



Ethno Medicines of Kolli Hills at Namakkal District in Tamilnadu and its significance in Indian Systems of Medicine

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Introduction

Tucked away between the Pachamalai and Kalrayan Hill ranges of the Eastern Ghats in South India, Kolli Hills (or Kollimalai, in Tamil) is indeed a remarkable spot in Tamil Nadu. Unlike man-made Ooty and Kodai, Kolli Hills is traditional hill country, the land of friendly tribes, and a part of the erstwhile kingdom of Valvil Ori, a Tamil king who was renowned for his generosity and valour. Formed in the shape of an open square, these hills were also known as Chathuragiri, literally meaning square-shaped hills. Located at an ever-so-pleasant altitude ranging from 1000 to 1300 metres above mean sea level, Kolli hills enjoys a salubrious climate throughout the year. This fertile pocket in Namakkal district is where exotic tropical fruits and medicinal plants grow in plenty. The land is still relatively untouched by time, with 16 quaint little tribal villages that once constituted the hill kingdom of Ori. Much of the charm of this hill country still remains. For if you can't stand the milling crowds of Ooty and Kodai, this surely is one place where you can head to

for a quiet holiday. The history of Kolli Hills is closely linked with ancient Tamil literature. It is believed that in the Ramayana, these hills are called madhuvanam (forest of honey), the abode of the monkey king Sugreva. In the ancient Tamil epics Silapadikaram and Manimekalai, there is an interesting reference to Kollipavai, the deity in the sacred grove, who is also considered the guardian of the forests here. According to this legend, the sages were looking for a peaceful place to do their penance, and they chose Kollimalai as their abode. When they began their rituals, the demons invaded the hills to destroy their penance. The sages prayed to Kollipavai, who according to the myth chased away the demons with her enchanting smile. The Kollipavai is still worshipped by the people here and her smile is revered. The Kollipavai temple is located in one of the 15 sacred groves here and can be approached only on foot. According to the references in Tamil Sangam literature, Kolli Hills was once ruled by the benevolent and most valiant King Ori, who lived sometime during 200 A.D. The region, consisting of 18 *nadus* (villages) including the present Rasipuram and Senthamangalam, were under his rule. His

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reign was perhaps the most prosperous, as far as these hills were concerned, as paddy, millets and spices grew abundantly and the king himself was a patron of arts and the most generous among all rulers. The Tamil literary works also talk about his extraordinary valour and archery skills. It is believed that he once killed an elephant, tiger, deer, wild boar and monitor lizard with a single arrow.

There are many such legends and interesting myths associated with these hills, which make it all the more interesting and worth visiting. The drive up the 70-hairpin bend ghat road is truly an enjoyable experience. Contrary to one's expectations, the ghat road here is quite wide and well-laid, thanks to the tribal welfare funds allotted by the government. The road winds through 13 miles of beautiful scenery and thick forests, where you could pause just to take in the fresh mountain air, or just stop and stare at the monkeys, mongooses or squirrels that frolic on the hillsides. But hairpin bends are frequent and plenty, so it would be wise to be cautious while driving. The drive up the hill will take you to Solakkadu, the main town here, which is also one of the highest points in the hills. But for the few shops, bus stand, a Highways Department Guest House, a higher secondary school and the weekly shandy, Solakkadu is just an overgrown village. The viewpoint inside the Highways Bungalow compound is worth visiting, as one can have a spectacular view of the surrounding hills and plains from here. The bi-weekly shandy (dawn market) on Wednesdays and Saturdays attracts fruit vendors and wholesale dealers from the plains. The shandy begins on the previous evening as tribals trickle in with their produce. Many walk all the way from their villages, and camp at Solakkadu for

the night, for the actual business begins at 5.00 in the morning and is over by 10.00am. Plantains, Jackfruit, Pineapple, Orange, Pepper, Coffee and Honey are what Kolli Hills is famous for, though you may get a better deal from the vendors than the tribals themselves. The resident Malayalis (literally meaning people of the hills) are a friendly, sturdy and hard-working people, who generally keep to themselves. They constitute about 95% of the total population of these sparsely populated hills. Researchers feel that these were not the people who lived here during King Oris time. The early natives were primarily hunters-gatherers, while the present tribes could have migrated from the plains, bringing farming and agriculture with them. About 4 miles from Solakkadu, an undulating track leads to the Christian settlements at Valavandhinadu established here by Mr.J.W.Brand, a Christian missionary who lived on the hills between 1913 and 1929. His work was carried on by his wife for many more years, in spite of the poor response from the tribals. But these missionaries were solely responsible for spreading literacy in this area, by establishing many elementary schools.

The next biggest village in the vicinity is Semmedu, which boasts of a primary health center, telephone exchange, a few shops, hotels and the Valvil Ori statue. Comfortable accommodation and restaurants are available near Semmedu, at the Nallathambi Resorts and P.A. Lodge. Semmedu also has a statue-memorial to the King Valvil Ori, and is the venue of the **Valvil Ori Tourism Festival** in August. The festival is primarily a cultural event, which had its origin in the traditional Adi festival when people from all the 16 villages in Oris kingdom came together and danced, sang and feasted in

praise of their deities and king. They brought with them, the flowers and fruits unique to each region and got together as a community. In recent times, this festival is organized by the Tamil Nadu Tourism Department to showcase the cultural heritage of this region. The schools and government organisations in the area take part in the cultural events, and the fruit show is a main attraction. A Summer Festival is also held here in May, which is primarily conducted as a source of recreation for the local community.

The best way to enjoy these hills is at a leisurely pace, as there is ample opportunity for trekking and generally relaxing. It would be ideal to stay at one of the good resorts at Semmedu and explore the hills. Summer would be the right time to visit. August is the season for fruits here, and the time for the Valvil Ori Festival. But it would be very windy in August, which could be discouraging for any outdoor activity. One of the highest points in the hills is Selur Nadu, which is believed to be the place where King Pari, another generous Tamil King, gave away his chariot as support to the helpless jasmine creeper. An ancient culvert can also be seen here. The long and winding road from Semmedu to Selur Nadu is dotted with beautiful scenery. Banana and coffee plantations with their red and green coffee berries glistening in the sun, tall silver oak trees with glossy pepper leaves wrapped around, guava and orange trees laden with fruit and a host of other tropical plants typical of this region, are a feast to the eye. There are many spectacular points on the way where you could pause to have a bird's eye view of the hills and the quaint little tribal villages nestling in the bowl-like valleys. Some of these villages still do not have electricity. Faraway, in the uninhabited hills, are thickly wooded

Sholas, similar to the ones found on the Western Ghats. These are the last resorts of the sloth bear, panther, porcupine, deer, fox, hare and a variety of wildlife that once roamed the entire hills.

Another village on the way is Vaasaloorpatti, where the Government Fruit Farm is located. It is a beautiful place where paddy (the traditional quick-yielding dwarf variety indigenous to this region) is cultivated in the valley and a variety of hybrid and native fruits such as jackfruit, oranges, coffee, pepper and spices are grown on the slopes here. At Vasaloorpatti, the Salesian Sisters of Mary run a free dispensary and maternity hospital for the tribal women. Hill Dale Matriculation School, the only residential private school in Kolli Hills is also located here. Not to be missed on the way to Vasaloorpatti from Semmedu is the Tampcol Medicinal Farm at Vaalavandi Nadu, run by the Tamil Nadu government. The farm is surely worth visiting, as Kolli Hills is perhaps better known for its medicinal plants than anything else. A wide variety of medicinal plants and herbs used in Ayurvedic, Siddha and Unani medicine are nurtured, cultivated, gathered and sent from here. Even the most common medicinal plants, acquire a special value when grown here, as the medicinal plants from Kolli Hills are generally considered to be more potent and effective. For example, the Chitharathai (*galanga the less er*), an effective remedy for cold, grown here is sold at Rs.400 per kg. Athimaduram (*Jamaica liquo rice*), Karpooravalli (*Coleus aromaticus*), Thoothuvalai (*Trilobatum*), Tulasi (*Ocimum sanctum*), Kizhanelli (*Phyllanthus amarus*) and a host of other herbs, besides a variety of spices are also cultivated here.

Since ancient times, Kolli Hills has always been famous for its medicinal plants. It is believed that the Sithars (ancient medicine men) lived, researched and meditated here in the caves inside the sacred groves. Many such sacred groves are believed to be found in the forests here (near the Agasagangai falls) even today, and the adventurous go on trekking expeditions, to the caves where the Sithars lived. Stories abound of people chancing upon the stone mortars used by the Sithars to prepare their medicines and concoctions. The moss covering the inner walls of the Sithar caves is believed to have unique healing properties. The sacred groves are guarded by the local temple deities, and the felling of trees is prohibited here. There is also a popular belief among the locals here that a person could lose his mind while entering certain areas of the dense forest where the Sithars lived. No one knows where exactly these areas are, but these pockets, known as Mathikettan Solai are believed to completely wipe out a person's memory, for a period of time. A common explanation to this phenomenon is that it could be due to the effect of the concentration of so many highly potent medicinal plants in one place.

Perhaps the biggest attraction in Kolli Hills from a tourist's point of view is the spectacular Agasagangai waterfalls and the nearby Arapaleeswarar temple at Valapoor Nadu. This ancient Siva temple has inscriptions dating back to the Chola period. One has to climb down the 700 and odd steps leading to the waterfalls from here. The waterfall presents a truly spectacular sight, as the water cascades down 200 feet, covering all around with a fine spray. It would be just enough to stand nearby and get drenched. Only the truly daring try to bathe on the slippery rocks here. The climb up the steps can be pretty

strenuous, and it is therefore wise to visit the falls only if one is capable of climbing back. Kolli Hills is thus a naturalists' haven - a treasure trove of medicinal plants, and the native home of traditional hill country and people. But like eco-systems elsewhere, these hills too have been invaded by modern farming practices and invasive methods. Tapioca, cassava and hybrid varieties of rice, which were introduced in this region recently, have overtaken the traditional paddy varieties, minor millets, pulses and fruit farms in terms of profitability. The M S Swaminathan Research Foundation has taken efforts to arrest this genetic erosion and rescue the traditional crop varieties. The local practice of burning the land after each yield has proven to be detrimental to the soil. The wiping out of traditional farmlands and orchards, has contributed to the near extinction of the mountain bees that produced the superior quality honey that Kolli Hills was once so famous for.

There has been an alarming rate of decline in the wildlife found here. Kolli Hills was once known for its Sloth Bear, which used to reside in the Sholas and visit the fruit farms occasionally, lured by the smell of ripe jackfruit. These bears were considered as pests by the local community, and were killed. Ever since King Oris time, hunting had always been a major preoccupation in this region. And even now, the Malayali tribes place a premium on hunted meat, which forms a major part of their diet. This explains the almost complete disappearance of the wild boar, porcupine, deer and hare that were once found abundantly in this region. As far as modern day communication is concerned, Kolli Hills is still rather remote. Though the hotels at Semmedu and the government offices have telephones, reliable communication is still non-existent here.

You will have to book your copy of the days vernacular newspaper, while the English dailies are rarely sold here. Out of the floating population that visits the hills, a majority are wholesale traders and planters who have plantations here. While most of the people on business make fleeting one-day visits, people from the surrounding plains do come here on extended holidays. And like elsewhere, the gradual rise in the influx of tourists and vehicular traffic has begun to show on the pristine environment. A visit to the stream near the Arapaleswarar temple could be an eye-opener of sorts. The rocks near the stream are littered with all kinds of garbage, and it is difficult to find a clean rock to step on, leave alone the suffocating stench. Public consciousness and social awareness seem to be the need of the hour to preserve these valuable hills. But in spite of all these modern ills, Kolli Hills is still one exclusive place where time has stood still. Where the pace of life is still in tune with nature, in its most pure and pristine form. A quiet little haven in the hills where you could retreat, rejuvenate and re-charge yourself. Kolli Hills can be reached by road from Chennai, Salem, Namakkal or Tiruchirapalli. National Highway 45 from Chennai is the road to take till Ulundurpettai, from where you will have to branch off on the road leading to Salem. A further southward diversion at the main town of Attur, will lead to Malliakarai, Namagiripettai and Belukkuruchi, at the foot of the Kolli Hills. If approaching from Salem, you can take the Rasipuram-Namakkal road via Kalappanayakanpatti, and reach Nadukombai from where the ghat road begins. The nearest railway station is Salem, 100kms from Kolli Hills. The nearest Airport is at Tiruchirapalli, 90kms from here.

Ethno medicines

Plants have been used in traditional medicine for several thousand years [1]. The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal systems such as Ayurveda, Unani and Siddha. In India, it is reported that traditional healers use 2500 plant species and 100 species of plants serve as regular sources of medicine [2]. During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of the world [3, 4, 5, 6 and 7]. Documenting the indigenous knowledge through ethnobotanical studies is important for the conservation and utilization of biological resources. Today according to the World Health Organization (WHO), as many as 80% of the world's people depend on traditional medicine for their primary healthcare needs. There are considerable economic benefits in the development of indigenous medicines and in the use of medicinal plants for the treatment of various diseases [8]. Due to less communication means, poverty, ignorance and unavailability of modern health facilities, most people especially rural people are still forced to practice traditional medicines for their common day ailments. Most of these people form the poorest link in the trade of medicinal plants [9]. A vast knowledge of how to use the plants against different illnesses may be expected to have accumulated in areas where the use of plants is still of great importance [10]. In the developed countries, 25 per cent of the medical drugs are based on plants and their derivatives [11]. A group of World Health Organization (WHO) experts, who met in Congo Brazzaville in 1976, sought to define traditional African medicine as 'the sum total of practices, measures,

ingredients and procedures of all kinds whether material or not, which from time immemorial has enabled the African to guard against diseases, to alleviate his/her suffering and to cure him/herself' [12]. Traditional medical knowledge of medicinal plants and their use by indigenous cultures are not only useful for conservation of cultural traditions and biodiversity but also for community healthcare and drug development in the present and future [2].

Ethno botany is not new to India because of its rich ethnic diversity. Jain printed out that there are over 400 different tribal and other ethnic groups in India. The tribals constitute about 7.5 percent of India's population. During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of India and there are many reports on the use of plants in traditional healing by either tribal people or indigenous communities of India [13, 14, 15, 16,17,18,19 and 20]. Apart from the tribal groups, many other forest dwellers and rural people also possess unique knowledge about plants [21].

There has been a resurgence in the consumption and demand for medicinal plants. These plants are finding use as pharmaceuticals, nutraceuticals, cosmetics and food supplements. Even as traditional source of medicines and they continue to play pivotal rule. Modern pharmacopoeia contains at least 25% drugs derived from plants. Many other are synthetic analogues built on prototype compounds isolated from plants. Demand for medicinal plant is increasing in both developing and developed countries due to growing recognition of natural products, being non-toxic, having no side-effects, easily available at affordable prices. Medicinal plant sector has traditionally occupied an important position in the socio

cultural, spiritual and medicinal arena of rural and tribal lives of Tamil Nadu. Millions of rural households use medicinal plants in a self-help mode. Over 20,000 practitioners of the Indian System of Medicine in the oral and codified streams use medicinal plants in preventive, promotive and curative applications in Tamil Nadu. There are estimated to be about 1000 manufacturing units in Tamil Nadu. In recent years, the growing demand for herbal product has led to a quantum jump in volume of plant materials traded within and across the countries. An estimate of the EXIM Bank puts the international market of medicinal plants related trade at US\$ 60 billion per year growing at the rate of 7% only. Though India has a rich biodiversity, the growing demand is putting a heavy strain on the existing resources. While the demand for medicinal plants is growing, some of them are increasingly being threatened in their natural habitat. For meeting the future needs cultivation of medicinal plant has to be encouraged. According to an all India ethno biological survey carried out by the Ministry of Environment & Forests, Government of India, there are over 8000 species of plants being used by the people of India. Analysis of habits of medicinal plants indicates that they are distributed across various habitats. One third is trees and an equal portion shrub and the remaining one-third herbs, grasses and climbers. A very small proportion of the medicinal plants are lower plants like lichens, ferns algae, etc. Majority of the medicinal plant are higher flowering plants. The State of Tamil Nadu is endowed with a very rich flora. Due to the various physiographic features and physiognomic factors, different types of vegetation exists in the state- 1. Coastal vegetation; 2. Island vegetation;

3. Vegetation of hills and mountains comprising of:

1. Dry deciduous forests
2. Moist deciduous forests
3. Semi-evergreen forests
4. Wet evergreen forests
5. Sholas (Southern montane wet temperate forests)

The altitude varies from sea level to 2637 m including the well known mountain ranges - the Nilgiri, the Anamalais and the Cardamom hills which harbours different types of ecological niches, ecosystem and innumerable medicinal plants. A few ethnic tribes like the Irular, Kaanikkara, Karumpar, Palliyan, Paniyar, Sholagar, Thodar and others dwell in these ecosystems and still depend on naturally occurring or cultivated from the state (N.C. Nair & A.N Henry, Flora of Tamil Nadu, India, - Analysis - Vol. I, 1983, B.S.I., Coimbatore). Out of this, it is found that 1474 are medicinal plants. A total number are found to be used in Siddha system of medicine which is commonly practiced throughout the state.

Tampcol has two medicinal farms, one in Chennai city at Arumbakkam and at Valavandinadu, Kolli hills, Namakkal district. In Chennai farm six varieties of medicinal plants are cultivated in five acres to meet the fresh herb requirements for the production of herbal hair tonic, other medicated oils and also supplied to pharmacy at Arignar Anna Govt. Hospital for Indian medicine and Homoeopathy, Chennai. Another 150 varieties of medicinal plants are maintained in the parts as reference material. The farm is also visited by the students of all systems of Indian Medicine. Leading practitioners of Indian Medicine also make use of this farm as their reference for medicinal plants. This farm is very popular and has contributed for herbal awareness in Chennai City. The farm participates in the

exhibitions conducted by Educational Institutions, Trade fairs and seminars/conferences in the city. The public are also encouraged to buy the medicinal plants at low prices to enhance the importance and awareness of herbal medicines. The Kolli Hills medicinal farm is situated in Valavandinadu at the altitude of 3600 ft. The land is undulating with rocky slopes. Out of 105 acres year-marked, the corporation has developed 55 acres and cultivating a dozen species of medicinal plants on large scale and another 50 varieties which includes trees, climbers and perennials are cultivated on bunds, hedges, fence line etc. as per suitability of the species. Further, the farm has a large nursery in which seedlings / saplings / cuttings / graftings are raised for own cultivation and to supply to the government institutions concerned and also to progressive farmers in the state and out side.

Siddha System of Medicine

The science of medicine is of fundamental importance to man's well being and his survival, and so it must have originated with man and developed as civilization advanced. It is therefore rather pointless to try to determine the exact point of time when any system of medicine was evolved and codified. A system of medicine is not a discovery but a gradual evolution during successive periods of history. It owes its progress to great men, who have not only enriched the science, but also society and civilization as a whole.

There are two ancient systems of medicine in India, the Siddha that flourished in the South and the Ayurveda prevalent in the North. Instead of giving the name of any one individual as the founder of either system, our ancients wisely attributed their origin to the Creator. According to

tradition, it was Shiva who unfolded the knowledge of Siddha system of medicine to his consort, Parvati, who handed it down to Nandideva and he, to Siddhars. Therefore it is called 'Saiva Sampradayam' (tradition of Shive), or 'Siddha Sampradayam'. In the case of Ayurveda it was Brahma, the Creator of the Universe, who taught the science to Prajapati, he to Aswini Devatas and they, in their turn, to Atreya etc. So this tradition is called the Brahma or Arsha Sampradaya (the tradition of Rishis). The inference to be drawn from these traditions is that, there is no exact point of time to which the beginning of these systems could be traced. They are eternal, without a beginning or end; they began with man. The Tamils have a distinct civilization, which is not disputed by historians. The recorded history of the Tamils is thousands of years old. Apart from the literature of the first, the middle and the last Sangam periods which bears ample testimony to the extent of Tamil civilization and its eminence, mention is made even in contemporary Sanskrit literature about Cholas, Pandiyas and Cheras and their kingdoms. A civilized society must naturally have had a system of medicine which catered to the health needs of its people. This was the Siddha system. The term 'Siddhi' means 'achievement' and the Siddhars were men who achieved certain results in medicine, as well as in yoga or tapas. The results in medicine were achieved by the Siddhars through their mental powers, they bequeathed to their 'Chilas' or pupils, who preserved and propagated the science. Eighteen siddhas seem to have existed. They should have lived at different periods and bequeathed their experiences in medicine and yoga to posterity. The names of these eighteen Siddhas differ from one source to another. It is not necessary to

dogmatise which of these enumerations is correct. Some of the Siddhas, for example, Kapila and Kakabujanda have written treatises both in Tamil and in Sanskrit. It is possible that the originals were written in Tamil and that they were translated into Sanskrit later. The following is the list of eighteen Siddhas according to one recension: 1. Nandi 2. Agasthiyar 3. Thirumular 4. Punnakkeesar 5. Pulasthiyar 6. Poonaikannar 7. Idaikadar 8. Bogar 9. Pulikai Isar 10. Karuvurar 11. Konkanavar 12. Kalangi 13. Sattainathar 14. Azhuganni 15. Agappai 16. Pambatti 17. Theraiyar and 18. Kudhambai.

Names like Bogar, Idaikadar and Theraiyar are of recent origin and these Siddhars lived probably in the middle ages. There are also authors of Siddha treatises like Sattaimuni, Yugimuni, Macha Muni, Kakabusundar etc., whose works are available in parts at the present day and are being used.

Siddha System is one of the ancient traditional systems of medicine in India. Siddhars the spiritual scientists of Tamil land are the founding fathers of this scientific system. According to Siddha System the human body is the replica of the universe so are the food and drugs irrespective of their origin. Siddha system believes that all objects in the universe including human body are composed of five basic primordial elements, namely earth, water, fire, air and space. The human body is a conglomeration of three humors and seven physical components. The Food is considered to be basic building material of human body, which gets processed into humors, tissues and wastes. The equilibrium of humors, body tissues and waste products is considered as health and its disturbance or imbalance leads to disease or pathologic state (Kurup, 1983).

This system also deals with the concept of immortality and salvation in this life. The exponents of this system consider that achievement of this state is possible by regulated diet, medicine and processing of mind by yogic or spiritual exercises like meditation and yoga. Siddhars described 96 principles as the constituents of Human Being. They include Physical, Physiological, Mental and Intellectual components of a person. They are nothing but the manifestations of the "Five Basic Elements".

Disease

Disease is a condition in which there is imbalance in the "Five Elements, which alters the "Three Humours" which is also reflected in the seven physical constituents. The change disturbs the equilibrium and cause disease. The basic concept of Siddha system of medicine is

"Food is Medicine - Medicine is Food"

Saint Thiruvalluvar says

" Miginum Kuraiyinum Noi Seyyum
Noolor
Vali Mudhala Enniya Moondru "

"Wind, bile and phlegm three cause
disease
so Doctors deem it more or less"

Diagnosis

" Noi Naadi Noi Mudhal Naadi Athu
thanikkum
Vaai Naadi Vayppa Seyal."
"Test disease, its causes and cure
and apply remedy that is sure"

-Thiruvalluvar.

It is always essential to identify the cause for any disease to be accepted as a "Scientific method" The Diagnostic methodology in Siddha Treatment is unique as it is made purely on the basis of

the "Clinical Acumen" of the Physician. He examines the Tongue, complexion, speech, eyes, palpation in a patient and he also examines the urine and stools. The diagnosis is then confirmed by the "Pulse Diagnosis ". The above approach is collectively known as "Eight types of examinations". However, the Siddha Physician now also accepts the modern diagnostic methods for the purpose of diagnosis.

Treatment

The following line of treatment have been in practice in Siddha medicine.

- Using medicines like Choornam, Kudineer, Vadagam etc. made of herbs.
- Surgical methods like incision, excision, heat application, blood letting and leech application etc.
- Physiotherapy - Thokkanam and Varma, the Siddha way of Touch therapy, Medicated Oil application, Fomentation, herbal steam bath etc.
- Using medicines like Parpam, Chenduram, Chuxnam etc. made of minerals especially of metals.

Significance

The Siddha System is capable of treating all types of chronic diseases especially arthritis, skin problems urinary tract disorders, infertility, degenerative disorders like osteo arthritis, Senile Dementia, disease of the liver, medicinally treatable Spinal disorders, general debility, diarrhoea and intractable allergic disorders. Aringnar Anna Govt Hospital of Indian Medicine, Arumbakkam, being the premier institute in Tamil Nadu for Indian Medicine and Homoeopathy treats both outpatient and inpatient.

Ayurveda System of Medicine

Ayurveda is an ancient system of medicine, which originated in northern India antiquity of which dates back to the period of vedas and this is said to be born from Atharva Veda. This knowledge has been gathered due to constant observation of nature for long years by men since the advent of civilization and cannot be attributed to any individual or a group of individuals by any stretch of imagination. Ayurveda is basically based on the predominance of three humours namely Vatha, Pitta and Kapha in the human body. Balanced state of these doshas denotes health and their imbalance produces disease.

Preceptors like Charaka, Susrutha have been benevolent enough to compile these invaluable treasure troves of knowledge to be passed on to posterity. The fact that Ayurveda has stood the test of time bears ample testimony to its efficacy till date. It comprises of eight branches namely.

1. Kaya Chikitsa (General Medicine)
2. Kaumara Bhruthya (Paediatrics)
3. Bhutha Vidhya (Psychiatry)
4. Salakya (ENT and Ophthalmology and dentistry)
5. Shalya (Surgery)
6. Agada Tantra (Toxicology)
7. Rasayana (Rejuvenation Therapy)
8. Vajeekarana (Aphrodisiac therapy)

Pancha karma one of the areas of specialization, which has earned public acclaim in recent times, is also a part of the above branches. It enjoys popularity because of its being hands on therapy and is very relaxing to the fatigued body and tired mind [22].

Unani system of Medicine

Unani system of Medicine has originated in Greece. It was further enriched and

developed by Arabs and Persians. Hippocrates explained that the disease was a normal process and its symptoms were the reaction of the body to the disease. The chief function of the physician was to aid the natural forces of the body. He held that there exists in the body four humours that keep up the balance of it. He also laid emphasis on diet, drugs of plants, animal and mineral origin for curing the disease.

The Unani system of Medicine is based on the Humoural theory. Humoural pathology which presupposes the presence of four humours namely - Blood (Dam), Phlegm (Balgham), Yellow bile (Safra) and Black bile (Sauda) in the body. The temperament of persons is expressed accordingly by the words Sanguine, Phlegmatic, Choleric and Melancholic according to the preponderance of them in the body. Everybody has got unique humoural constitution which represents the healthy state of humoural balance of the body. The Unani medicine plays a vital role when the individual experiences the humoural imbalance. The correct diet and digestion can bring back the humoural balance. Its main emphasis is on diagnosis of a disease through Nabz (Pulse), Baul (Urine), Baraz (stool) etc. It has laid down six essential prerequisites for the prevention of disease. They are known as 'Asbab-e-sitte Zarooriya' viz. air, drinks and foods; bodily movement and repose; psychic movement and repose; sleep and wakefulness; excretion and retention [23].

The modes of treatment are as follows:-

- i) Ilaj bid-Tadbeer (Regimental therapy)
- ii) Ilaj bid Ghiza (Diet Therapy)
- iii) Ilaj bid Dawa (Pharmaco Therapy)
- iv) Jarahat (Surgery)

The regimental therapy includes venesection, cupping, sweating, diuresis, bath (Hammam), massage, cauterization, purging, vomiting, exercise and leeching etc. Dieto therapy aims at treating certain ailments by administration of specific diets, whereas pharmaco therapy deals with use of naturally occurring drugs, mostly herbals though drugs of animals and mineral origin are also used.

Diagnosis and Treatment

The unani system of diagnosis of diseases and treatment restoring health revolves round the concept of temperament or 'Mizaj'. The humours also have specific temperament. Changes in temperament are related to changes in the balance of humours. Any change in temperament brings about a change in the health of the individual. Thus imbalance of the harmony of humours and temperament along with failure of one or more parts of the body to eliminate pathogenic waste causes disease. The Government recognized the merit of Unani system and attempts were made to develop it as a viable system of medicine for National Health care. The Unani drugs are cost effective, safe and widely accepted by the people of India. Therefore, the Tamil Nadu Government have established a Unani Medical College and Unani dispensaries.

Homoeopathy System of Medicine

Homoeopathy is a system of treatment of the diseased by drugs usually prescribed in minute doses that in a healthy person would produce symptoms like those of disease. The Homoeopathy way of healing was devised by the Great German physician Dr.Christian Frederick Samuel Hahnemann in the late 18th Century. He came across an old idea of the efficacy of

'Cinchona bark' in treating intermittent fever due to its toxic effect on the stomach and conducted experiments upon himself in order to get the truth. He deduced from the experiment that Cinchona was used as a remedy for intermittent fever and it could produce symptoms similar to those of intermittent fever in healthy people, if taken for a specific period of time. The law of 'Similia Similibus Curentur' or 'let likes be treated by the likes' thus forms the basis of treatment under the Homoeopathic method of drug therapy employed to cure the natural sufferings of person by the administration of drugs which have been experimentally proved to possess the power of producing similar artificial sufferings or symptoms of diseases in healthy human being [24].

In Homoeopathy, the main emphasis is on the remedial agents in illness and in health. It is a low cost system using only the non-toxic drugs. It has established a reputation for successful treatment of acute and chronic illness and in certain disease for which there is no or less treatment in other systems. Dr.Samuel Hanemann, who was the founder of this system, enunciated the basic concepts and its principles in "Organon the Art of Healing" in the year 1810. Due to various reasons like cost-effectiveness and non-toxic nature of its drugs, no side effects of easy in take. Homoeopathy is getting a very high recognition and acceptance from the people. Having its origin in the moden scientific age, it has the benefit of basing its theory and concept on demonstrable scientific principles and procedures.

It is based on the following cardinal principles

1. The law of Similars
2. The law of Single Remedy
3. The law of Minimum Dose
4. Doctrine of Drug proving
5. Doctrine of dynamisation

6. Doctrine of vital force

7. Doctrine of Chronic disease

Among this, the most fundamental is the 'law of Similars'. This law states that the symptoms experienced by the sick person are reactions of the body which it mobilizes in order to counteract a morbid influence, be it a specific stress such as bacteria or viruses, or a non-specific stress such as climatic changes, environmental pollution, mental and emotional disturbances etc. Among the seven, first three are having more therapeutic importance and value.

Health and Disease

This system assumes that any disease symptoms, syndrome is the reaction of the defence mechanism of human body against the disease-causing agent. The symptoms are the means through which the body tries to regain its lost balance. According to it, the symptoms syndrome in a disease is not the disease per se but the reaction of the defense mechanism mobilized by the body in order to counteract a morbid influence existing in the body and causing the loss of balance of the healthy body. Thus the disequilibrium in the normal functioning of the organs of body implies sickness.

Diagnosis and Treatment

In Homoeopathy patients are diagnosed (their individual symptoms) but not their disease. As there is specific medicine for specific disease, unless the diseases are diagnosed, they cannot be treated, in other systems of medicine, whereas in Homoeopathy, medicine are proved in healthy individuals are their symptoms are recorded. In order to treat the diseased individual their symptoms are to be matched with the patients' symptoms. Therefore, importance is given to the

symptomatology than the diagnosis. By treating in this way, the natural defence mechanism (Immunity) of the individual is strengthened and recurrence of the disease is curtailed.

In deciding the treatment, the Homoeopathic practitioner follows the well-known principles of 'Similia Similibus Curentur'. In simple terms it means let the similar substance which can produce specific symptoms in a healthy individual cure those similar symptoms in a sick individual, although the symptoms have arisen from another cause i.e. Bacteria, Virus etc., The cure is based on the assumption that the patient is extremely sensitive to that particular remedy and only to that remedy which can produce his/her symptomatology. Homoeopathy has a definite and effective treatment for some disease such as Diabetes, Arthritis, Bronchial Asthma, Epilepsy, Skin Eruption, Allergic conditions and Mental or Emotional disorders. Even, some surgical disease gets cured in Homoeopathy without undergoing surgery. Thus the sick person after taking treatment not only gets cured of his disease, but simultaneously regains a perfect state of health.

Naturopathy & Yoga System of Medicine

Naturopathy is not just a system of medicine but a way of life. It is often referred as drugless therapy. It is based mainly on the ancient practice of the application of the simple laws of nature. There are two schools of thought regarding the approach of Naturopathy. One group believes in the ancient Indian methods. The advocacy of Naturopathy pay particular attention to eating and living habits, adoption of purificatory measures, use of hydrotherapy, cold packs, mud

packs, massage and a variety of measure based on their innovative talent.

A carefully supervised total fast or partial fast is advocated to clear the system of toxic accumulation. Water or dilute fruit juices are permitted. The Naturopathy has to keep a strict supervision lest the patient may develop physical and emotional untoward effects. The system believes that, if the way of life is properly organised, one can get the bounties of energy, health and happiness from the benevolent nature. What one has to do for prevention of disease, promotion of health and to get therapeutic advantages is to adopt natural means to living. Naturopathy is based on various treatments like magneto therapy, massage therapy, physiotherapy, phychotherapy, reflexology, chromotherapy, acupuncture, accupressure, yoga therapy and diet therapy [25 and 26].

Discussion

A noteworthy feature in ethnomedicinal system is the use of medicinal as well as food plants as ingredients for drug preparation. Certain types of these substances not only help the body in providing energy sources but also assisting in the body's plastic repairs as well as interfering in the complicated chemical reactions of life processes. The "non nutritional" chemicals like alkaloids, flavanoids, terpenes, glycosides etc. have therapeutic potentials comparable to isolates from non-edible plants. In many developing countries therapeutic lists commonly contain a number of plant based drugs, partly because modern synthetic drugs are beyond the reach of greater portion of the population and heavy financial burden of expensive synthetic drugs. Phytotherapy provides a

complimentary form of medicinal agents and an alternative to modern orthodox medicine. It is viewed as a natural approach for the treatment of metabolic and chronic disorder, viral infections and infections due to drug resistance organisms. Curtailment of bacterial infections by antibiotic, and improved standard of living leads to longer longevity, hence a greater number of people are living to a very old age having the problems of senescence, which require a different kind of 'drug'. Scientific validation and pharmaceutical supervision for good, safe and consistence medicinal preparation from plants can minimize some of the criticism against herbal treatment. When medicinal plant products are subjected to the rigors of applied science, the experimentation reveals and clarifies the condition and the pharmacodynamic basis for the use of such plants in medical practice. These reevaluations would provide a rationale for the use of those plants.

The herbal drugs can be continually used in chemotherapeutics as (i) the plants drugs provide a desirable therapeutic effect with reduced risk of iatrogenous diseases associated with allopathic medicine; (ii) The infusion dosages of herbal preparation have bioavailability advantage over conventional dosage forms; (iii) the enhanced solubility and dispersion of active molecules at gastro-intestinal absorption sites reduced the problems encountered in the pharmacodynamic phase of drug therapy; (iv) herbal drugs are most suitable for the diseases requires long-term medication such as arthritis, hepato-biliary deficiency, spleen disease, etc, because most plant extracts are used in repeated low doses; (v) compared to the synthetic compounds herbal drugs have a reduced chance of acute toxicity and secondary drug effect; and (vi) the multi-

component feature of phytotherapeutic agents is considered a positive attribute as biodynamic agents since the same extract often includes compounds that have synergistic activity, and in some instances even that antagonize the main activity of the plant product, thereby maintaining the equilibrium.

It is therefore important to study the phytotherapeutic agents as they play vital roles in clinical medicine. The study of medicinal plants is also important because of the adverse effect sometimes observed with herbal drugs. Hence it is of immense clinical importance to determine the acute and chronic toxicity of therapeutically useful plant products and know whether or not they exhibit the expected pharmacological action. Until today relatively little effort is spent on investigation of medicinal plants as drug sources because (i) it requires a considerable space and labour to cultivate and harvest sufficient amounts of a plant material; (ii) due to seasonal and climatic variations of the biological activities each individual batch should be considered separately; (iii) natural hazards and political restrictions like war may disrupt the supply of raw materials. However, the same argument could be made for food plants. It is estimated that so far less than 10% of the global genetic resources have been studied seriously as source of medicines and from this small fraction, humanity has reaped enormous benefits.

This approach to the discovery and development of plant products as medicines holds a lot of promise for people of developing countries. The increase in the acceptance of the 'holistic' philosophy of therapy by the medical profession, which the traditional systems exemplify, is a further indication that there will continue to be a growing demand for

natural product based drugs derived from traditional medicine. The global herbal trade is at an early stage in its evolution or revival, which places the producers, especially in developing countries, in a strategically favorable position to compete with the major players, unlike in other biological resource based industries where new entry into the market is frustrated by already saturated fields with large companies in Europe and USA. Until 1990 India has over 46,000 pharmacies manufacturing traditional remedies and in the last 10 years the number increases sharply.

According to the World Health Organization the safety should be the overriding criterion in the selection of herbal medicines for use in healthcare. Proof of safety should therefore take precedence over establishing efficacy. There is no longer any doubt regarding the value of traditional remedies, but the difficult part of it is the conversion of these remedies into modern therapeutic agents in a sustainable and safe manner. It is generally recognized that accuracy of labeling the constituents of medicinal plant remedies is critical for their proper use, safety evaluation and drug control. Yet, many people are hesitant to disclose the ingredients in their preparation. This reluctance to divulge 'trade secret' is largely due to the fact that the formulations are unprotected by any legal instrument. This cloak of secrecy leads to a situation where genuine medicines are sold alongside 'fake' remedies with fantastic claims. It is therefore, the part of the duty of the medicinal plant experts to devise methods for protecting the rights of the medicinal plants. This is an area of study, which is grouped under the omnibus term 'intellectual property rights' (IPR). It is the fact that large quantities of plant materials are often required for the production of

phytomedicine and therefore, it is very important that such herbs are collected in sustainable manner.

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