.

Dose : 5-15 minims per dose.

CALOTROPIS GIGANTEA

Plant Introduction :

It is a very well known tree, can be found every where in India. It generally grows in the unploughed land. This drug has long been used by lhe Hindu physicians. It is known in the Arabian states too. It may be seen in the fields of Himalayan regions of Punjab, Nepal, Assam, Bihar etc. at the height of 3000 ft or more.

In the Mahabharata we find that—in the city of Avanti—Uddalak, a desciple of Sandipan used to take the new leaves of this drug for appeasing hunger. Consequently, he became lean and thin and received blindness of the eyes.

Name :

In Sanskrit—Arka, Maandar ; Bengali—Akanda ; Hindi—Moder ; Arabiyan-Khark ; Gujarati—Ekado ; Telegu—Badabdum ; English—Mudar Giagantic Swaloroot ; Latin—Calotropis Gigantea.

Another name of it is Vegetable Mercury.

Family : Asclepiadeae.

Pharmaceutical use :

Whole of the tree viz. root, leaves, gum etc.

Therapeutic action :

The bitter principle is appetizing and stomachic, evacuating agent for bowels, anti-phlegmatic and is very useful remedy for flatulence, dropsy, fever, leprosy, some skin diseases, enlargement of the spleen and liver ; has anthelmintic action.

Chemical composition :

According to Col. Chopra—The root and the bark are used medicinally. The active principle appears to be a yellow resin, besides which the root bark also contains two substances named by Warden and Waddel 'Madar Alban' and 'Madar Fluavil' closely resembling the *alban* and *fluavil* found in gutta-percha. It contains no alkaloids.

Symptomps

Mind : Disapplontment ; down cast ; tiredness ; sentimental and annoyed.

Head : Giddiness ; weariness due to headache which generally appears after 11 A.M. and persists till night.

Mouth : Dry and white coated tongue with crack marks ; ulcer ; bad breath and abnormal salivation ; syncopation.

Stomach : Flatulence ; rumbling in the bowels ; belching ; colicky pain in case of existence of skin disease too ; nausea.

Heart : Fast pulse ; heaviness of the chest ; pain in the heart as if some one has stabbed the patient ; suppression of the phlegm ; weakness. Phlegmatic disorders may be checkcd by the intake of this drug.

Bladder : Frequent discharge of urine ; some times scanty ; the urine is yellow in colour, non-sedimenting, has a pungent odour and contains blood.

Male Gen Organ :

Ulcer of the penis ; emission of pus from the wound resembling *ring worm* ; bloody semenal emission ; bubonic inflammation ; wound of scrotum and urethra with itching ; oozing of a fetid juice in *syphilis*.

Female Rep. Organ :

Ulcer of the vagina ; suppuration of the ulcer ; oozing of a fetid juice from the ulcer or wound ; affected part itches during menstrual flux which some times become unbearable. The nipples shrink.

Back : Creeping sensation of the back bone as if some one is creeping over the back ; Chilliness.

Skin disease : Cracky fingers of hands and legs ; wounds ; leprosy ; dryness of the skin ; wound of *ring worm* from which exudes a fetid juice ; bed-sore ; syphilitic nodes ; *herpes*.

Sleep : Insomnia due to anxiety ; the patient rolls over in bed.

fever : Fever caused by septic ulcer ; burning sensation of the head and throat attended with fever ; creeping sensation. This drug is useful in reducing fat of the body.

Dose : 5—10 minims twice daily.

CALOTROP IS LACTUM

A milky juice like gum out flows from this plant when new branches are broken. The gum is very effective in the treatment of skin diseases but the use should be limited with small quantity. The pharmacological actions resemble those of Calotropis Gig.

CARIA PAPAYA

(Pop-Tree)

Let us see first whether it is an Indian tree. No, it is not so. In the twelfth century the Arabian merchants fetched some seeds of this tree to Arabiya from New Guinea. The use was started after full growth of the tree. Ultimately, the seeds were brought to India through merchant shipments. By investigating the therapeutic benefits, Indian physicians planted out the same in various states of India. Now *papaya* is available in all parts of India. The fruits are available in green or ripe condition. Time of cooking meat may be reduced either by incorporating its gummy juice into the rew mix as it makes meat tender or wrapping the raw meat with papaya leaves. Some people like to cook meat along with the slices of papaya. Papaya or, Papain has been recognised by all therapies. Its usefulness in bile disorders is incomparable.

The tree attainds a height level of 20-25 ft. Branches are often absent. Old tree stretchesout one or two branches. The leaves are palmatipartite ; have alternate and octastichous phyllotaxy. Stalks are tubular and 3 ft. long. Florescenee commences at the stalk ; There are five parts of the gynoecium. Fruits are long and round. Green fruits are available through out the year which contain a milky gum.

Name :

In Sanskrit—Paaris ; Bengali—Pempe ; Hindi—Papaya or, Papita ; Gujarati—Papeti ; Telegu—Bappeti ; Tamil—Popeti ; English—Pop-Tree ; Latin—Caria Papaya.

Family : Passifloraceae.

Chemical Composition :

The milky juice of Papaya contains a ferment which has an extra-ordinary energetic action upon nitrogenous substances and like pepsin, curdless milk. This juice differs from pepsin in being active without the addition of free acid ; more over the ferment acts at a higher temperature than animal pepsin.

The leaves of the papaya tree have been shown to contain an alkaloid called "CARPAINE" and a glucoside named "CARPOSIDE". This alkaloid was first discovered by Greshoff and has been further examined by Merck and Van Rijn who found that it is a secondary base. The present accepted formula is C_{14} H_{25} O_2 N. The alkaloid can be purified by repeatedly crystallising the base from dilute spirit when it occurs in the form of colourless, lustrous, needle-shaped crystals with a melting point of 121°C.

Therapeutic action :

It is a refeshing and spermatic appetizer. The extract is antibilious and is helpful in piles. The milky juice is anthelmintic. Dr. Fleming advocated that it prevents the enlargement of the spleen.

Symptomps

Mind : Two contrasting symptoms may be seen in the patient. First symptom is dull headed, can not understand anything easily, annoyed and absent minded ; second—the patient is very intelligent, too mnch concentrated in education and concerned matters ; does not feel tired ; some times likes people and some times dislikes.

Head : Giddiness (dyspeptic patient) ; nausea,—often after taking sweets or, in the afternon. Pleasure in cold weather.

Face : Pain in the left portion ; facial paralysis.

Nose : Choked nose ; difficulty in taking breath ; running at nose.

Lungs : Cough ; huskiness or *aphonia* ; shooting pain in the lower left lung. Aggravation on movement.

Stomach : Dyspepsia ; rumble in the bowels ; constipation or diarrhoea ; vomiting tendency after taking meals ; food-aliments protrude out of the stomach ; the patient becomes weak and anaemic. Face becomes pale. But remember that papaya (car. pap.) should not be given to diarrhocic pasients.

Urine : Paraffinic or yellowish discharge ; hindrance in passing urine as if some thing is obstructing the flow ; painful micturition ; burning sensation in the urethra before or after urinal discharge ; drop wise or trickling discharge of urine with pain in the bladder. This drug has effective action on primary gonorrhoea.

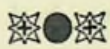
Male Rep Organ : Pain in the testicles : excitement of the organs without semenal efflux. Some times. noctunnal emission happens without any excitement. Pain in the corinium to glans penis.

Female Rep. Organ : Weakness during menstruation and benumbed state by itching, and burning sensation in the ovaries ; itching of the vaginal passage.

Skin and Limbs : Itching of the whole body, particularly in the left portion ; appearance of urticaria preceded by itching ; shivering hands and legs, generally in the left side ; rheumatic pain in the left leg.

According to **Shri Shivakali Bhattacharyya**, well versed and famous practitioner in Ayurveda therapy.—papays is very much useful in the treatment of constipation but administration of this drug is forbidden in case of diarrhoeic symptom.

Dose : 5-10 minims twice or thrice daily.



CASSIA SOPHERA (Senne Sophera)

Plant Introduction :

This plant grows mostly in tropical countries. In Bengal, it grows in plenty just after the first rainfall. The trees are seen with full of flowers in the Autum. The fruits are like the kidney beans or rod with seeds. It is a bushy tree with small acicular laminas. The plant dies in winter. The leaves, bark and seeds are stomachic and work as expectorant. Another tree mostly resembling to Cassia Sop. is seen which is known as Cassia Tora. The latter differs with the former in having no acicular lamina. Extract of this drug is a remedy for ring worm.

Name :

In Sanskrit — Kashmarda ; Bengali — Kalkasunde ; Hindi—Baski-Kasand ; Marathi—Rantaunkal ; Tamil—Paria Takari ; English—Senne Sophera ; Latin—Cassia Sophera.

Family : Leguminoceae.

Time of **collection :** in Autumn.

Pharmaceutical use : Leaves, bark, root,

Chemical composition :

Acid Chrysophonic, silica etc.

Theraeutic actions ;

It is an appetizing agent ; anti-poisonous ; blood purifier ; expectorant.

Symptomps

Mind : Frightened of being ill.

Head : Skin disease of the head, dandruff, *eczema*, itching and exudation of juice.

Ears : Wound in the ears witn scabs turned to thick scale.

Stomach : Skin disease with constipation ; chronic dysentery ;

colicky pain during evacuation ; dyspepsia.

Urine : Red, concentrated and warm urine, contains blood ; skin disease of the penis with itching. Urine contains sufficient starch.

Lungs : Asthma ; rattling in the throat without phlegmatic expulsion ; dyspnoea ; asthma of the patient suffering from skin disease.

Skin : Affected with diseases like eczema, scabies, *psorisis* ; the sore itches and exudes judice. Eczema is seen through out the body ; wound by ring worm and existence of of syphilis ; suppuration beneath the scabs: Aggravation at night. Pleasure in the open atmosphere, Bed-Sore. I prescrib e the drug in Ring worm and get very good results.

Dose : 5—10 minims per dose. Can be applied internally or externally.

CEPHALANDRA INDICA

Plant Introduction :

This plant found in Bengal and in various parts of India, is a kind of creeping plant. The leaves are 4 inch broad, penta axilic, petiole is extended upto one inch. The fruits are like Patol, colour changes to red when they get mature containing seeds. The fruits are 1-2 inch long having diametric measure of about $\frac{1}{2}$ inch and are full of kernel or substance. Florescenee and fructification take place in almost all seasons except winter.

Name :

In Sanskrit—Bimba, Bimbi phal ; Bengali—Telakucha ; Hindi—Kanduri ki—Bil ; Tamil—Korai ; Gujarati—Kholi ; Punjabi—Kandari.

Family : Cucurbitaceae.

Pharmaceutical use : Leaves and root, also stem.

Therapeutic actions :

This drug is very effective in the treatment of haema- temesis, dyspnoea, catarrh, flatulence, fever, blood-poisoning and diabetes.

Opinions of different Physicians (symposium)

According to the therapy of Ayurveda—In the book written by Dhannantari, it has been mentioned that the said drug had long been used in the treatment of fever, *elephantiasis.* duodenal ulcer jaundice, blood dysentery, *dropsy* etc.

According to Allopathy—Dr. R, R. Khory (Mat-Med vol II p 307) written that the said drug might be successfully prescribed in the treatment of d*iabetes*, enlargement of the glands and a few skin diseases.

Dr. W. C. Dutta advocated that the drug was useful in diabetes.

Dr. Dymock says—Taking the green fruit by the patient suffering from ulcer of tongue or catarrh, excellent result may be experienced. Besids, if the leaf is kept in contact with the boil, qulck relief may be perceived, The extract is useful in gonorrhoea. The fruits are effective remedy for r*heumatism*.

Dr. R. N. Chopra says—Telakucha contains an enzyme with amylolytic properties, a hormone and traces of an alkaloid.

Special uses :

Extract of the leaves and root—Used in diabetes.

Leaves—External application in the skin diseases,

The Plant—Internal application in gonorrhoea.

Chemical Composition :

The fresh plant was chemically analysed by Lt col Dr. R. N. Chopra M.A.M.D,. I.M.S and his co-worker (Dr. B. Mukherji, Dr. S. Ghosh etc). They say-"Not only was a search made for the ordinary active principles which are found in plants (e.g. Glucosides and alkaloids) but bodies of the nature of hormones and enzymes which are some times present, were also investigated. In 1923 Dr. Dubbins and Dr. Corlett have shown that in certain plants and vegetables both the blood sugar reducing and blood sugar increasing principles are present. Collip (1923) isolated a substance called "Glucokenin" which has the property of reducing the amount of sugar in the blood.

Cephalendra Indica was found to contain an enzyme, a hormone and traces of an alkaloid.

Pharmacological Action :

The activity of the enzyme isolated was tested. It had well-marked amylolytic properties and rapidly hydrolysed starch.

Symptoms

Mind : Annoyed ; especially after discharge of urine ; fails to concentrate mind.

Head : Giddiness ; weakness of the head marked by discharge of excessive urine ; difficulty in raising head.

Eyes : Burning sensation of the eyes ; painful opening of the eyes.

Mouth : Dryness of the throat and tongue ; thirst, consequently the quantity of urine is more.

Abdomen : Loss of appetite ; the patient is reluctant to take food ; *flatulence*

Urine : Little but frequent discharge of urine which contains sufficient amount of starch.

Stool : Constipation ; stool with mucus.

Feel : Burning sensation of the body ; relief in cold.

I have noted fruitful result by adminitering the alcoholic tincture of this drug in the case of increasing blood sugar. Continuation of intake for 2-3 months is necessary.

Dose : 5-25 drops thrice daily.

CLERODENDRON INFORTUNATUM

Plant Introduction :

It is a kind of shrub. Height of the plant is generally 4 ft or more. The whole plant is covered with yellow or red hairs. Leaf blades are 4-8 inches long, hastate and acuminatic ; petiole is 1-4 inches long and peduncle is 6-12 inch having several branches. The types of plant which are generally found in the garden, bear white or red flowers. Florescence and fructification take place in the end of winter or during the summer.

Growing Places : West Bengal, Bihar, Chittagaon, Chhotanagpur, etc.

Name

In Sanskrit—Ghantakarna : Bhandir ; Bengali—Ghentu, Bhant, Hindi—vata ; Marathi—Kori ; English—Latin :—Clerodendron Infortunatum.

Family : Leguminoceae.

Pharmaceutical use : leaves and the bark.

Time of collection : During the end of winter.

Chemical Composition :

Resinous matter, bitter principle, Tannin, alkaloid.

Therapeutic Action :

The leaves and root may be used in the treatment of the skin diseases and tumour. The leaves may be administered in substitution of Cbirata. Fresh juice of leaves is anthelmintic, febrifuge in *Malaria* of children.

Leaves and flowers :

Very effective antidote for scorpion sting.

The bud : very effective antidote for snake poisoning.

Opinions of different Physicians (Symposium)

Physicians in Hindu Medical Science (or Ayurved) have

advised this shrub as an useful remeday for chronic fever, diseases of heart and intestinal worms.

According to Dr. U. N. Kanjilal—The white and red flowers of ihis shrub are useful in the treatment of several diseases. Dr. Rheede proclaimed that principle of leaves had shown anthelmintic action and the root extract had been found successful in removing colicky pain.

Dr. Bholanath Basu said that the leaves of Ghentu are ideal substitute for Chirata and the bitter principle acts as an anthelmintic and is a tonic (Pharm. India).

Dr. U. C. Dutta realised that the shrub was very effective in curing chronic skin diseases. Dr. J. R. Thorton, Brigadier Surgeon, says that it is a beautiful bitter tonic, effective in case of constipation too. Application of the extract by means of clysterpipe, into the anus, reduces worms. The hypothesis has been supported by other six medical officers.

Dr. G. Watt, in his "Dictionary of Economic Products" and Dr. W. Dymock, in the "Pharmacographia Indica" have specially mentioned the effectiveness of this drug.

Dr. R. N. Khory (Mat. Med. of India) says—It is a bitter tonic, anteperiodic and vermifuge, also a good laxatio, a decoction is some times given as a rectal enema for worms,

also given as a bitter tonic during convalescence from acute diseases.

R. N. Chopra says—It is a laxative, cholagogue and anthelmintic, used in scorpion-sting and snake-bite.

Symptoms

Head : emptiness ; giddiness marked by existence of intestinal worms ; sunken eyes ; dim-stightedness.

Mouth : salivation, sometimes red in colour ; coated tongue; affected teeth. The patient gnashes his teeth in sleep.

Stomach and Abdomen : Tremendous appetite ; seeks food always and does not get contented even after having a meal ; poor digestive power ; pain surrounding the navel ; struggles in pain ; enlargement of the belly.

Stool : Diarrhoeic or constipated bowels containing thread like intestinal worms ; creeping sensation in the anus ; itching ; *dysentery.*

Urine : Discharge of urine in bed due to intesitinal worms. Frequent tendency to discharge of urine.

Hands and legs : Thin hands and legs ; difficulty in movement ; pain in the limbs.

Dose : 5-10 minims.

CINCHONA
(China)

Plant introduction

A large geuns of trees of the madder family (Rubiaceae) natives of the Andean region from Colombia to Peru having panicled flowers with a salver shaped corolla and an ovary crowned with a fleshy disk. The trees are extensively cultivated in the Netherlands, East Indies.

It is an exotic plant but brought to India by the British government in the need of people because India is one of the malarious countries in the world. Therefore, she needs Cinchona. There is a long history behind it. Formerly the plant was grown in South America at a height of 3000-10 000ft which was then included in the European Pharmacopoeia in 1639. Then it was brought into use in Spain and Italy. During the end of seventeenth century, peoples of France and England started using this drug by observing the curative power hidden in it. It 1820 Pelltier, a famous French chemist, found the existence of Quinine ; At that time, the plant was exported to different countries of the world by the South America due to severity of Malaria in various countries. Consequently, South America suffered a

scarecity of supplies in her own land. In 1852, the Dutch people cultivated this drug in java island and started exporting the same to different countries. Many Indians were suffering from Malaria at that period. In 1860, Sir Clement and R. Markham started cultivating Cinchona in the mountain of Nilgiri. Later on, arrangement for cultivation of this drug was made in Burma and Ceylon too. Besides Malaria, Cinchona finds its application in many other diseases, by which demand of this drug has been increased a much now-a days. It is available in about 40 different varities among which Indian Cinchona is best in the world. India government earns a considerable amount of foreign exchange by exporting it. At present this plant is being cultivated in Nilgiri, Khasia, Jayantia mountains and in the valleys of Kashmir.

Name :

Prevalent name of this drug in almost all langages is 'Cinchona'.

Pharmacological use : the bark.

Time of collection : in the Autumn.

Chemical Composition :

Alkaloid 60% which is known as Cinchonidine or, Cinchonine and contains about 1.76% of Quinine.

Reports of examinations by different physicians :

In 1925, Dr. Dale and James found by investigation that the drug was effective in removing *Malaria*.

In 1930, Goodson Henry and Macfie caried on researches and were able to prove that Cinchona was very useful in Malaria.

In 1916, Mac Gill Christ and W. Fletcher performed some experiments on this drug.

Symptoms

Mind : The patient can not concentrate his mind in works ; always suffers from inferiority complex or disappointment.

Head : Tremulous head ; emptiness as if the head is vacant ; throbbing sensation ; becomes very weak after having intercourse.

Eyes : Paleness of the eye edge ; dim-sightedness at night.

Ears : Buzzing Sound in the ears ; creeping sensation.

Face : Pale and *anaemic* ; always gloomy.

Stomach and abdomen : Dyspepsia, flatulence, colicky pain and nausea.

Stool : Frothy bowels containinig indigested food particles and mucus. The patient shows diarrhoeic tendency after taking fruits (mango, orange, apple).

Male Gen Organ : Weakness after intercourse, ferquent discharge of semen.

Female Rep. Organ : Weariness due to abnormal menstrual flux ; difficulty in movement ; anaemia ; haemorrhage results in bleeding of clots of dark red blood ; too much sexual desire.

Heart ; Weak and uneven heart beat.

Limbs : The patient can not move easily due to weakness ; breathes hard ; shooting pain of the hands and legs, also in the abdomen, weariness persists.

Fever : Malaria fever ; fever attended with chilliness ; weakening night sweat ; pain of the fore-head ; burning sensation of the face.

Dose : 5—10 minims in one dose.

CINNAMOMUM (Indian Cinnamon)

Plant Introduction :

A large genus of Asiatic and Australian aromatic trees and shrubs of the laurel family mostly natives of different states of India with thick 3—5" ribbed evergreen leaves and aromatic bark.

Though this plant grows in some parts of India but it is mostly found in Ceylon and China. In India, very small quantity grows in Southern part. It may also be found in the neighbouring areas of the Himalayan region. Cinnamon of Ceylon is of yellow colour having thin, wavy and shriveled bark. Chinese cinnomon is attractive, aromatic and has sweetish-pungent taste. The bark is not shriveled e. i., arrangement is not in scales. Indian cinnamon is slightly blackish, thick and does not posses as strong taste as the Chinese Cinnamon has. Cinnamon can be identified with its strong peculear odour. It becomes slippery when gets wet.

Cinnamon is one of the best cordial, carminatic and astringent species and is much used in cooking for flarouring. It yields the light-coloured aromatic oil of cinnamon, consisting chiefly of cianamaldehyde.

Name : In Sanskrit—Twak, Twaj ; Bengali—Hindi, Urdu & Gujarati— Daruchini ; Latin name of Indian variety is Indian Cinnamon.

Family : Lauraceae.

Pharmaceutical use : The bark and oil which exudes from it.

Chemical composition : Volatile oil, Tannin acid mucilage and some dyes.

Therapeutic actions :

It is anti-phlegmatic and anti-poisonous drug. It is very useful in the treatment of throat diseases, infection of the mouth ; bleeding ; toothache or odontalgia, It is good appetiser and allaying agent for thirst.

I have noted excellent action of this drug on uterine haemorrhage at the time of menopause and found appreciating result hy prescribing it in the case of bleeding from *uterine cancer*.

Symptomps

In speaking of the special symptoms, this duug can be administered unhasititavely in uteric or intestinal haemorrhage.

Femle Rep. Organ : Uteric haemorrhage—bright red and excessive discharge sometimes continous discharge ; which does not easily stop followed by weakness, lose of appetite, paleness of the face. The patient feels as if the entrails would protrude out of the body; Haemorrhage of the uterus by sustaining an injury. Excessive after-birth discharge ; excessive discharge in case of the women of age above 40 ; discharge during pregnancy or cancer (Durba, Blumia Odo.)

In case of peptic ulcer duodonal ulceror blood cough (Ipecac), this drug is very effective. 5—10 drops to be administered. In hiccough, oil of Cinnamon with sugur cake has been found very useful.

Dose: 5—10 drops in one dose.

COLOCYNTHIS

Plant Introduction :

A medtierranean and African herbaceous vine (citrullus colocynthis) allied to the water melon ; from its fruit a powerful cathartic bitter apple is prepared.

This plant is grown all over India. It can be found in Trivancore Southern India and forest rengion of North-Westera India. Besids, this drug can be seen in the unploughed lands of Howrah, Hoogly and Burdwan districts of Bengal. It is a wild kind of bitter cucumber having hairy leaves and normal stalks. Leaf plade is segmented and 2-2$\frac{3}{4}$ inches long. Flower is bell shaped and 1/4 inch in size, glabrous, green or white in colour. Frorescence and fructification takes place in winter.

Name :

In Sanskrit—Indrabaruni ; Bengali—Rakhal Shasha, Indrayan ; Hindi—Chhoti Indrayan ; Marathi—Indrabaruni ; Telegu—Itipucca ; Tamil—Pettyum Mutti : English and Latin—Colocynthis.

Time of collection : in winter.

Useful part of the plant : Fruits and root.

Chemical composition :

There is an ample accumulation of alkaloid in it which is known as 'Colocynthinium' or 'Colocynthimin'. Besides, fixed oil, enzyme, purgative resin, fatty acid, bitter principle and glucoside are also present. Also a resinous compd. colocynthein (colocynthin+acid).

Therapeutic action :

It is stomachic and allays dyspepsia, gastric ulcer, pain, acidity, jaundice, rheumatism and is anthelmintic. Abdominal pain due to worms may be removed.

Opininons of different researchers

Shusrut : has suggested the use of this drug in jaundice.

Chakradutta—in intesto-gastritis and insanity.

Bhavaprakash—has recommended the use in joint-gout.

Greek physicians has called it as 'HARZL'. According to them, this drug is a strong purgative and effective in dropsy, jaundice etc. Dr. Dymock also appreciated the therapeutic nature of its actions and has mentioned that the drug could be administered in colic pain, lever pain and existence of intestinal worms.

I consider this drug as an infallible remidy for colicky pain (owing to intestinal worms) and neurulgic pain of the right side.

Symptomps

Mind : Very hot-tempered ; gets into a temper if questioned on any matter.

Head : Pain in the vertex, particularly in the left part.

Eyes : Pleasure under press.

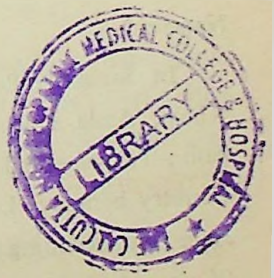
Mouth : Bitter taste ; tongue is harsh to touch ; toothache.

Ttomach and abdomen : abnormal appetite ; does not allay easily ; colicky pain ; surrounding the navel and due to existence of intestinal worms. Pleasure on applying pressure ; tremendous excremental Pressure ; viscous excrementing tendecy after taking food ; colicky pain marked by acidity or diarrhoea.

Urine : Sticky, foul odoured and albuminous discharge ; pain in the pelvic region during urinal flow.

Limbs : Contraction of the muscles, particularly in the right portion of the body ; pain in the shoulder ; difficulty in raising hands ; colicky pain ; relief by hot compress and pressure.

Dose : 5-10 minims in one dose.



COLEUS AROMATICUS (Country Borage *or* Bryophylum)

Plant Introduction :

A large geuns of tropical African and East—Inian showy foliage herbs of the mint family, having spicate blue flowers.

This plant grows in various states of India. It owes its origin in the Molacca isles. At present it may be avilable in Shibpore Botanical Garden, Howrah, Hoogly, Burdwan, Murshidabad etc. It is a perennial Blue flowered hairy. leaved plant used to flavour claret cup etc. In Arabia it is known as 'Abu-rashsh' or Father of sweat' from its use as a diaphoretic. It is an aromatic plant. Stem height is generally 1-3 ft. Lamina is 1-2 inch long, reniformed, succulent and has crenatic margin. Florescence and fructification take place in spring and summer respectively.

Name :

In Sanskrit—Pashan vedi, Himsagar ; Bengali—Pathar Kuchi, Amla Kuchi ; Hindi—Pathar chur ; Tamil—Kapur balli ; Telegu—Pindichetty ; Gujarati—Ovapani ; English—Country borage ; Lattin—Coleus Aromaticus or Bryophylum ; but accoding to modern Botanists-the name should be "Coleus Amboinicus Lour".

Family : Lamiaceae.

Medicinal use : The leaves.

Chemical composition : Sodium Percentage, Alkaloid, Essential oil containing canvacrol present in the herb in small quantites.

Therapeutic actions :

Leaves are very useful in the treatment of diseases of urethra, uremia, strangury or painful micturition ; colick pain and dyspepsia. It is also useful in *asthma*, chronic catarrh, and epilepsy.

Symptomps

Mind : muttering maniac ; absent minded ; looks agaze ; can not concentrate mind ; epilepsy : looses sense.

Face : Pale face, irishiplus with burning sensation but the uretic symptoms must be carefully observed.

Stomach and abdomen : Burning sensation of the heart ; food aliments are not easily digested ; repels food ; likes sweets ; acidity and dyspepsia ; bed breath ; burning sensation of the stomach.

Urine : frequent tendency to urination with strain at stool ; painful micturition and sparking pain in the urethra. Stran-

gury attended with gonorrhoeal symptoms. Sometimes concentrated, viscous urinal discharge with blood (Blumia Odo) ; hot and trickling urinal discharge; uremia of choleraic patient. This drug may be administered in the treatment of strangury, and burning sensation of the urethra or uriter due to existence of *uric calculus* in the urine. This is also useful in excessive discharge of urine or diabetes and strangury of women who have just delivered childs. Also in unaemic or choleraic patients-it can be administred safely.

Special uses :

Dr. Wight says=It Is a strong and very useful medicine in the colicky pain and flatulence of boys. It has a little intoxicating property. An European women was very much benefited by taking this medicine when she was suffering from chronic dyspepsia. In colicky pain of the children, 2—4 minims of this drug may be administered with sugar. Application of the leaves on forehead removes headache.

W. C. Dutta says—This drug is very much effective in the treatment of the diseases of urethra ; also helpful in *epilepsy*.

In case of strangury, or improper function of kidneys. application of the wet pulp of leaves in the pelvic region causes definite urination, which also relieves pain of piles.

Dose : 5—20 minim.

CYNODON DACTYLON (Harialee grass)

Plant Introduction .

A genus of creeping grasses. having short flat leaves and digitate spikes of one flowered spikelets.

This is available in all parts of India and is known in different names in the states. It is available in plenty and dies in winter. In fact, it is a kind of lenear grass called 'Durba' ghass in Bengali or Hindi. Active power of remedy is immense in it. It has been divided into four parts or varieties according to the Hindu Science of Medicine viz. Blue, White, Rosary and Glandular but the blue variety is generally counted best among them. C. dactylon—is the Bermuda grass : syn-capriole

Name :

In Sanskrit –Durba, Sweta, Granthi, Bhargabi ; Bengali — Durba ; Hindi – Doob ; Telegu — Harnali ; Marathi—Durba ; Punjabi—Talla—Doob ; English—Harialee Grass ; Latin—Cynodon Dactylon.

Class : Poaceae.

Medicinal use : The whole plant

Time of collection : The Autumn.

Responding parts of the human body : All parts of the body.

Chemical Composition : Crude protein fibre, carbohydrate.

Therapeutic actions :

The bitter principle is refreshing, agreeable taste; allays thirst and useful remedy for vomit, inflammation, burns, blood dysentery, blood poisoning, weariness, cough, swoon or syncope and erysipelas, and any kind of blood discharge. It also checked the bleeding of the cancer.

Opinions of different researchers

Charak : The drug is useful in bleeding from nose and carbuncle.

Shusrut : In haematemesis.

Chakradutta : Skin diseases and hindrance in menstrual flux of women.

Bhavaprakash : Strangury and Painful micturition.

Col R, L. Dutta, IMS, a famous allopath, says—The natural juice of Durba stops bleeding from piles. He also adds that he generally prescribes his patients to intake the drug with milk.

Dr. N. C. Dutta, a renowned physician of Darbhanga District, Bihar, says that Greek physicians used to apply the drug for stopping nasal bleeding.

Dr. Houseton says that the juice is very useful in phlegmatic infalmmation of the eyes.

Dr, R. N. Khory (Mat Medica of India Vol. I p 640) says—It is demulcent and acid, used in checking vomiting and it stops bleeding from wounds.

Dr. N. C. Dutta says—(Mat Med. of Hindus) medicinally, the fresh juice of the leaves is considered astringent and used as a snuff in epistaxis. The bruised grass is a popular application to bleeding wounds. It seems probable that both for sacred as well as for medicinal purposes, this grass is often confused with Eragrostis Cynosuroids. Both these grasses are used indiscriminately in compound prescriptions with more powerful drugs in cases of dysentery, menorrhagia, epistaxis etc.

The Rev. A. Campbell says—A preparation of the grass is applied in parasitic disease which attacks the spaces between toes. This may be same as that which is common in the West Indies caused by Palex Penetrans.

Civil surgeon Dr. H. Thorton says—The expressed juice is astringent. is used as an application to fresh cuts

and wounds. It is also diuretic and is used in cases of anasarca, also as an astringent in the cases of chronic diarrhoea and dysentery.

Sugeon Major S. M. Houseton says—The juice of the green grass is useful in catarrhal opthalmia as astringent and used also with much benefit in haematemesis.

Dr. Dayal Ch. Shome of Calcutta found the fresh juice to be a very valuable septic in epistaxis.

Civil Surgeon Dr. S. Mcconaghey, M. D. says—It is anti-periodic and used as an application in scabies.

Surgeon Major John North, I.M.S. says—The decoction of the root is used in Mysore for the treatment of secondary syphilis

Dr. T. Ruthman says—I use it with success in irritation of urinary organs.

It is also very effective for the dressing of the wounds and ulcers.

Symptoms

Head : Giddiness due to haemorrhage follwed by weekness ; difficult movements ; headache : the head totters.

Nose : Bleeding from the nose which does not stop easily ; polypus ; pain in the nose.

Stool : Intestinal haemorrhage ; haemorrhoids with or without pain ; chronic dyesentery.

Urine : Haematuria with or without burning pain ; painful micturition ; haematuria marked by injury of the male genetal organ or bladder (Blumia Odo).

Female Rep. Organ : Bright red menstrual discharge followed by weakness ; the patient can not rise from bed ; excessive haemorrhage due to injury or slip of legs ; painful swelling of the veins ; menorrhagia during menopause (Ficus Rel., Menis Pur, Blumi Odo.)

Lungs : Cough with blood, Haematemesis of the T.B. patient (Ipecac, Acalypha Ind.) with pain in the heart ; headache ; violent palpitation ; difficult movement.

Limbs : Bleeding from injury. This drug has very wonderful action on bleeding caused from any reason. A bandage may also be used in case of severe injury.

Dose : 5—30 minims in one dose.

DESMODIUM GANGETICUM

Plant Introduction :

Desmodium is a large genus of herbs ; t'ıe tick trefoils. Syn. Meibomia. They bear trifoliate leaves, clustered flowers and indehiscent legumes.

This is a small plant, grown in forest areas. It is available in all parts of India, particularly, (abundant) the lower valeys of Himalaya. It has long been used according to the Hindu Science of Medicine and is a very efficacious medicinal plant.

Name :

In Sanskrit — Shalparni ; Bengali — Shalpani ; Hindi— Sariban ; Marathi — Shalban ; Telugu — Geetanaram, Kolakuparna ; Gujarati — Shalban ; English and Latin— Desmodium Gangeticum.

Pharmaceutical use : The entire plant.

Time of collection : The autumn.

Family : Fabaceae.

Acts on almost all parts of the boby.

Chemical Composition :

In the root—resin-oil, Ash 6'/. and a sufficient quantity of Alkaloid are present.

Therapeutic actions :

It is a nourisher. The bitter principle is febrifuge, anti-dyspnoeic, vermifuge and useful in the treatment of influenza wounds, and rheumatic pain.

Symptomps

Mind : The patient is restless ; talks incoherently ; can not lie up in bed.

Head : Headache ; haeviness ; sensation as if some one has tied it up ; Crampness of the rear head ; sensitiveness.

Eyes : Swelled and red ; pain in movements or opening of the eyes ; inflammation of the eyes by the attack of cold or drenching in rain ; *coryza.*

Ears : Earache ; shooting pain or creeping sensation in the ear.

Nose : Sneezing with warmful tears ; redness of the exterior nose.

Face : Facial pain ; paralysis ; painful chewing ; pain in the jaw bone.

Mouth : Loose gum ; weak teeth ; toothache ; sensation as if the teet would fall down ; fever-blister ; bitter taste of the mouth.

Throat : Pain in the throat ; swollen glands ; painful swallow.

Stomach and Abdomen : Tastelessness ; loss of appetite ; thirst ; heaviness ; flatulence ; colicky pain ; relief on movements.

Urine : Scanty and warm discharge of urine.

Stool : Constipation attended with colicky pain.

Lungs : Rattling in the throat ; having a creeping sensation ; pain in the chest ; dischargr of phlegm.

Limbs : Pain in the hands and legs ; pleasure on press ; shooting pain starting from hip to legs ; crampness ; unbearable pain with benumbed sensation.

Fever : Weakness and restlessness attended with influenza, enteric fever, typhoid ; dry cough attended with fever ; eruptions with itching.

Dose : 5—15 minims in one dose.

EMBELIA RIBS

Plant Introduction

Embelia is a genus of climbing shrubs and small trees, natives of Australlia and normal tropics. There are about 60 species. The plant ascends on the tree by means of its thin branches which are long and spread. Sub-branches are inclined, long an round. The bark is 1/2 inch thick, horny, pale-grayish and perforated. Colour of new branches is white and bright. Leaves are characterised by 5" size with small petioles, mucronate and hairy (both dorsal and ventral surfaces) feel. Flowers are small white and yellowish dioecious (coverd with soft hairs). Fruits are 1/4 inch in size, round ; shrink when they ripe. Florescence and fructification take place in spring and winter respectively.

Name :

In Sanskrit—Biranga, Crimiha, Chaitra, Tandula ; Bengali—Biranga ; Hindi—Bay-Birang, Babirang ; Gujarati & Marathi—Babring ; Telegu—Bayubirhandmu ; Tamil—Bay-Bilang ; Arabian—Baranj Kabri ; English & Latin—Embelia Ribs.

Family : Myrsinaceae.

Time of Pharmaceutical collection : End of rainy season.

Chemical Composition :

A volatile matter, fixed oil, tannin, resin and alkaloid called "Christembine".

Medical use : fruits and seeds.

Therapeutic actions :

Dry fruit is febrifuge and strengthening tonic ; useful in scorpion-sting or snake-bite, fever, diarrhoea, cough, skin diseases and worms.

Part of the body on which the drug acts : intestines.

Opinions of different physicians :

Charak : Best medicine for intestinal worms.

Shushrut : The bitter principle to be taken with liquorice and water for effective relief. It is vermifuge and developes merit.

Bangasen : Snuff of ground mixture of sesumum and Embelia Rib. is effective in hemicrania.

Dymock : Hakims consider this drug as a remedy for tape-worms. Also it removes flatulence (without any adverse contrasting effect) and checks vomiting.

Taking in castor oil followed by intake of Emb. Rib. (1 tola) powder in butter-milk, expels tape-worms within 24 hours.

Allopathic use :

Seeds of this plant are used as an anthelmintic. Powdered seeds in doses of one or two drachms are administered with sugar or honey in an empty stomach to expel tape worms, (Dr. R. N. Chopra, Indegenous Drugs of India p 577).

Clinical use :

It is very useful in the diseases of children associated with or proceeding from worms. It is a grand medicine in diarrhoea, dyspepsia, flatulence and fever.

Symptoms

Mind : Moody and whining child. Reluctant to be in the arms. Does not like embrace or touch ; very obstinate.

Head : Headache marked by heaviness.

Eyes : Frequent twinkling of the eyes ; squint-eyed patient.

Nose : Tendency to prick the nose. Some times bleeds owing to itching of the nose.

Face : Pale and wanly face and tongue. The patient gnashes his teeth in sleep.

Stomach : Indomitable appetite. The patient seeks food immediatety after eating food.

Abdomen : Pain surrounding the navel ; nausea ; vomit after taking food ; fond of eating sweets. The patient is pot-bellied,

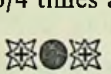
Stool : Palely stool contains small worms ; itching. Diarrhoeic stool.

Urine : Turbid and staining (on standig for some times) ; urination in bed.

Sleep : The patient screams in fear and gnashes teeth in sleep.

Fever : Aggravation in the afternoon, particularly after 12 noon. Fever owing to existence of intestinal worms.

Dose : Tinc. 5-15 minims 3/4 times a day with a cup of water.



EMBELICA OFFICINALIS (Emblic myrobalan)

Plant introduction

It is a medium sized and 20-25 ft high tree having 1/4 inch thick grayish bark with reddish cortex. Stalks of leaves are long. Flowers are small and greenish-yellow in colour having elongated peduncle. Fruits are astringent, notched and plum like 1/2-3/4 inch in size, round and contain pale-yellow substance. There are 6 seeds in each fruit. The

best quality of Emb. myrobalan has a smell of sulphur (found in Kashi). Dry fruit is shrunk, black and aromatic. Florescence and fructification take place in the seasons of spring and winter respectively.

Growing places :

Fonnd in various states of india and Himalayan regions, Ceylone, China, Burma etc.

Name :

In Sanskrit—Amlaki, Bayastha, Dhatrik ; Bengali—Amlaki ; Hindi—Amla ; Gujrati & Marathi—Amla ; Oriya—Arira ; Tamil—Nellikai ; French—Amla-Kong ; Arabiya—Amlaj ; English—Emblic myrobalan or Indian gooseberry ; Latin—Embelica Officinalis Gaerth.

Family : Euphorbiaceae.

Time of collection :

Generally Fruits are collected in the winter for medicinal use but may be used in all seasons.

Chemical composition :

Acid Tannin, Gallic Acid, Ellagic Acid, Glucose in the molecule, Rich source of Pectin and vitamin C, ascorbic acid (600 to 921 mg per 100 gm).

Physio-Chemical actions :

Fruit is bitter, astringent, refreshing, refrigerant and stomachic. Green fruit remeves constipation dry fruit. useful in haemorrhage, diarrhoea and dysentery. Also

in cases of acidity, anaemia, jaundice or loss of appetite. In take of this drug along with lime juice removes blood-dysentery. This drug has actions on—all parts of the body. especially, in the lower interior part (intestinal disorders).

Opinions of different Physicians

Charak—This drug can be administered in cases of erysepalas, hicough and leucorrhoea.

Shusrut—Piles, gonorrhoea and painful micturition.

Chakradutta says—This drug is a remedy for haematemesis and colic pain.

Bhavaprakash—In urinary disorders and irritation of the vagina.

Hareet—Vomit marked by rheumatism and wound of the head.

Bangasen—In haematuria and strangury.

I prescribe this in the case of Acidity Gastritis and use safely at the time of pregnancy.

Thearapeutic uses :

The fresh extract is diuretic and used in cleaning skin of the human body. It removes diarrhoea and dysentery.

Practitioners in Hindu Science of Medicine use the flowers as an astringent (Mat. Medica of India Vol 11 p 244).

Dr. Dymock says—The fresh juice is very effective in gonorrhoea when taken with honey and turmeric. The decoction of seeds is bitter, strengthening and expels blood dysentery. The Greek physicians have also described the effectiveness of this drug in the disorders of the three humours of the body. One of the ingredients of Chavanprash is Emblic myrobalan.

Mr. J. Dutta says—The most useful parts of the tree is fruit. It is one of the richest sources of Vitamin C. The fresh fruit is refrigerant, tonic, antiscorbutic, diuretic and laxative. It is used in fevers, hiccough, eczema, vomiting, indigestion, habitual constipation and other disorders of the digestive system. It is a blood-purifier ; also given in diarrhoea, dysentery and haemorrhage. It is an useful eye-wash in diseases of the eyes.

Symptoms

Head : Headache marked by indigestion also sourish vomiting, throbbing sensation of the forehead ; painful movements ; hairs fall.

Stomach : Sourish vomiting, acidity ; setting of patient's teeth on edge ; cramping or colicky pain. Sourish odour

in faeces ; caries of teeth owing to excessive acidity ; flatulence attended with colicky pain (Atista Rad). Sourish odour from the body of a child. Milk is not digested. Vomiting like curdled milk ; dyspepsia. This medicine is stomachic,

Female Rep. Organ : Leucorrheal discharge with sourish or fetid smell ; itching like *ring-worm.*

Urine : Scanty and turbid discharge with foul odour. Irritation during urinal flow.

Stool : Constipation ; loose and sourish stool owing to acidity.

Skin : Dirty and horny skin with ring worm or eczema.

Dose : 10—20 minims four times a day.

EUCALYPTUS GLOBULUS

Plant Introduction .

In fact this plant is not exactly an Indian plant but found in various states and hilly areas. It is available in plenty in Nilgiri mountain. Besides, it grows abundantly in cold regions like Darjeeling, Mussouri, Nainital etc. It has a property to abate chilliness. Quality of Eucalyptus of Australlia is excellent for which she is known as 'Home of Eucalyptus'. Also available in Malayasia, Spain, South Africa, Algeria and Java. It is a very large and evergreen tree with thick, generally narrow, glandular-punctate leaves and axillary umbels or heads of apetalous flowers with very numerous Stamens. The stem is thick and has racemose or indefinite branching arrangement as the epical bud grows actively and lateral branching developes from axillary bud and grows in acropetal order.

Name :

It is widely known in all languages by the common name 'Eucalyptus'.

Family : Myrtaceae.

Chemical composition :

The leaf contains Fix oil, Tannin and Resin. In the

gums—Chino tannic acid, catechin and pyro catechin are present. In the oil—Cineole or Eucaliptol is present. The oil has been analytically divided into the following parts :

1.	Oxide	e.g, Cineole (Eucliptol)
2.	Alcohols	Geraniol, Eudesmol, Methyl alcohol, Terpene oil.
3.	Aldehydes	Butaldehyde, Valeraldehyde cytral etc.
4.	Ketone	Piperitone
5.	Phenols	Geranyl acetate, Butyl Butyrate etc.
6.	Terpenes	Phellandrene, Limonene etc.
7.	Sesorvin Terpene	Aromandrene
8.	Benzene Hydrocarbon	Cymene
9.	Solid	Paraffin
10.	Free acid	Acetic acid, Formic acid.

Physio-Chemical action :

It is an antiseptic and expectorant.

Eucaliptus oil converts water into Hydrogen peroxide or vice versa in presence of sunlight. So, it is a deodorant and blood-purifier (Dr. Merel).

The British Pharmacopoea prescribes that medicinal sample of Eucalyptus should contain not less than 55 percent of Cineole,while U.S. Pharmacopoiea requires Cineole content to be 75 percent.

In 1919 Dr. Ghosh performed experiments on this drug. The government of India earns a considerable amount of foreign exchange by exporting Eucalyptus oil. There is no mention of use of this drug in Ayurvedic system of treatment

Pharmaceutical use : Dry leaves, gum and oil (which exudes from leaves).

Clinical uses :

It is effective in influenza, fever, cough, typhoid, rheumatism asthma etc. It is perspiring agent and is an expectorant,

Symptomps

Fever : Fever owing to sudden attack of cold ; headache ; running at nose with violent sneezing ; sore of the nose. Constipation and bodyache ; Continuous or persisting fever with high temperature ; typhoid—symptoms of *typhoid* is not shown by the patient if the drug is administered in the primary stage of fever.

Rheumatism : Application of the mix of Eucalyptus oil in Terpene oil is helpful in relieving rheumatic pain.

Wound : Application of Eucalyptus oil (mixed with cocoanut oil regularly at bed time is helpful in removing wound of hands and legs in a very short time.

Dose 5—20 minims twice or thrice daily.

FICUS INDICA
(Banyan tree)

Plant Introduction :

Ficus is a vast genus of trees or shrubs with alternate usually entire thick leaves and monoecious flowers collected in a pear shaped hollow receptacle, which in the cultivated fig is the part eaten. This tree grown in different parts of India particularly in the forest area and found in West Bengal plentifully. There is a 200 year old huge banyan tree at the Botanical Gardens, Shibpore, Howrah. The lateral branching is generally cymose or definite with scally buds ; scale leaves are covered with bud scale,

Modified adventitious roots for mechanical function descend radially from the branches and take up the form of pillars which are known as proproots,—help in spreading and strengthening the tree. The bark is 1/2 inch thich, grayish in colour. Wood is grayish-white and light. Leaves are hairy and ovated. Margin is entire ; apex is obtuse. By deliberating the phyllotaxy, we see that leaves are alternate (pentastichous) having unicostate and reticulate venation. There are 3-5 veins per leaf blade each of which is 4-8 inches in size. Stalk is 1.2 inch long ; fruits are round, soft and hairy ; become raddish when they ripe. Fructification happens in summer and fruits ripe in rainy season,

Name :

In Sanskrit—Nagrodh ; Bengali—Batgachh ; Hindi—Bargat, Barh : Marathi—Badh, Bat ; Oriya—Boroo ; Gujrati—Barh ; Telegu—Marichetu, Mari ; Tamil-Aall ; Arab—Djatud-bayee, Bot aaz. ; English and Latin—Ficus Indica.

Family : Urticaceae. (Many say Moraceae)

Time of collection : Autumn.

Chemical Composition :

There is a considerable amount of Tannin in the bark.

Physio-Chemical action :

The bitter principle is refrigerant, astringent, anti-bilious and febrifuge. It pacify the cause of irritation and removes gonorrhoea, boils and dropsy ; also allays thirst.

External application of the gum is useful in rheumatism ; decoction of the bark gives relief in diarrhoea and that of the seeds—refrigerant. Leaves may be used as poultice in boils or eruption.

Opinions of different physicians :

Charak—The drug may be administered in the cases of haematemesis, blood dysentery, boils and leucorrhoea.

Shusrut—in haematemesis.

Chakradutta : in diarrhoea.

Bangasen : in menorrhagia.

Symptomps

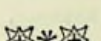
Mind : Reddened face owing to haematemesis ; hates people ; nausea ; scarlet vomit of blood (Acalypha Ind.) attended with cough and rattling at throat.

Blood gonorrhoea : Bloody flux attended with naosea and cough ; pain spreads from navel to uterus.

Therapeutic uses :

The gum relieves rheumatism and neuralgia. It is also useful in the cases of burns and cuts. The bark extract is a strengthening agent and removes diabetes. The boil cracks when baked leaf is applied on it as poultice. The use of root in the treatment of gonorrhoeal diseases is prevalent in Punjab. Rubbing the gum on cracked skin of the body is useful in winter (Dymock).

Dose : 5-15 minims thrice or four times a day.



FICUS RELIGIOSA
(Sacred fig)

Plant Introduction

This plant is found all over India. It is a large (holy) fig-tree allied to banyan, bo-tree. It remains fresh in all seasons and is dycotyledonous ; has large leaves and

pentastichous phyllotaxy. stipules (bud scales). Margin of the lamina is acuminatic with reticulate venation. The leaves are used for worship by Hindus. Besides, the leaves have some therapeutic actions. Raja Radhakanta Dev has mentioned about its power of stoppage of bleeding in the Dictionary compiled by him.

Name :

In Sanskrit—Pippal, Shri-Breeksha ; Bengali - Aswattha ; Hindi—Pipal ; Gujarati—Jari ; Telegu—Riga, Rabi Chatta ; Tamil—Ansamaram ; English—Poplar leaved fig-tree, sacred fig. Latin—Ficus Religiosa.

Family : Urticuceae.

Time of collection : in all seasons.

Pharmaceutical use : The bark, leaves, fruits.

Chemical composition :

The bark contains an ample stock of Tannin and Oxygen in its cortex of phloem.

Therapeutic uses :

The bitter principle is astringent, blood-purifier, anti-bilious, stomachic and used to remove blood-poisoning, vaginal ulcer etc.

It is very useful in the cases of haemorrhage of the intestine, lungs, uterus, stomach, nose and haematuria.

Symptoms

Head : Headache ; restlessness ; burning sensation ; virtigo ; nausea ; warmth.

Nose and throat : Bleeding from the nose attended with restlessness (Ipecac, Durba, Vasaka) ; clots of scarlet blood ; creeping sensation followed by bleeding ; dyspnoea ; rapid pulse.

Stomach : Haematemesis ; colicky pain.

Urin and stool : Bleeding from the uterus or haematuria (Durba, Blumia Odo) ; feel of pressure in the lower pelvic region. The drug is very effective in piles and blood dysentery.

Opinions of different physicians

Charak—Green leaves of peepul tree is applied to wounds for the purpose of healing. In acute gout-2tolas of bark is boiled in water vigorously and reduced to half ; then cooled and taken with sugar twice or thrice a day.

Chakradutta—Application of the ground bark on burns or wounds is very much effective. Washing vagina with the decoction of the bark by means of a clyster-pipe helps in healing vaginal wounds. In cases of ear-ache, suppuration, twinging or shooting pain in the ear—application of the oil of baked leaf is very much beneficient.

Dose : 5-15 minims twice or thrice daily.

GYMNEMA SYLVESTA

Plant Introduction :

A creeper plant having epiphytic roots. Branches and shoots are thin and long with soft hairy feel. Leaves are 1—$2\frac{1}{2}$ inches in size, ovate or almost cordate, yielding small pale-yellowish flowers ; seeds are $\frac{1}{2}$ inch in size. It is found in Central or Southern India. Florescence and fructification take place in Autumn and Winter respectively.

Name :

In Sanskrit—Mesh shingi, Aj-singi, Sarpadransta : Hindi and Bengali—Medasinga ; Gujrati—Mangra Singi : Tamil—Shiktakaranja ; Telegu—Patni Padra.

Family : Ascepiadeae.

Time of collection : Roots, leaves and sometimes the whole plant in winter.

Chemical Composition :

In 1887, Hooper made the first systematic examination of the leaves. He isolated two resins ; the resin insoluble in alcohol forming the larger proportion and the resin soluble in alcohol was said to leave a tingling sensation in the throat. There was no Tannin. He had also isolated an organic acid said to be a glucoside and to possess anti-saccharine property. It was designated as gymnemic acid and the formula C_{82} H_{55} O_{12} was given to it. It was present to the extent of 0·6 percent. A new bitter principle, some tartaric acid and Calcium Oxalate were also isolated.

In 1904 Power and Tutin next took up the subject and made a through investigation of the leaves. They isolated hentiacontane C_{31} H_{64} quivercitol and gymnemic

acid. The gymnemic acid was purified and analysed. They showed that it did not possess any anti-saccharine properties and was not a glucoside. Dr. Chopra, Bose and Chatterji in 1928 prepared differend fractions from the leaves, isolated the gymnemic acid and prepared a sodium salt of the acid for both Pharmacological trials. They also isolated some enzymes and tested their sugar hydrolysing actions.

Recently, Mhasker and Cains in 1930 have made a detailed Chemical investigation of the leaves of gymnema sylvesta. The air dried leaves yielded after ignition 11.45 percent of inorganic matter consisting of alkali, phosphoric acid, Ferric oxide and Manganese, Phytol, resins, Tartaric acid inositol, anthraquinone bodies and gymnemic acid were also identified. In the enzyme isolated from the leaves no such action was seen.

The gymnemic acid was found to have neither hydrolytic nor oxidase action when mixed with cane sugar or glucose solution.

The effect of the drug on the blood-sugar was tested on rabbits. The animals used were carefully selected, were all over 1.0 kilogram weight and were the albino Himalayan and the brown Belgian hare types. A quantitative estimation of the initial blood-sugar was made and then the drug

was given by subcutaneous injection. Two hours after injection the blood-sugar was re-examined. Besides pure gymnemic acid, the following fractions were tried and the effect on the blood-sugar in animals were recorded (1) an aqueous extract of the powdered leaves (2) an alcoholic extract using 95 p.c. alcohol (3) an alcoholic extract using 70 p.c. alcohol (4) Sodium salt of gymnemic acid. In none of the animals to whom these fractions were given was then any reduction in the amount of sugar present in the blood. It may be argued that the non-reduction of blood sugar in these rabbits after injection of the various preparations of Gymnema Sylvesta might be due to the excess glycogen in the liver of the rabbits, which by being converted into sugar tends to prevent the fall of blood-sugar. They could not find any water soluble or alcohol soluble substance in the leaves which had the property of dissolving glucose in vitro or any chemical body resembling insulin.

Pharmacological action :

The actions of the enzymes isolated from Gymnema Sylvesta was studied in vitro on both cane-sugar and glucose. The sugar solutions were made upto a definite strength and then mixed with the powdered leaves of the plant and also the enzyme isolated from the leaves. The

mixtures were kept in an incubator at 37° C for 48 hours and estimations were made at regular intervals to see if any changes occured.

Thearapeutic uses :

The drug was tried in a number of cases of dsabetes mellitres in order to see if it produced 'any reductien in the amount of sugar present in the blood or urine. All the patients were uncomplicated cases of diabetes and were kept in hospital under strict observation. They were all palced on a fixed diet which was strictly under control. The total quantity of urine passed in 24 hours was carefully collected, measured and a portion of it was examined every day for the quantity of sugar present. The sugar content of the blood was also estimated time to time, the 'fasting lavel' of blood sugar being always recorded. The patients were regularly weighed during the course of treatment.

In 1930 Mhaskar and Cains found that the leaves of Gymnema Sylvesta in daily dose of 30 to 60 grains (dry leaf) for a period of three months or more may reduce glycosuria non-amenable to dieto-therapy. It is however, too early to give any definite opinion and further work is necessary to estimate the real anti-diabetic property of the drug.

Symptomps

Mind : apathetic patient ; weariness and anxiety.

Heart : Weakness and palpitation of the heart.

Urine : Contains excessive sugar. The patient becomes weak after urination. Voluminous and clean urination (particularly in the evening) having high specific gravity.

Skin : Burning sensation in the body ; slack skin.

Thirst : Frequent tendency to drink water ; thirst like a thirsty swallow.

Weakness : Symptom appears very slowly. Loss of sexual power.

Dose : 5-25 minims 3-4 times a day.

HEMIDESMUS INDICA
(Indian Sersaperilla)

Plant Introduction :

It is a creeper and available in Bengal and various states of India ; kinds of tropical-American smilax esp. the Jamaica "sersaperilla" is the chief sourse of the medicinal sersaperilla. Germination takes place from the old root during rain fall. Leaves are hairy, ovate and 1—1½ inch in size having a stain. Stalk is ¼ inch in size. Broken root is aromatic. Florescence and fructification take place in rainy season and winter respectively.

Name :

In Sanskrit—Sariba, Shyama, Gopbadhu ; Bengali—Ananta Mul ; Hindi Sarmia, Kalishar, Dudhi ; Marathi—Ananta Mool ; Gujrati—Kapri ; Oriya—Gupapanmul ; Tamil—Nannari ; English—Indian Sersaperilla ; Latin—Hemidesmus Indica.

Family : Asclepiadaceae.

Pharmaceutical uses : the bark and root.

Time of collection : Autumn.

Chemical composition :

Volatile oil, alkaloid, a crystalloid, bitter principle. Alkaloid—Hemidesmine.

Therapeutic uses :

It is a blood purifier and there is no such other medicine in Ayurvedic system of therapy.

According to Charak, anantamul is best among the medicines for haematemesis. It is diuratic. refrigerant and perspiring agent. The sweet extract is a remedy for cough, flatulence, blood-poisoning, rheumatism, leucorrhoea, leprosy and fever. It is a mild laxative. Shusrut has described it as an infallible remedy for asthma.

Opinions of different Physicians

Charak—It is an effective medicine in the treatment of haematemesis.

Chakradutta—It removes all kinds of piles and boils.

This drug has been accepted in the British Pharmacopoeia (Dutt's Materia medica).

Dymock—It is applied to the eyes in case of swelling.

Watt—Compound prescription of this drug with milk or sugar serves febrifugal pupose for boys. It is a tonic.

Symptoms

Mind : Disappointment ; hot-temper.

Head : Weariness or morbid condition marked by pain. Headache after turning a cover from gonorroea; sensitiveness of the vertex.

Mouth : Salivation. pale tongue, tastelessness ; bad breath or halitosis ; wound in the mouth or tongue.

Stomach and abdomen : Flatulence ; rumbling at the bowels ; colicky pain ; constipation ; back-ache.

Uretic organ : Scanty and albuminous discharge of urine ; painful micturition ; trickling discharge containing uric acid. straining is necessary.

Male Gen. Organ : Bloody semenal emission. Small tumour or wound like ring-worm on penis or vagina. Itching of the testes ; exudation of fetid juice.

Female Rep. Organ : Itching of the vagina : small eruptions on the vaginal passage prerceding or following menstruation. Breasts shrink. Burning sensation during urination.

Skin : Itching of the vagina. Small eruptions on dry and harsh skin of the body attended with ring worms, eczema or scabs. The affected part of the skin turns blak on itching. Relief in cold weather. Allergic symptoms ; the skin cracks ; leprosy ; any kind of skin eruption.

Limbs : Shooting pain with paralytic sensation in the hip or knees. Pain in the finger ; whitlow ; aggravation at night ; rheumatic pain—preceded by gonorrhoeal suffering ; shivering sensation ; irritation ; weakness.

Dose : 10—40 minims 4 times a day.

HOLARRHENA ANTIDYSENTERICA

Plant Introduction .

It is a moderate tree of 20-25 ft high ; leaves fall in the spring. Bark is 1/4 in thick, grayish, harsh with whitish medula. Leaves are ovate and 6—12 inch long (width $1\frac{1}{2}$ inch). Flowers are white in colour and have a mild scent. Fruits are covered with a pericarp, 16—18 inches

long (1/5th inch wide) containing several seeds each of which has a white stain or hilum on the testa. Seeds are $1\frac{1}{2}$ inch in size having wooly hairs. Two kinds of seeds are available in the market, viz.—sweetish and bitter but the latter kind is supposed to be the best.

Grown places : Bengal, Assam, Madhyapradesh, Gujarat, South India Trivancore etc.

It is a hearsay that Kurchi tree owes its origin to the drop of nectar dripped from the body of Hanuman while Indra (God) reanimated him by administering the same.

Name :

In Sanskrit—Kutaj, Girimallika, Batsak ; Bengali—Kurchi ; Hindi—Kauriya ; Gujarati—Pandakura ; Punjabi—Kawar ; Oriya—uriya ; Arabian—Tiwe ; Tamil—Velallei, Kooda Sappali : English and Latin—Holerrhena Antidysenterica. It is also known as Wrightia Antidysenterica.

Family : Apocynaceae.

Medicinal use : Bark and seeds.

Physiological effect : Intestinal region.

Clinical use : Primary and chronic cases of the fallowing :

The bark—is useful in dysentery.

Seeds—are very effective in fever, dysentery and diarrhoea.

Chemical composition :

The bark contains Potassium, Sodium, Calcium and Ferrous salts and a gum. Alkaloids are known as Kurchicin and conircine.

The seed contains fixed oil, Oleic acid. Besides, mucilage, dextrin glucose and alkaloids are present.

By deliberating the works on Kurchi, we find that-in 1858, Haines obtained a kind of alkaloid known as Conessine. In 188o, Dr. R. C. Dutta found Kurchicin from the seeds and received efficacious results by administering the alkaloid in patient suffering from chronic dysentery. In 1886, Ranaki, Kanga and Aiyar found Conessine (alkaloid) from the seed. In 1928, Dr. Ghosh obtained more alkaloids viz-Kurchicine and Kurchine. In 1932, Dr. Ghosh and Dr. Bose while carrying on researches in the Calcutta Tropical School of Medicine, proved that Kurchicine and Kurchine were pure alkaloids which had been approved by Dr. Haworth in 1932.

Dr. R. N. Chopra, Dr. R. N. Khory, Dr. K. L. Dey, Dr. R. C. Dutta etc. performed experiments on Kurchi. An invaluable action regarding Kurchi is known from the report of the first Indian committee of Pharmacists in which it which it was mentioned that the bark and the seeds were astringent, antidysenteric and anthelmintic. Dr. A. C. Khostogir

wrote about the antidysenteric power of this drug in the Indian Medical Gazette. Sir Walter Elliot described this drug as an infallible remedy for blood-dysentery.

Opinions of different physicians :

In the books wrote by Charak, Shusrut and Bhava-prakash-power of curing of several diseases of this particular drug has been mentioned. The drug is helpful in bleeding piles, blood-dysentery attended with fever etc too. According to the opinions of Indian Medical Association and many medical scientists, fixed oil in the seed, accounts for the functions of the drug. That is why it is effective in the dysentery or diarrhoeic dysentery. Chronic dysentery and blood dysentery are curable owing to presence of alkaloid, resin and gum. It is better than Emitine. They think that Emitine contains alkaline substance whereas alkaline and acidic juice both are prsent in Kurchi. Hence, action is more powerful.

According to Ayurveda, fresh bark of matured and fructiferous tree should be used. I have investigated its action on acute and chorinc dysenteric patients and considered the responses to have been fruitful. It may take little more time in case of chronic dysentery.

Symptoms

Head : Fretful mind ; hestiness marked by anxiety.

Head : Painful and hot.

Heart : Weak and experience of pain time to time.

Eyes : Tears trickling down the cheeks.

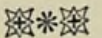
Mouth : Dry tongue with a white coat.

Belly : Intermittent pain around the navel ; painful excremental pressure ; some times after taking food ; frequent ; pass of stool.

Urine : Normal.

stool : Pain in the rectum ; hotness ; pain persists even after passing stool ; stool or faeces full of mucus ; weakness ; paralysing sensation.

Dose : 5—25 minims 4/5 times a day.



HYDROCOTYLE ASIATICA

Plant introduction :

This is a small herbaceous plant with palmately nerved or dissected leaves and simple umbels of small flowers found throughout India from the Himalayas to Cape of Comerin at the attitudes upto 2000 ft above sea level. It is particularly grown in the damp places of west Bengal. The plant was know to the Sanskrit writers of very remote times. Its properties being similar to those of Herpestis Monniera (Brahmi). Both plants are regarded as a tonic, useful in the skin diseases, nervous system, blood and brain cells. Some parts of Indians are habituated in taking the leaves with milk for improving their memory and use as a body building tonic. The leaves are very effective in skin eruptions and syphilitic treatment. It can be administered for both internal or, external use. It has a special gravity on leprosy. Still the confirmatory aciions on curing leprosy are under research.

Name :

Sanskrit—Mandukparni, Manduki, Dibya, Mahaushadhi ; Bengali—Thankuni ; Arab—Artaniyak Hindi, Jharniba ; Assam—Manimuni ; Bombay—Karniga ; Gujarati—Bani ; Hindi —Brahmamanduki, Khulakhudi ; Tamil—Babassa, Vallari :

Urdu—Brahmi ; Malayalam—Kutakun ; Telegu—Manduk ; English—Indian Pennywort ; Latin—Hydrocotyle Asiatica or centella asiatica.

Family : Umbelliferae (many say Apiaceae).

Medincal uses : The entire plant.

Physiological responses : Can be experinced throughout the body.

Therapeutic actions :

(The patient) is very much benefited for the purpose of building a healthy body ; excellent results have been noted in the cases of leprosy.

Leaf of this plant is memory promoter ; can be administered for internal or external use.

Chemical composition :

I found from the research report of Dymock (Pharmacographia Indica) that an oily substance, resin, organic acid, tannin and traces of an alkaloid are present in the plant. Presence of a substance-'Vallerine' (O. 8 to 1 percent) resin fat (8—9 percent), tannin, sugar (24.5 percent), gums, salts (11.5), albumanoid matter (12.5 percent) and Ash (2.4 per cent) are known to be attributes to a cause of activity of this drug, mentioned by Lepin.

In 1941, Bose & Bose investigated the plant but could not find any substance of alkaloidal nature.

In 1937, Wali and Kathi investigated it and obtained (from the alcoholic extract) the following substances :

An essential oil, Oleic, linolic, linolenic, palmitic, stearic and lignoceric acids, sitosterol, tannin, glucose and large amount of resinous material.

In 1941, Botems isolated from the fresh leaves, a glucoside named 'Asiaticoside' consisting of colourless crystals, m. p. 230 c. in 0.7 to 1.2 gr. per kilogram, yield of the (fresh) leaves.

In 1947 Basu and Lamsal isolated from the plant an alkaloid 'Hydrocotyline' C_{22} H_{32} O_8 N., m. p. 210–212°C. From Ayurvedacharya Sri Shivakali Bhattacharyya's book the chemical composition is (a) acid V Centotic acid, Centellic acid (b) Alkaloids Viz. Hydrocotyline, vallarine (c) Sterols—viz. betasitosterol, gammasisterol (d) glycosides, viz. Asiaticoside (e) resinous substances (f) fat.

Vigorous reseach works are being carried on at the Tropical School of medicine and Indian Statical Institute of Calcutta under Mr. T. Chakaravorty and S. Desmukh (their articles were publishe in Science culture Page No. 573, Nov. 76 issue.)

Pharmacological action :

Hydrocotyle if properly prepared and administered, is a powerful stimulant to the circulatory system. Its action chiefly affecting the vessels of the skin and mucous membranes. In larger doses it is a stupefying narcotic and in some cases produces cephalagia or, virtigo with a tendency to coma. A note in the British Medical Journal (1948) states 'We have received through the courtesy of the French Embassy in London a copy of despatch from Madagaskar giving a preliminary account of the discovery of a new remedy which is reported to have given remarkable results in the treatment of advanced Lepromatous cases in Leprosy.'

In 1937, Drs. Boistean and Grimes extracted a new glycoside from an umbelliferous plant growing in Madagasker called 'H. Asiatica' which in doses, bearing a toxic level, gave encouraging results in Leprosy. In 1938, Botems working in the leprosy laboratory at Antananarivo, discovered a new glycosids which he called 'Asiaticoside' whoch was much less toxic but was slightly insoluble in alcohol and very soluble in Pyridine. By further researeh, Boitean succeeded in obtaining a solution for injection. Devanne and Razafimahery ascertained the chemical nature of 'Asiaticoside'. Boitean and Grimes are of the opinion

that it acts as a solvent of the waxy coating of the bacillous leprosy which then becomes very fragile and may easily be destroyed by the tissues or by an adjurant drug.

The results now reported from clinical trials of the new glycoside including softening, breaking down of nodules followed by cicatrization, testify to its powerful action against leprosy bacillus. Healing of whitlows and perforating ulcers and gradual improvement of anaesthesia and muscular atrophy are also said to occur. Still more remarkable is the claim that eye lesions are rapidiy cured if treated before the posterior chamber is involved. It had not yet been proved possible to prepare large quantities of the new remedy for extensive trials but in view of the many disappointments during recent years but report of the triats carried out and their confirmation by other workers must be awaited. The most hopeful features of the present account for the work is the success in breaking down leprosy nodules and still more the clearing up of the hitherto intractable eye lesions. These results should be confirmed by workers in India from the glycoside isolated from the plant of Indian origin.

Yet, I have seen fruitful results by administering this drug in several skin diseases, specifically in dry eczema and leprosy. Prescribed this medicine for both internal and external use.

Symptomps

Mind : gloomy mind ; preferes solitude ; spiritlessness ; loss of memory.

Head : Virtigo, smarting pain (or, tension) of the cerebral veins ; sensitiveness and pain of the occiput.

Eyes : Dim-sightedness ; stinging pain in the eyes.

Ears : Pain in the left ear ; buzzing sound at the ears.

Mouth : White coating at the left part of tongue ; enlargement of tonsil ; painful swallowing ; tastelessness ; pain of the throat.

Heart : Palpitation ; feeling of lightness.

Belly : Flatulence ; pain of the lever ; throbbing sensation in the abdomen.

Stool : Dry, hard stool in lums ; loss of excremental pressure.

Urine : Turbid ; abnormal urination.

Male gen organ : Slackness of the left testlcle ; pain in the sparmatic cord ; impotency.

Female Rep. Organ : Uteric pain, particularly in the left side attended with itching and leucorrhoeal discharge.

Limbs : Pain at the joints which spreads out to other parts of the body. Painful limbs at awakening.

Skin : Dry and stained (like ring-worm) ; itching, dry eczema ; cracked skin ; allergy ; leprosy ; psorisis ; dandruff ; syphilitic eruptions ; leucoderma etc.

Sleep : Dreaming in the sleep ; insufficient and non-refreshing sleep.

Dose : Alcoholic tincture 5-20 minims per dose daily T.D.S.

Some specific uses :

Abnormal perspiration : Extract of the sqeezed leaves to be taken (1-2 teaspoonful) for 2-3 days.

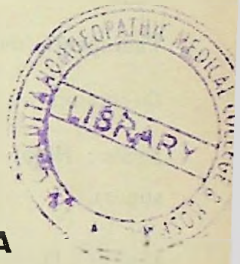
Poisonous gangrenes: Application of the decoction of Hydrocotyle leaves (or, leaves fried with ghee) to the affected part gives efficacious result within a very short time.

Wound of the mouth : Gargling with the boiled extract of leaves is effective.

Loss of memory : Active principle of bruished leaves to be administered (1-2 spoonful) with honey for some days.

Irregular menstruation : Administration of active principle of expressed leaves for some days brings quick effect.

Injury : Application of the expressed leaves has been proved to be successful in case of bruise.



HYGROPHILA SPINOSA

Plant Introduction

This is a thorny plant yielding bluish or, pinkish flowers, reddish seeds, grown in the marshy lands. This drug occupies an important position in the Indian Science of Medicine. Many physicians have mentioned its properties in the 'Pharmacopoeia of India.'

Name :

In Sanskrit—Ikshugandha ; Marathi—Talimkhana ; Bengali—Kule khara ; Hindi—Talmakhana : Telegu—Nirguviveru ; Urdu—Talimkhana ; Oriya—Kuilirokha, Makherung ; Gujarati—Ekharo ; Tamil—Neremulli Nirmulli.

Family : Acanthaceae.

Medicinal uses : Root, leaves and seeds.

Physiological responses : may be experienced in all parts of the body.

Therapeutic uses :

Decoction of the root : diuretic.

Seeds : Helpful in removing gonorrhoea (to be taken with sugar).

Leaves : Diuretic, anti-allergic ; removes dermatitis ; helpful in the treatment of rheumatism and urethral disorders.

Chemical composition :

The roots of the plant were first examined by Warden in 1893 who by extraction with 80 per cent alcohol, isolated a crystalline substance apparently in an impure form which has been described as mass of cauliflower like nodules, pearly-white in colour and contaminated with oil. It dissolves in concentrated Sulphuric acid with the formation of a yellow colouration.

In 1931, Ghatak and Dutta examined the roots and obtained a phytosterol, C_{28} H_{46} 0 m.p. 194 C to which name Hygrosterol has been assigned. Besides, the roots yleld

a trace of essential oil, a yellow green wax, a sticky gum, and comparatively large quantity of maltose. The ash obtained from the roots on iginition was found of to consist mostly of Potassium salts. In 1934 Capt. Chopra, Dr. B. Mukherji investigated the plant and isolated a basic amorphous residue which gave alkaloidal tests. It could not be studied furhter due to its poor yield. Beside this they also isolated Potassium salts and sugar. The diuretic and the soothing properties of the plant are probably due to the Potassium salts and to the large quantities of mucilage present in the plant. In 1941, Srivastava isolated an oil (23 p.c. yield) from the seeds and it was classified as semidrying oil. The component fatty acids of the oil contain the following percentage of acids ;

Linoleic 72, Oleic 10, Stearic 12, Palmitic and Myristic 6 p.c.

In 1947 Basu and others obtained and alkaloid having the emperical formula $C_{3.4}$ $H_{4.3}$ $N_{1.36}$ O_n m.p. 216—170 C and gave the reaction of a purine body. Dr. Khory said (Mat Medica of India vol ii p 455) that the seed contains mucilage, albuminoids, traces of alkaloid and a yellow fix oil.

Pharmacological action : The root is demulcent, diuretic and given in dropsy, gonorrhoea, hepatic obstruction, rheumatism and urinary affections.

Opinions of different physicians

Charaka has found it useful in stone, gravel and calculus in the bladder and strangury.

Shusrta recommended it as a great sexual tonic.

Chakradutta's opinion is—(that) this drug can effectively be used in dropsy.

Bangasen has acknowledged its efficacy in effecting safe delivery.

Bagbhatta has recommended it for all kinds of skin diseases owing to impurities of blood.

Dr. Rheede said that 'Hydrocotyle Asiatica' had been found very effective in dropsy and gall-stone cases.

Dr. Gibson and Dymock termed this drug as an uretic.

The Mohammedan physicians have found it beneficial in impotency and leucorrhoea. It has wonderful action over insomnia and is an infallible remedy for pox and anaemia. It is capable of producing R. B. C. in the blood.

Symptoms

Mind : Weighed down with cares ; encumbered ; loss of memory while doing something.

Head : Giddiness attended with weakness and pain : the patient becomes heated.

Eyes : reddened and tearful eyes ; itching attended with jaundice, disordered vision as characteristic of this.

Face : Tumiscent and reddened face ; hotness ; irisiplus ; painful facial inflammation ; paleness.

Mouth : Painful eruption on the tongue attended with itching ; salivation ; bitter taste.

Abdomen : Irritation of the lower abdomen and lever maked by stinging sensation and colicky pain ; duodenal ulcer : chronic acidity ; jaundice.

Stool : Diarrhoea ; stiff and whitish faeces ; some times greenish.

Urine : Diabetes ; abnormal urination ; irritation during urination.

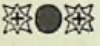
Male gen organ : Concentrated, greenish and painful gonorrhoeal discharge ; slacken penis ; loss of sexual desire.

Female rep. organ : Irritation attended with (greenish) gonorrhoeal or, leucorrhoeal discharge.

Skin : Allergic skin ; relief in cold atmosphere ; violent itching : urticaria all over the body ; itching starts immediately after putting off clothes ; sycosis ; moist blisters which gradually suppurate.

The drug is specifically helpful in chronic allergy.

Dose : 10-15 minims 3—4 times a day.



The following books have been consulted by me :

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Correct Prescriber (2nd Ed.)
Birth Control
Coronary Thrombosis
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Dentistry

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Abyartha Aushadh (9th Ed.)
Dhatri Bidya
Janma Niyantran (2nd Ed.)
Danto-rog Chikitsa (2nd Ed.)
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Amla—Ajirna
Pocket Repertory (2nd Ed.)
Jauno Rog O Tahar Chikitsa
Bharatiya Aushadher Bhoisajya Bignan

*** Also available in other languages.**