

# WEALTH & WELFARE



WITH WHICH IS INCORPORATED

'CO-OPERATOR,' COLOMBO



AN ALL-INDIA—CEYLON

(WELFARE WEEKLY)

(DEVOTED TO ECONOMIC, SOCIAL & WELFARE PROBLEMS)

Founder-Chief Editor : Late Mrs. M. R. JANAKI, B.A. (Madras), L.T. (B.H.U.), M.R.A.S. (Lond.)

Hon. Managing Editor : Sri K. R. ACHARYA, F.C.A.

Head Quarters: NEW DELHI

Office for any Correspondence: Please Address the Hon. Managing Editor W. & W. P. O. Box No. 1407, Madras—Thyagarayanagar.

Vol. XXXI, No. 20

Madras, Friday, November, 19th, 1954

Registered M. 2116

ANNUAL SUBSCRIPTION Rs. 10/- always payable in advance in full  
Pamphlets are given free to all. Please apply with Stamps for Postage.

(Papers are not available for Sale).

## CONTENTS

EDITORIAL :	PAGE
See The Things of the Flesh with The Eyes of The Spirit	... 1
NOTES:	
Glories of Ayurveda	... 3
Pearls of Wisdom	... 4
March of Time	... 4
HEALTH:	
Home Remedies	... 4
Filariasis	... 6

It's easy enough to be pleasant  
When life flows along like a song,  
But the man worth while  
Is the man who can smile,  
When everything goes dead wrong.

To Our Subscribers—Our subscribers are reminded to remit their subscriptions to the Hon. Managing Editor, *Wealth & Welfare*, Madras-Thyagarayanagar.—Editor, W. & W.

## EDITORIAL

See The Things of the Flesh with The Eyes of The Spirit

'It was the wealth and luxury, and this reputation which led India's reputation, and worse than all else, despiritualisation and demoralisation that brought invasions, oppression, exploitation.

India's other-worldliness only illumined and softened, as with moonlight, her this-worldliness, transfigured it, filled with reverence for God's Nature in all its manifestations.

This made her people see, not the things of the Spirit with the eyes of the flesh, but the things of the flesh with the eyes of the Spirit.

To recover those days of peaceful and prosperous happiness, India must first recover her soul by realising and knowing how to regulate her thoughts and mind in the proper manner.

Man is essentially divine.

The life of the physical body is subordinate to the life of a mysterious something, the Soul, Spirit, which has a life beyond this life.

The excess of this-worldliness brought about the great disease of mind which resulted in the greatest of wars and continues to threaten a still worse.

Religion as practised is said to be becoming scienceless and reasonless and degenerating into priest-craft. But, such things are due to the evil in human nature.

Those who wish to abolish religion disgusted with religious deterioration and conflicts, speak hastily of abolishing religion.

As well kill the body to cure the disease, time seems likely to take the form of scientific Religion emphasising the oversoul of the Human Race.

Unfortunately owing to inherent human weaknesses, people stray away from principles to personalities, from humanitarianism to sectarianism and to all the dangers and mischiefs of priestcraft which that implies.

The universe is a more spiritual entity than many can grasp.

The universe begins to look more like a great Thought than a great Machine.

The apparent objectivity of things is due to their subsisting in the Mind. We reach the concept of the universe as a world of pure thought. Mind no longer appears as an accidental intruder in the realm of Matter.

We should all realise that the only real world in which we exist is the Spiritual world, and that the Truth is, not matter, not Force, not any Physical Thing, but Mind, personality, is the central fact of the universe.

Religion belongs to the Realm of Spirit and mind and cannot be shaken.

To realise in mind, that the very nature of the world-process, of all life, of separate individuality, is necessary, unavoidably, inevitably, a mixture of joy, and sorrow, good and evil, that we cannot have gains without pains, nor pains without gains, so long as we feel identified with separate bodies; and, thus realising, to experience and bear both joys and sorrows with 'equiable' mind,

with "Peace at the heart" and to go on discharging duties without craving for selfish recompense; to fling off the three gunas triple functions of the mind, cognition, desire, action, in which the following ideas dwell.

Joy and woe are woven fine,  
A clothing for the soul divine;  
Under every grief and pine  
Runs a joy with silken twine,  
It is right it should be so;  
Man was made for joy and woe;  
And when this we rightly know,  
Safely through the world we go.

— William Blake.

In our last editorial we pointed out that the body is the product of the mind and that if we hold vigorous thoughts in mind the body also will be vigorous.

We have to carefully consider the power of thought on mind. If you hold on sickly, evil and bad thoughts in the mind, you can never expect good health, beauty and harmony.

If we study the detailed working of thought and Karma, we know that every Karma produces two fold effects—one of the individual mind, and the other on the world.

Every change in thoughts is accompanied by vibration of the matter (mental). Thought as force needs a special kind of subtle matter in its working. Evil thoughts of all kinds befoul and injure the mind and if persisted in, will become veritable diseases and maimings in the mind, incurable during the period of life.

You form your own character, becoming that which you think. Man is created by thought; that which he thinks upon in one life he becomes in another.

Continuous dwelling upon one train of thought creates in the mind a groove into which the thought force runs automatically, and such a habit of thought survives death, and since it belongs to the ego, is carried over to the subsequent earth-life. Every thought of compassion helps to build the tender and pitiful nature which belongs to one who is a friend to all creatures.

Every action has a past which leads up to it. Every action has a future which proceeds from it. An action implies a desire which prompted it and a thought which shaped it. Each act is a link in causes and effects and each link in the endless chain of causes and effect is welded out of three components—desire, thought and activity.

A desire stimulates a thought; a thought embodies itself in an act.

"As a man thinketh, so he is".

"Man is created by thought; what a man thinks upon, that he becomes".

Steady persevering thought sets up a definite habit of the mind making the habit manifest itself as a quality in the character. The thread of thought has woven into mental and moral qualities to form character.

Thought is a great force, with tremendous power. You can use it for the best as well as the worst. You can

aid a friend by good thoughts and cause evil by bad thoughts.

A mind tenanted by evil thoughts acts as a magnet to attract like thoughts from others and thus intensifies the original evil. You can aid a friend by sending good thoughts of comfort.

When a thought—good or evil—crosses the mind of a person it gives rise to vibrations in the Manas or mental atmosphere, which travel far and wide in all directions.

A good thought is thrice blessed.

First it benefits the thinker by improving his mental body. Secondly it benefits the person about whom it is entertained. Lastly it benefits all mankind by improving the general mental atmosphere.

An evil thought on the contrary is thrice cursed. First it harms the thinker by doing injury to his mental body. Secondly it harms the person who is its object. Lastly it harms all mankind by violating the whole mental atmosphere. It is sufficient if your thoughts are not bad.

Our mind is like a wireless machine.

A saint with peace, poise, harmony and spiritual waves sends out into the world thoughts of harmony and peace. They travel with tremendous lightning speed in all directions and enter the minds of thousands producing thoughts of harmony and peace.

Whereas one whose mind is filled with jealousy, revenge and hatred sends out discordant thoughts which enter the minds of thousands and stir in them similar thoughts of hatred and discord.

Therefore, we should understand the laws of thought, raise only thoughts of mercy, love and kindness from our minds and be happy always.

Thoughts are our own real children. We must be careful of our progeny of thoughts. Just as we rear up our children with great care, so also we have to rear up good, sublime thoughts with great care.

Thought is a great force, moves, creates and with the power of thought one can work wonders.

Thought is highly contagious. Thought is subtle matter and every thought has got weight, shape, size, form and colour. A thought charged with anger and hatred is of a dark red colour while a spiritual thought is of yellow colour. A selfish thought has a brown colour and so on.

A Yogi can see directly with his inner Yogic eye all these thoughts.

Like attracts like. This is a law in nature.

This law operates in the thought world also.

People of similar thoughts are attracted towards each other.

"Birds of the same feather flock together".

"A man is known by the company he keeps".

"A doctor is drawn towards a doctor".

"A poet has attraction for another poet".

"A songster loves another songster".

"A philosopher likes another philosopher".

"A vagabond likes a vagabond".

The power of thought is very great. The strength of your body, the strength of your mind, your success in life and the pleasures you give to others by your company all depend upon the nature and quality of your thoughts.

Let us study thought-culture by reading the book *Mind and its mysteries* by His Holiness Swami Sivanandajee.

By doing so, we shall not only benefit ourselves individually but also benefit the humanity.

## NOTES

### GLORIES OF AYURVEDA

(H.E.S. Fazl Ali, Ex-Governor of Orissa)

We all know that the problem of health is one of the greatest of earthly problems, for without health life is hardly worth living but is only a state of languor and suffering. Our sages of ancient times fully realised this and they developed Ayurveda, which means the science of life, to a degree of perfection which is known only to those who have studied history and know something about the wisdom of our ancient people.

It appears that for 200 years many European scholars believed that Indian medicine was only a matter of spells and charms and at the utmost it was a very antiquated empirical and unscientific mode of treatment. This kind of ignorance was due largely to the fact that a great deal of the education in Europe was devoted to ancient Rome and Greece and even when some scholars began to study Sanskrit they paid little heed to treatises on medicine.

During the last 100 years or so, however, a few of the scholars have interested themselves in the ancient science of Indian medicine and have written some very instructive books on the subject. Researches done by these pioneers were followed up and developed by other giants such as Vagbhata Madhava, Jivaka, the famous Buddhist physician Bhava Mishra of Banaras, jewel of physicians and a host of others. In course of time there also sprang up many schools among which Dr. Wise of the Bengal Medical Service, writing in 1845, has mentioned two systems of Hindu surgery, 9 systems of medicine, 3 of materia medica, one of nosology, one of pharmacy and three on metallic preparations.

It is sometimes said that the Indians derived their knowledge of medicine from the physicians who came with Alexander the Great to India, but the latest researches show that it was to India that the Greeks owed a great deal of their knowledge of medicine. It is to be remembered that in ancient days India was in constant communication with many countries and many philosophers and sages of antiquity came to India to study the science of life. From the discoveries that have been made as the result of the excavations carried out in the north-west of India it seems almost certain that as long as 3,000 B.C. there was considerable intercourse between those dwelling in that region and the men of Babylonia and Egypt. The Indian influence also spread to Ceylon, Java and even to China and Tibet. Phoenicians had in the Persian Gulf their centres for the Indian trade, while as early as about 1,700 B.C. the Arabs had opened out trade with India. It is known that Greek physicians like Hippokratis, who is said to be the father of medicine, Magasthenes and Ktesias visited India and it is almost certain that they were attracted to this country by the fame of the Indian physicians.

Weber in his *History of Indian Literature* remarks that "there is no ground whatsoever to suppose that Sushruta borrowed his system of medicine from the Greeks. On the contrary there is much to tell against the idea." There is evidence to show that even the earliest of Greek writers mentioned Indian doctors by corrupt Sanskrit names and that many

medicines produced in India were used by the early Greek physicians.

Another European writer has pointed out that "considering that we have no direct evidence of the practice of human dissection in the Hippocratic school but know of the visit about 400 B. C. of Ktesias to India, the alternate conclusion of the dependence of Greek Anatomy on that of India cannot be easily put aside." Dr. Wise is also of the opinion that "Greece and Egypt may both in their scientific relations to India have been the learners and not the teachers."

It is well known that during the Buddhist period the science of medicine advanced by leaps and bounds and many hospitals were established for the sick and blind and the deformed and hospitals for pregnant women and for travellers. Pharmaceutical gardens were established to supply the herbs and drugs; a number of anti-adulteration laws were passed; and there were State physicians, one being appointed for every ten villages on the great roads of India. Even in later times the Indian science of medicine had such a reputation that it attracted notice in the neighbouring countries of Persia and Arabia. There is evidence to show that the treatises on Indian medicine were translated and studied by the Arabs in the days of Haroundal-Raschid and Mansur and that they were also known to the Persians.

### Scope of Ayurveda

The scope and the scientific nature of Ayurveda is described by Sir William Hunter in these words: Indian medicine dealt with the whole area of the science. It describes the structure of the body, its organs, ligaments, muscles, vessels and tissues. *Materia Medica* of the Hindus embraces a vast collection of drugs belonging to the mineral, vegetable and animal kingdoms, many of which have now been adopted by European physicians. Their pharmacy contains ingenious processes of preparation with elaborate directions for the administration and classification of medicines. Much attention was devoted to hygiene, regimen of the body and diet.

It should be mentioned that the ancient Indian physicians excelled not only in common surgery and could mend a cleft ear-lobe, affix an artificial nose and make false teeth. They also used a number of surgical instruments many of which, say some medical authors, were remarkably similar to those to be found in a catalogue of modern surgical instruments. The *Materia Medica* of the Indians, says a European writer, is a marvel to the modern scientific investigator being an encyclopaedic compendium of an amazingly large number of drugs of which the properties were carefully investigated and analysed. It deals with drugs belonging to the animal, vegetable and mineral kingdoms and each drug was judged and classified with reference to 5 main properties (*Rassa, Guna, Veerya, Vipaka* and *Prabhava*), namely, taste, virtue or inherent power to cause a certain effect, their healing or cooling power, the change or action they underwent in the human organisms and their adherent nature or active force. The description of the drugs includes as to how they would affect the three humours, namely, *Vayu, Pitta* and *Kapha*.

Unfortunately owing to a variety of cause, which need not be discussed by me, there has been a considerable decline in this great system, but it is still a living science and thousands of people even now prefer to be treated according to its method. I know that quite a large number of medical men are inclined to condemn this system as unscientific and its practitioners as quacks and charlatans. Any criticism however which is made without knowing and understanding the principles of the system cannot carry much weight. The best critics, of course, would be those who possess a complete knowledge of both Western and Ayurvedic systems of medicine and as far as I know the few men who have tried to study both the systems and are in a position to form an unbiased opinion have had to concede that in the treatment of many common diseases the Ayurvedic system is as effective as any other system.



### Modern Drugs

The Ayurvedic physicians are sometimes unduly critical of the Western system without knowing much about the value and properties of certain modern drugs which have saved and are saving thousands of lives. I was told some years ago by a friend of mine that when he competed for the Indian Civil Service one of the questions put to him in his *viva voce* examination was what was the greatest modern discovery in medicine. My friend mentioned Insulin in his reply and the examiners, though they had something else in their mind, gave him full credit for his reply, saying that Insulin had undoubtedly saved many lives. That was some time ago, but in more recent times Penicillin, Chloromylitin, Streptomycin and several other drugs of Sulpha group have been discovered and they have revolutionised the treatment of some of the diseases which were regarded as incurable. I think I ought to quote here what the famous physician M. K. Gananath Sen while delivering his address on Ayurveda at the Banaras Hindu University in 1916 said among other things. What he said was this: "Let us not be slow in recognizing the crying need for reform. Let us clearly understand that Anatomy and Physiology might have been comprehensive at one time, but as we have them at present, they need to be sifted and supplemented. Our Chemistry, Botany and Materia Medica might have been once ahead of the West, but now we might recast and remodel them according to the present high scientific standards. We may have once made great progress in Surgery, but we must confess that we now lag badly behind. And again our old methods of study might have been of a high order but we must not be timorous to admit that the present methods by which so-called Kavirajas are manufactured out of idle pupils or compounders in many cases are fit to be mercilessly condemned. And even in the great departments of medicine and Pharmacy which are our great pride and mainstay, we must work hard to rediscover, demonstrate and utilise the principles of medicine that form the bedrock of our treatment. In other words, we must establish them on the sound footing of actual observations and experiments according to the methods of the West. We must make good the losses we have already sustained."

### PEARLS OF WISDOM

(Sri Swami Sivananda)

1. Know thyself, and thou shalt know everything.
2. Attain Self-realization. This is the greatest form of service you can render to the world.
3. Realize that you are, in truth, that supreme Consciousness, which is beyond time and space which is changeless, eternal, all-pervading, indivisible and unconditioned, and which is existence-knowledge-bliss absolute.
4. Hate is the symbol of destruction, but love is the creative force that unifies all creations. Love alone triumphs at the end.
5. Education is incomplete if the students are not trained in self-restraint, selfless service, and unselfish love for all.
6. Discipline, on individual and community basis, is the greatest factor in the building up of a nation.
7. The Lord alone is one's real hope, delight, centre, ideal and goal.
8. When there is so much suffering and misery all around us, one has no right to live a life of luxury.
9. Love and service are the two keys to the Life Divine.
10. Help the needy. Help all, as best as you can. In the measure in which you help others, will help flow back to you.
11. Without trust in God, life is a dreary desert. One must, therefore, have absolute faith in His name, His grace His presence and His compassion.

12. It is unwise to attach undue importance to earthly relationship. There is only one relationship that can be called real, and that is with God.

13. Dispassion and renunciation paves the way to the Infinite.

14. God alone is the complete and perfect Being which takes nothing and needs nothing.

15. There is neither defect nor deficiency in God. Apart from God, there is nothing anywhere.

16. The voice of a sage comes like a gentle breeze to soothe the afflicted heart of man and to breathe into him the message of faith and courage for a new vision of life.

17. Man is not only a biological or mental being with thoughts and ideas, but a spiritual being, infinite and immortal in his essential existence.

18. As food is necessary for the body, prayer and meditation are necessary for the soul.

19. Prayer is an impossibility without a living faith in the presence of God within.

20. God reveals Himself daily to every human being in diverse ways, but he sees Him not on account of delusion.

21. The act that pleases the Lord is that which is done with no attachment to its fruits, which is unselfish, and which has goodness as its basis.

22. Use the body as a temple of God; use it not as a vehicle for sensual enjoyments without any heed to reason and prudence.

23. God is neither in heaven, nor down below, but in everyone, everywhere.

24. To attain Self-realization you will have to become absolutely free from passion and egoism, and rise above love and hate, attachment and repulsion.

25. When you have renounced all selfish motives, when you are devoid of attachment to the objects and actions, then you can have real progress in meditation.

### MARCH OF TIME

Time is the cradle of hope, but the grave of delusion; it is the stern corrector of fools, but the salutary counsellor of the wise. Wisdom walks before it, opportunity with it, and repentance behind it. He who has made Time his friend will have little to fear from his enemies. But, he, that has made Time his enemy will have little to hope from his friends. According to Plato, God, unable to make the world eternal, gave it Time, a moving image of eternity. To learn never to waste our time is perhaps one of the most difficult virtues to acquire. It is however useless to try to put old heads on young shoulders or to do in old age what only youth fits us for. Our time is like our money. When we change a guinea, the shillings escape as things of small account; when we break a by day idleness in the morning, the rest of the hours lose their importance in our eye, and the art of wisely using the spare five minutes, or intervals of life, is one of the most valuable we can possess.

ISAAC TAYLOR.

### HEALTH

#### HOME REMEDIES

(Sri Swami Sivananda)

#### Holy Basil

Tamil: Telugu: Malayalam. Canarese: Hindi: Sanskrit: Tulsi. Latin: Ocimum Sanctum.

Every Hindu keeps this plant in his house. A special altar is consecrated for the purpose. Daily worship is offered. It is adored as a Goddess. The leaf is offered to Lord Hari, Lord Rama, Lord Krishna during worship. Food that is prepared in the house is first offered to Tulsi.



Binda, wife of Sankhachuda was favoured by Lord Krishna and transferred into this herb. Tulsi Jayanti is celebrated on Sukhla Dwadasi in the month of Kartik (Tamil, Appasi) October-November. Every Sukla Dwadasi is very famous for Tulsi worship.

Holy Basil is a well-known small herb in India about 1-3 feet long. It is found in most of the gardens. It is cultivated for its medicinal value and worship in Hindu temples especially by the Vaishnavites.

There are two important varieties. One is black and the other white. The black variety is most efficacious medicinally. There are the red and blue varieties also. The other varieties are mul-tulsi, Kal-tulsi, tiruneetu pacchai. The white variety is called Siva tulsi also. The black one is called Krishna tulsi. Tiruneetu Pachai is also called Vibhuti Pachalai or Ramtulsi. In Hindi it is called Sabja.

The leaves possess stimulant, expectorant, aromatic, carminative, antifebric, antiperiodic and diaphoretic properties. The seed is a demulcent:

The whole tulsi plant is used for medicinal purposes but the leaves are generally used.

The leaf checks the formation, of sputum in the respiratory passages. It is beneficial in bronchitis, pneumonia, whooping cough, influenza, consumption and Asthma. It is beneficial in every disease where there is excess of sputum.

The powder of dry leaves is used as snuff in ozaena for destroying maggots.

Like eucalyptus, tulsi drives away all mosquitoes. It is advisable to keep tulsi plant in front of the houses and backyards. If body is covered with leaves, mosquitoes will not bite.

Tulsi is useful in all kinds of insect bites. In snake bite it is very efficacious. Rub the bitten part well with the juice of tulsi. It may be repeated. Internally give two teaspoonssul of the juice. Apply the leaves as poultice to the part.

Tulsi tea is very useful in fever and cold. You can add milk also to this tea.

This tea can be given to children when they suffer from fever and cough with sputum. Or the juice of fresh leaves can be given. The juice can be mixed with a little honey or breast milk. If it is given with an equal quantity of fresh ginger juice the effect is more marked. The powder of a little pepper and long pepper may also be added.

The leaves are rubbed with the lime juice over ring worm.

The medicated oil (tulsi leaves boiled with gingelly oil) is used as drops in the ears in ear-ache and discharge of pus. It is put into the nose in ozaena.

The seeds are mucilaginous. They are used as a diuretic in scanty urine and cough.

Tulsi is useful in scorpion bite, constipation, remittant and intermittant fevers.

In Malaya people strew the leaves over the graves of their dead persons for the peace and benefit of departed souls.

### Honey

(*Mel depuratum*)

Hindi. Shahad	Maharatta. Mada
Dukhni. Shahad	Guzarati. Madh
Bengali. Modhu	Singalese. Pani
Sanskrit. Madhu	Burmese. Piyaye
Tamil. Taen	Malaya. Ayer madu
Telugu. Tene	Punjabi. Shahd
Malayalam. Taen	Kashmeri. Mhach
Kanarese. Jenu	

Always keep some honey in your domestic medicine chest. It is an agreeable sweetening ingredient for mixtures. It is a

good vehicle in which to administer powders for children, and Bhasma or metallic oxides like Makaradwaja, Vasanta Kusu-makar, etc. Pills can be made with the aid of honey.

Mel Depuratum is purified honey. Commercial honey is heated in water bath and while still hot, is strained through warm flannel. This is the way to purify honey.

It contains mainly glucose and laevulose. It has a characteristic odour with a sweet and faintly acid taste.

Honey has got the nutritive value of sugars and is an article of diet with certain people. It is prescribed for its soothing and flavouring properties. It makes good cough linctus. It is a laxative and is given to children for this purpose. It relieves dryness of the mouth and facilitates swallowing.

Honey contains 70 per cent of dextrose and laevulose, also wax, dextrin, volatile oil and pollen.

### (*Mel Boraces*)

Re. Powdered borax	...	10 Parts
Purified honey	...	90 "

Useful in ulcers in mouth, tongue, and nipples of nursing mother.

This is a soothing, emollient and demulcent application.

### Oxymel

Re. Purified honey	...	700
Acetic acid	...	150
Water	...	150

Dose: 30-120 minims or drops.

This is a common ingredient of cough mixtures. It is a very good expectorant. It brings out the sputum easily.

2 tablespoonfuls of honey with 2 tablespoonfuls of lemon juice and 1 oz. of water is a beautiful drink in the early morning. This is anti-bilious, and anti-scorbutic. It is useful in spongy gums, impure blood and skin diseases.

Honey is a substitute for sugar in diabetes. Honey and milk is a very good combination. This supplies much energy and vigour.

Honey is useful in burns and scalds. It is a soothing application. It will prevent the formation of blebs if applied in time.

Re. Yellow wax	1 oz
Clarified honey	4 oz

Melt these together with the help of gentle heat and strain. This is a beneficial stimulant application for indolent and other ulcers. This is admirably adapted for use in hot climates, where animal fats, the basis of so many ointments, soon become rancid and unfit for medicinal use.

### Indian Pennywort

(*Hydrocotyle asiatico*)

Tamil. Vallarai
Malayalam. Kudakam
Sanskrit. Brahmi, Mandukaparni
Hindi. Brahma Manduki, Khula-Kudi
Telugu. Bokuda Chettu, Manduka, Manduka-Brahma, Kuradu
Kanarese. Vondelagi
Arab. Artaniya-e-hindi
Bengali. Tholkuri or Thankuni

This is a weed found near the banks of rivers and lakes all over India and in South Africa. This is a very precious herb.

The whole plant (particularly the leaves) is used for medicinal purpose. The entire plant consists of root, twigs, leaves and seeds.

It is an alterative, tonic, aperient, diuretic, stimulant, emmenagogue and local stimulant. That herb which increases the flow of urine is diuretic. That herb which increases the menstrual flow is an emmenagogue.

Brahmi in the form of powder is useful in diarrhoea, dysentery, fever, hoarseness of voice, due to consumption, elephantiasis, orchitis, scrofula, leprosy, jaundice, chronic skin diseases, skin eruptions such as eczema, lupus psoriasis, skin eruptions, syphilis, gonorrhoea, dropsy, leucorrhoea, nervous debility and seminal weaknesses.

Brahmi is a nervine and brain tonic. It increases memory and bestows long life.

A small quantity soaked in water over night and made into a paste with a few almonds, sugar-candy and milk—this could be taken as a first rate tonic and a cooling beverage, excellent for health and strength.

It tones up the liver and eliminates all kinds of worms in the bowels. It is specially useful for nervous debility and invigorates and improves the brain.

The juice and the powdered root are used. The dose of the juice is 2 tolas, powder of the leaves 5 to 10 grains, 3 times daily.

Under its medication in the treatment of leprosy the appetite improves. The skin becomes soft. The thick skin is cast off.

It contains resin, gum, sugar, albuminous matter, sulphates, tannin and an oleoginous substance, vellarin, an active volatile principle.

The leaves are dried in the shade. By drying in the shade no active principle is lost. The leaves are powdered and kept in well-stoppered bottle.

The powder can be made into an ointment with vaseline or butter. This is useful in eczema, leprosy, secondary syphilitic ulcers. It can be used as a dusting powder also.

A decoction of the entire plant is a very useful preparation. Put one ounce in 20 ounces of water. Boil for 20 minutes. Strain. Dose 1 to 2 ounces.

It is used in ozaena as a snuff.

Make a paste of the leaves and apply it to the navel in children. Dysentery and diarrhoea will be cured.

Mix one or two teaspoonfuls of the juice with cow's milk. It is useful in the skin diseases and impure blood of children and syphilis, fever, stomach troubles of adults.

The application of a paste of the leaves is highly useful in elephantiasis, swelling of testicles, rheumatic swellings, boils, contusion. You can apply the juice of the leaf also in these diseases.

Brahmi Grita is prepared from fresh Brahmi and pure cow's ghee. It is used as a nervine and brain tonic.

### FILARIASIS

Certain worms of slender cylindrical shape invade the body of persons causing group of disease conditions. The most important of such diseases is the *wuchereria* (formerly *Filaria*) *bancrofti*—Filariasis.

This worm has a mosquito as its intermediate host, and is the cause of elephantiasis and various conditions associated with lymphatic obstruction.

In 1863, the embryo stage (or *microfilaria*) was found in hydrocoele fluid, by Demarquay. In 1873, in India the embryo was found to live in human blood. In 1876 the adult worm was discovered in Australia. In 1878 the development of the embryos in the mosquito intermediate host was traced.

In 1900, it was observed that the developed form of the embryos escape from the mosquito during the act of

biting; and so penetrate the skin of human host in whom they complete their life cycle.

This parasite worm is very widely distributed throughout the tropical and sub-tropical zones of both the new and the old world. It is especially common in some of the West Indian Islands such as Barbados and in British Guiana, in low-lying deltaic areas in the East Indies, on the east coast of India and Travancore, in Ceylon, in Central and Southern China, in the coastal area of Queensland, and on many of the Oceanic Islands, in some of which 60 per cent of the people were found to be infected.

It occurs throughout tropical and North Africa down to the Anglo-Egyptian Sudan, with very high recorded rates of infestation in Nigeria and Tanganyika, and in America from the Southern United States to Brazil.

The incidence varies greatly even in neighbouring localities, so that very high prevalence in certain areas may occur without a high incidence in the country as a whole.

In India, for example, the endemic areas of filariasis are limited, although the disease constitutes a serious cause of disability in the affected places.

The endemicity is closely related to the presence of numerous mosquito carriers, and to existence of hot, moist atmospheric conditions essential for the spread of infection.

The disease prevails at increasing rate after twenty years of age, showing higher rates in males as a rule, and all races appear to be susceptible according to living in close relation to infected persons.

The worms being long thread-like are easily visible to the naked eye, and when found encysted in thin-walled sacs of dilated lymphatics they are extremely active in their movements, but within a few hours of being removed from the human body. They inhabit the lymphatic vessels of the abdominal cavity in particular. They may be found in the thoracic duct down to the lymphatics of the lower extremities especially those of the groins. Several may occur in a bunch. They may also be present in the lymphatic vessels in any part of the body. The common sites are elephantoid tissues of the external genitals mammary glands or of the extremities, abdominal retroperitoneal lymphatics, including those of the kidneys and the epididymis. The worms are so slender that they are very difficult to find in the tissues after death, and when present in abscesses they are often dead and undergoing decomposition.

The embryos, called *microfilaria bancrofti* are far more familiar objects than the adult worm; for so long as the latter live in lymphatics communicating directly with blood stream, the microfilariae are present in large numbers in the peripheral blood, where they continue to appear for years. They can pass through the capillary vessels. They possess a thin sheath, which is best seen where it projects slightly beyond the extremities of the embryo. The number of microfilariae may be so great that several hundreds may sometimes be counted in 20 c. mm. of the finger-blood taken in the evening, so that many millions may be present in the circulation at one time, and that too in persons in perfect health.

During the day time up to 6 P.M. the embryos are absent completely or nearly completely from the peripheral blood. After that time they steadily increase reaching their maximum numbers about midnight. They after-

wards decline rapidly, to reach their minimum about 9 A.M.

The most frequent significant and intermediate host bites chiefly at night, when it has the greatest chance of becoming infected with the parasite. This is known as *Culex fatigans*.

But it was found in the Pacific similar filaria present in the peripheral blood by day, and these are conveyed by a mosquito which bites in the day time and it was also found that the range of this filaria coincides with that of its mosquito carrier. This mosquito is known as *Aedes variegatus*.

The development of the parasite in the mosquito takes place in the thoracic muscles, which are penetrated by the microfilariae within twentyfour hours after first discarding their sheaths in the stomach of the mosquito, aided apparently by the increased viscosity which occurs in the blood after being swallowed by the insect. In their new location they increase rapidly in size and gradually acquire the internal structure of the adult worms. This process occupies from eleven to twenty days, the shorter period being associated with higher atmospheric temperatures. When fully grown they measure 1.5 to 2 mm., or nearly a forty-fold increase in length.

In India full development has been found to take place in eleven days in the hot humid monsoon months and in eighteen to twenty days in the drier and colder winter months.

If the infection of the mosquito is very heavy, the insect dies, but when it is lighter the developed young filariae migrate to the proboscis, and are commonly found in pairs in the labium, through the thin membrane of which they escape when the mosquito feeds on the skin of the patient. They penetrate the skin and find their way to the lymphatics where they attain to sexual maturity and thus complete their life cycle.

There is a variety of microfilariae called *malayi* found in the Dutch East Indies and the Malay Archipelago in Indo-China and China, while those in South India resemble this variety. *Microfilaria Malayi* differs from *Mf. bancrofti*. In South India *Mf. bancrofti* infections are urban in character and those of *Mf. Malayi* rural. In Ceylon the latter form 80 per cent and the former only 20 percent of the infections. The adult worms discovered in Calcutta closely resemble those of *W. bancrofti* except in the number and shape of the cloacal papillae and folds.

There is another kind of filaria called *Filaria Ozzardi* which is a sheathless non-pathogenic form met with in the interior of British Guiana, the West Indies and South America.

The precise manner in which filariasis is produced is still imperfectly understood. The adult worms may be present in unobstructed lymphatics, and may continue to give off immense numbers of microfilariae for long periods without giving rise to the slightest manifestations of disease.

When the characteristic elephantoid enlargement of the limbs and scrotum has taken place the microfilariae as a rule have disappeared from the peripheral blood. The pathological processes which are known to produce clinical manifestations are obstruction of the lymphatic channels of a progressive nature and local inflammatory conditions associated with fever. The latter are often due to secondary bacterial infections. Sceptic infections play the major part in producing repeated attacks of lymph-

angitis leading to elephantiasis. Some hold that the living adult worms injure lymphatic walls through toxins excreted by them.

Lymphatic obstructions of the larger vessels is caused by inflammatory changes set up by the adult worms, which under certain conditions act as irritating foreign bodies. This inflammatory reaction may not be associated with secondary bacterial infections.

Filarial lymphangitis is found to be 40 per cent higher in the hot humid monsoon months than in the cold season.

The occlusion of the lymphatics prevents the embryos from reaching the blood stream, so that microfilariae will no longer be found unless other adult worms are present in unobstructed vessels. It has been noted that embryos disappear from blood immediately after such localised lymphatic inflammation had occurred. If obstruction takes place as high up as the thoracic duct very large varicose dilatations of the thoracic and retroperitoneal lymphatics may be produced, but such a condition can only be detected at an autopsy.

Similar obstruction of large abdominal lymphatics may result in chyluria, which is due to leakage of chyle through the distended lymphatics into the pelvis of the kidney, ureter or bladder. There may also be varicose dilatations of the lymphatic vessels of the iliac, inguinal, testicular, spermatic and external genital areas, or of those of the skin of the scrotum, labia or external abdominal wall. In this way the various forms of varicose lymphangiomatous swellings are produced. The more superficial of these may rupture externally and cause debilitating lymphorrhoea, or even the escape of chyle.

#### The Lymphatic Glands

The lymphatic glands may also be the seat of considerable obstruction of the lymph flow due to a chronic fibrotic condition caused by irritation resulting from the presence of the adult worms or embryos or by inflammatory changes. Either living or dead adult worms are commonly found in the glands. The dead worms may be calcified.

#### The Spleen

The spleen has been shown in Bombay in postmortem examinations to contain small granulomata visible to the naked eye in which embryo filaria can be found microscopically together with surrounding eosinophilia.

#### Elephantiasis

In India and China this affects the leg most frequently, and next the scrotum, but in Foji, the upper extremity is found to be much more frequently attacked than in Asia. The penis or the labia majora may also be affected. Pendulous tumours of a similar nature occur rather rarely in the regions of the groin, the buttock, or the scalp.

One or both legs below the knees are especially liable to be attacked and may reach an enormous size and render locomotion very difficult. The swelling first appears on the dorsum of the foot, but the ankle and leg are soon involved. Deep fold often appear at the ankle. The surface may be smooth, but frequently it becomes rough. The oedema is hard and does not pit on pressure, and if the usual filarial fever with erysipela-like inflammation occurs, each attack is followed by increased thickening of the tissue. Similar enlargements may affect the hands and forearms, deep transverse folds are formed at the wrist, and the disease runs a similar course.



Elephantiasis, so common in the later stages of filarial infections, is not so easy to explain, as simple obstruction of the main lymphatic channels only produces swelling (Oedema) of the tissues. Although the proportion of persons suffering from elephantiasis in endemic areas of filariasis is variable, the distribution of the disease is restricted to places where filarial infestation occurs, and there is a uniform association between the prevalence of elephantiasis and that of the other clinical manifestations which are known to be caused by filariae.

The frequent absence of microfilariae from the blood of elephantiasis patients is due to the blocking of the lymphatic vessels in which the adult worms are lodged. This obstruction prevents the embryos from reaching the general circulation. It is said to be reasonably certain that these worms play an essential part in the cause of tropical and sub-tropical elephantiasis. These attacks of fever are sudden and severe, with temperatures running up to 103° F. or 104° F. and leucocytosis. They are frequently accompanied by localised acute inflammation of the skin, simulating local febrile disease producing deep red colour on skin, or of the connective tissues of the deeper layers of the dermis.

It is also well-known that the form of elephantiasis which is called *elephantiasis nostras* occurs in persons who have never lived in countries in which the filaria exists. In the case of this disease the attacks of (dermatitis) the skin below the upper layer of the skin and cells (cellulitis) which cause the thickening are entirely due to bacteria. It is also said that bacterial infection plays the essential part in the causation of elephantiasis. There is a close association between the prevalence of filariasis and that of elephantiasis, and it is likely that the filarial worm, under certain conditions, damages the tissues in which it lives in such a way as to make them less resistant to the attack of stray circulating cocci. From a practical point of view the filaria may be regarded as the cause of elephantiasis, although it often may be only a predisposing factor.

The great tendency to periodical attacks of filarial fever at intervals of several weeks or at monthly intervals is less easy to explain. It was found that a great increase in the numbers of the circulating filarial embryos occurred at intervals of about a month, accompanied by the appearance of a large number of small, thin, apparently young microfilariae indicating that the adult female worms were giving birth to many embryos at these times. If there is no lymphatic obstruction the microfilariae escape into the blood stream without producing any symptoms, but if the lymphatic vessel in which the adult female worm is lying is blocked, this sudden flood of young embryos will tend to block the small lymph tributaries, and, by increasing the lymph stasis, lower the resistance of the tissues and so predispose to a recurrence of the inflammatory attacks due to septic organisms. The organisms still persist after the attack is over, and are ready to spring into activity when immunity has worn off or local resistance is diminished. Neither the presence of living adult worms and microfilariae, nor obstruction and dilatation of the lymphatic system mechanically produced by their presence, will account for the frequent sudden attacks of severe fever, often accompanied by rigor at the onset and profuse perspiration with the decline of the temperature. The presence of bacterial organism of chaplet form (streptococci) in the thickened superficial tissues, and the occurrence of inflammation during such febrile attacks, fully

account for the fever. It is also known that similar acute inflammation of the deep-seated varicose lymphatic within the abdomen is sometimes the cause of fatal terminal fever in filariasis. In other cases, deep-seated lymphangitis occurs in the limbs and may result in the formation of localised abscesses. The abscesses often contain the remains of dead adult filarial worms. Such inflammatory processes may be followed by the disappearance of the microfilariae from the blood indicating either inflammatory obstruction of some large lymph-vessel containing the adult worms, or the death of the worm. Repeated attacks of this kind are liable to be followed by steady increase in the solid oedema of the extremities, external male and female genitals, or, more rarely, the mammae. This condition constitutes the most frequent and important clinical result of filariasis, namely, the well-known elephantiasis. Acute septic inflammation may also occur in cases of the various varicose dilations of the lymphatics of the spermatic cord and so give rise to acute funiculitis. The lymphatics of the testicle or of the tunica vaginalis may be affected, giving rise to the frequent chylous hydroceles of filarial disease. Even the lymphatics of the large joints may be attacked, and, in the endemic areas of this disease, any acute inflammation of the parts liable to be infected should be suspected of being due to filariasis and investigated from this point of view.

Scrotal elephantiasis is also very common, and may reach an enormous size. The tumours, on removal, have been known to weigh over 100 lbs. When a scrotal tumour has reached even a moderate size the penis becomes completely embedded in it. The urine dribbles out of an orifice on the anterior surface. Large hydroceles often form part of the bulk of the tumour. These tumours usually have rough surfaces, and they are liable to inflammatory skin complications in the same way as those of the extremities.

The penis may sometimes be much enlarged with only comparatively slight affection of the scrotum. In this case it remains very prominent with a rough surface and distorted appearance.

The lips (labia majora) may be affected in much the same way as the scrotum, either one or both being attacked.

The breasts are sometimes involved and large pendulous tumours may result.

Those living in an endemic area of filariasis should consult the medical man who soon becomes familiar with the more common manifestations of the disease, such as elephantiasis, chyluria, varicose lymphatics and varicose groin glands. The occurrence of abscesses in the course of large lymphatics of the extremities will also raise a suspicion of filarial origin.

By X-ray examination of the limbs, Calcified filariae in the form of oval areas may be seen either singly or in chains of two or more.

Apart from the disabilities produced by elephantoid and varicose gland tumours, the prognosis is good except when secondary septic infections, involve the extensive varicose abdominal lymphatics, and may cause death within a few days.

Much may be done by surgical measures to remove the elephantoid swellings of the external genitals organs, but comparatively little can be done for those of the extremities.