

Review Article

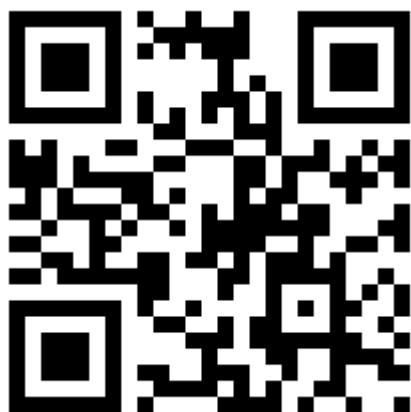
Received on: 08-08-2014
Accepted on: 09-11-2014
Published on: 15-12-2014

Corresponding Author:

* Rajesh Yadav,

Department of Pharmacy, SRMS,
College of Engg. and Tech., Bareilly,
U.P.

Tel No: +919410294357,
+919458702562



*Email Id-raj_ishu78@rediffmail.com

Traditional Systems of Medicine in India

Yadav Rajesh^{a*}, Yadav Nita^a, Kharya Murli Dhar^b

ABSTRACT

The Indian System of Medicine is of great antiquity. It is the culmination of Indian thought of medicine which represents a way of healthy living valued with a long and unique cultural history, as also amalgamating the best of influences that came in from contact with other civilizations be it Greece (resulting in Unani Medicine) or Germany (Homeopathy) or our scriptures/sages which gave us the science of Ayurveda, Siddha. Medicinal plants based traditional systems of medicines are playing important role in providing health care to large section of population, especially in developing countries. Interest in them and utilization of herbal products produced based on them is increasing in developed countries also. To obtain optimum benefit and to understand the way these systems function, it is necessary to have minimum basic level information on their different aspects. For Standardization and testing of drugs, various agencies have been put in plan by the Government of India. Four different Pharmacopoeia Committees are working for preparing official formularies / pharmacopoeias to evolve uniform standards in preparation of drugs of Unani, Ayurveda, Homeopathy and Siddha and to prescribe working standards for single drugs as well as compound formulations. In this review, an attempt has been made to provide general information pertaining to different aspects of these systems. This is being done to enable the readers to appreciate the importance of the conceptual basis of these systems in evolving the material medica. The aspects covered include information about historical background, conceptual basis, different disciplines studied in the systems, Research and Development aspects, Drug manufacturing aspects and impact of globalization on these systems.

Key-words: Unani System, Ayurveda, Homoeopathy, Siddha System

Cite this article as:

Yadav Rajesh, Yadav Nita, Kharya Murli Dhar, Traditional Systems of Medicine in India, Asian Journal of Pharmaceutical Technology & Innovation, 02 (09); 2014. www.asianpharmtech.com

^{a*}Department of Pharmacy, SRMS, College of Engg. and Tech., Bareilly, U.P.

^bDepartment of Pharmaceutical Sciences, Dr H. S. Gour Central University, Sagar, M.P.

INTRODUCTION

A number of traditional systems of medicine exist in India of which Ayurveda is the most popular. Despite being in use for more than 3000 years, few properly designed trials have scientifically examined the clinical potential of Ayurvedic and other medications. The traditional systems of medicine are of great relevance to the health care of the people. It is calculated that majority of world population are still relying on various traditional systems of medicine¹. Kerala is the first state in the country, which separates the traditional systems of medicine into Unani, Ayurveda, Homeopathy and Siddha respectively. For human beings disease threatens not only the well being of sufferers and their fellows, but also the integrity of the community. Illness and death are disruptive events that impose high economic, social and psychological costs wherever they occur. Therefore it is of primary importance to the members of every group to try to maintain their health and to restore to health those who fall ill².

Every human community has responded to this challenge by developing a medical system that can be used to store health. A system of medicine or medical system can be defined as the pattern of social institution and cultural traditions that evolved from deliberate behavior to enhance health. Several traditional medical systems exist along with contemporary scientific medicine system. The published accounts of world's medical system make the subject matter of Ethnomedicine which is concerned with the beliefs and practices relating to disease that are products of indigenous cultural developments and are not derived from conceptual framework of modern medicine. Let us discuss the health and casualty concepts, therapist and therapy concept of various system of medicine practiced in India^{1,3}. The major systems of medicine widely practiced are enlisted below:

- a) Unani system of medicine
- b) Ayurvedic system of medicine
- c) Homoeopathic system of medicine
- d) Siddha system of medicine

a) Unani System of Medicine

Introduction: Unani system of medicine may be traced to that system of Greek medicine that was developed during the Arab civilization. It was the Greek philosopher-physician Hippocrates on whose teachings the theoretical framework of medicine is based. After him a number of other Greek scholars enriched the system considerably. Of them Galen stands out as the one who stabilized its foundation, on which Arab physicians like Razes and Avicenna constructed the imposing edifice. It is now practiced in the Indo-Pakistan subcontinent after being introduced by Arabs.

The basic philosophy of *Tibbis* that body is composed of matter and spirit. Human body is taken as a totality because harmonious life is possible only if there is a proper balance between bodily and spiritual functions. Thus *Tibb* aims at restoring the original state of body. It also provides counseling service and attempts to treat the whole person within a family context^{4,5}.

Concepts and Principles of Unani System of Medicine: Unani system of medicine believes that there is a power of self preservation or adjustment called defence constitution of an individual that gets affected when ill and need restoration to normal by the use of various therapy prescribed in the system. The basic framework consists of theory of Hippocrates, which presupposes the presence of four humours in the body namely blood, phlegm, yellow bile and black bile. Unani medicine strives to find the best possible ways by which a person can lead a healthy life with the least sickness. The logic behind maintaining good health is based on the concepts of hygiene or *Hifzan-e-Sehat* and the six essential causes to maintain health or *Asbab-e-Sehat Zaruriah*. The body is regarded as comprising of following seven principles:

1. **Arkan (Elements)**- Comprising different states of matter and material entering into and forming a part of everything in Universe. These are simple and irreducible individual substances that provides the primary component for a compound. They cannot be further dissolved into simpler entities. According to ancient percepts of Unani theory, there are four primary elements namely *Nar* or fire, *Hawah* air, *Ma* or water and *Arzor* earth. This is a widely accepted theory among all schools of thoughts of Unani medicine. Air stands for gaseous state, water for liquid state, earth for solid state while fire stands for matters that has been transformed into heat. The properties of these four elements are: *Nar*- hot and dry, *Hawah*-hot and wet, *Ma*-cold and wet and *Arz*-cold and dry
2. **Mizaj (Temperament)**- It occupies a very important place in Unani/*Tibb* and forms the basis of pathology, diagnosis and treatment. The temperament of the person to be treated is expressed by the Galenic concept of its being sanguine, phlegmatic, choleric or melancholic, according to the respective prevalence of the humours. In other words, temperament of the individual is equal to the uniqueness of the

individual or, in modern terminology, the psycho-neuro-endocrinal system with its orientation tempered differently in each individual. Any change in the temperament brings about a change in the person's state of health. Thus disease is an expression of an imbalance of the humours or the disturbance to their harmony and of the failure of one or more parts of the body to eliminate pathogenic waste. There are two types temperaments:

- (a) Equal temperament: When the contrary qualities of elements present in a compound are equal in quantity and perfectly balanced according to the required properties and functions of that compound, it is known as equal temperament.
- (b) Unequal temperament: When the opposite qualities of the elements in a compound are quantitatively unequal and unbalanced, it is known as unequal temperament.

3. **Akhlāt**- It constitute the structural components of the body.

4. **A'da**- It represents the fully developed and mature organs.

5. **Ruh**- It refers to the vital force or life force.

6. **Quwa**- The bodily power/energy is represented by this principle.

7. **Afal**- The physiology of the body including biochemical processes make the *Afal*.

The ancient Unani scholars based their study on the theory of humours which combined both physiology and pathology. According to them there are three types of matter in the human body namely solid, liquid and gas. The solid parts are known as organs or *A'da*, liquid parts are known as humours or *Akhlāt* and the gaseous parts are known as pneuma or *Ruh*. The body fluids, which are humours, are further sub-divided into four types: *Dam* (Blood), *Balgham* (Phlegm), *Safra* (Yellow bile) and *Sauda* (Black bile). On the basis of different constitution, people can be categorized under four basic temperaments. The four are *damwi*, *bilious*, *phlegmatic* and *melancholic* temperamen⁵.

Diagnosis: Diagnosis in the Unani system is carried out in the following manner:

- (1) Body heat is measured by pulse, palpitation and thermometer.
- (2) Urine gives many indications of disorders in kidney and liver and in the organs of digestion and plays an important part in the Unani system.
- (3) Examination of stools helps in the diagnosis of certain diseases (laboratory examination of urine and stools are made).
- (4) Observation, palpitation and percussion are used to diagnose disease of the internal organs. Every disease is fully described in Unani literature with its symptoms, points of differential diagnosis and all its complications. A detailed examination of a patient entails studying the person as a whole. The tongue gives an indication of the condition of the blood and functions of the digestion. The eyes, lips, teeth, throat and tonsils have all indicative signs together with other physical conditions and secretions. Sleep, fear or grief, anger or happiness also provides indicative signs^{5,6}.

Treatment: The humours are assigned temperaments i.e. blood is hot and moist, phlegm is cold and moist, yellow bile is hot and dry and black bile is cold and dry (in their physical temperaments). Drugs are also assigned temperaments and there are degrees of these temperaments. The temperament of a given drug is assessed by its action on the temperament of the body itself. Thus, a drug said to be hot means that when it enters the body and interacts with the vital faculties. It produces a temperament which is hot. Hence drugs are principally used to correct the abnormal pathological temperament of the body itself or any particular system or organ.

The practitioners of *Tibbare* known as *Tabibsor Hakims*. In the Unani system of medicine various types of treatment employed are:

1. Regimental therapy (*Ilaj bid-Tadber*)
2. Dietotherapy (*Ilajbil-Ghiza*)
3. Pharmacotherapy (*Ilaj bid-Dawa*)
4. Surgery (*Jarahat*)

The regimental therapy includes venesection, cupping, diaphoresis, diuresis, Turkish bath, massage, metastasis, cauterization, purging, emesis, exercise, leaching etc. Dietotherapy aims at treating certain ailments by administration of certain diets or by regulating the quantity and quality of food. Pharmacotherapy deals with the use of naturally occurring drugs of herbal, animal and mineral origin. The naturally occurring drugs are usually free from side effects and are symbolic of life. If such drugs are toxic in crude form then they are processed and purified in many ways before use. In Unani medicine both single and compound formulations are used in the treatment of various complex and chronic disorders.

The use of sugar to mask bitter and unpleasant taste is a characteristic of Unani medicine that was attributed to this system by Arab physicians. The candy coated pills were first introduced by Avicenna. The role of many drugs of India such as musk, cloves, cubeb, galanga, beetle nut, *chandana*, rhubarb, nutmeg, *imli*, nux-vomica and cassia bark was first acknowledged and introduced by Unani medicine. Various plant drugs used in the Unani system along with their uses are given in **Table 1**.

Table 1: Some of the Plants used in Unani System of Medicines^{6,7}

Plant Name	Unani Name	Part	Uses
<i>Acorus calamus</i>	Bach	Rhizomes	Toothache, dysentery
<i>Andrographis paniculata</i>	Chiraita	Leaf	Tonic, febrifuge
<i>Berberis aristata</i>	Darhald	Seeds, roots	Febrifuge, astringent, tonic hepatic dysfunction
<i>Calotropis procera</i>	Safedak	Latex, roots	Purgative, dysentery
<i>Commiphora wrightii</i>	Bol, guggul	Balsam	Rheumatism
<i>Corylus avellana</i>	Maghzfundug	Fruit	Tonic
<i>Carica papaya</i>	Avandkharbuza	Fruit	Digestive, diuretic
<i>Cheiranthus cheiri</i>	Todrisurkh	Leaves, flowers	Impotence, paralysis, expectorant, tonic
<i>Curcuma domestica</i>	Haldi	Rhizomes	Aromatic, stimulant, carminative
<i>Eruca sativa</i>	Tukhmejirjir	Fruit	Vesicant, expectorant
<i>Hordeum vulgare</i>	Jave, yava	Seeds	Demulcent
<i>Illicium verum</i>	Staranisi	Fruit	Carminative
<i>Ipomoea nil</i>	Kala dana	Seeds	Purgative
<i>Juglans regia</i>	Akhroat	Seeds	Rheumatism
<i>Lawsonia inermis</i>	Henna	Leaves	Headache, muscular pain
<i>Mentha piperita</i>	Podinakhush	Leaves	Fever, cough, diarrhoea
<i>Nelumbo nucifera</i>	Nilofar	Rhizome	Diarrhoea
<i>Onosmodium bracteatum</i>	Burg gaozaban	Leaves	Tonic, demulcent, diuretic
<i>Psidium guajava</i>	Amrood	Fruit	Laxative
<i>Rosa damascena</i>	Gul-e-surkh	Flowers	Astringent
<i>Rutagraveolens</i>	Sudab	Whole plant	Anthelmintic, rubefacient
<i>Syzygium cumini</i>	Jambul	Seeds	Hypoglycemic
<i>Viola odorata</i>	Banafshah	Flowers	Purgative, demulcent
<i>Zingiber officinale</i>	Zonth	Rhizome	Bronchitis
<i>Zanthoxylum armatum</i>	Darmar	Fruit	Antiseptic

b) Ayurvedic System of Medicine

Introduction: Ayurveda originated in India long back in pre-vedic period from Vedas, which is the most ancient text and gives more information on the health and diseases than any other documented knowledge. Ayurveda born out of intuition and revelation, developed in due course into a complete system of medicine. The term Ayurveda means 'Science of Life'. It deals elaborately with measures for healthful living during the entire span of life and its various phases. Besides, dealing with principles for maintenance of health, it has also developed a wide range of therapeutic measures to combat illness. These principles of positive health and therapeutic measures relate to physical, mental, social and spiritual welfare of human beings. This is one of the oldest formulated systems of medicine widely practiced in India, Nepal, Bangladesh, Sri Lanka and Pakistan⁸.

The basic theories of Ayurveda arise from the concept of *Tridosha* that embraces the process of creation and evolution of Universe and laws of life. The function of the body is considered to be the complementary work of body, sense organs, mind and soul. Health in Ayurveda is defined as a well balanced and a happy state of being. Disease is also considered four folds i.e. body, mind, external factors and natural intrinsic causes. The treatment is done by use of drugs, diet and practices. Ayurveda considers humans beings in their totality and in their relationship with the universe. Its approach is that disease occurs due to imbalance in the equilibrium of three *doshas*, restoration of which eliminates the disease. Thus it aims at not only curing the disease but also enhancing the body vitality to combat the disease and strengthen the immune system so the disease is automatically cured or prevented. Ayurveda also gives due consideration to observation like daily routine, sleep, diet and gratification of senses. Thus it can safely be said that Ayurveda epitomizes the philosophy of complete and total healthcare and it is not merely a medical science but is in fact a way of life.

Concepts and Principles of Ayurvedic System of Medicine: According to Ayurveda there are three basic constituents of the physiological system. These constituents are called *Doshas*. They are the ultimate irreducible basic metabolic elements constituting the body and mind of living organisms. These are classified into *Vata*, *Pitta* and *Kapha*. These correspond primarily to elements of air, fire and water. They determine the life processes of growth and decay.

There are seven *Dhatus* or tissues in the body. These are: *Rasa*- body fluids, *Rakta*- blood, *Mansa*-muscular tissue, *Meda*- adipose tissue, *Asthi*- bone tissue, *Majja*- nerve tissue and bone marrow, and *Shukra*- generative tissue. There are also waste products (*Malas*). There are many *malas* in the body- stool, urine, sweat, nails, hair etc. Health depends on balanced state of all *dhatus*, *doshas* and *malas* both in quantity and quality.

Vata: The biological air humour is called *Vata*. It is primary dry, cold and light. It is most important or primary of three biological humours. It governs the other two and is responsible for all physical process in general. It sustains effort, exhalation, movement, the equilibrium of tissues and the coordination of senses. An aggravated *Vata* causes debility, tremors, distention, constipation, insomnia and sensory disorientation. *Vata* is located in the colon, thighs, hips, ear, and bones.

Pitta: The biological fire humour is called *Pitta* (bile) . It is responsible for all the chemical and metabolic transformation in the body. *Pitta* exists in the acid form and is essentially hot, moist and light. It governs digestion, heat, visual perception, hunger, thirst, lusture, courage and of stool, urine, eyes and skin, burning sensation and difficulty in sleeping. An aggravated *Pitta* results in accumulation of internal heat or fever with inflammation and infection. *Pitta* is located in small intestine, stomach, sebaceous glands, blood and lymph.

Kapha: The biological water humour is called *Kapha* (phlegm) that holds things together. It provides substances and gives support and makes up the bulk of bodily tissues. It also governs emotional traits, passion, patience and modesty. *Kapha* is primarily cold, moist and heavy. These are groups of enzymes which are responsible for digestion and metabolism in the body. It gives stability, lubrication and holding together of joints. Excessive *Kapha* causes depression of the digestive fire, nausea, lethargy, heaviness, white colour, chills, cough, difficulty in breathing and excessive sleeping. Higher *Kapha* content in the body causes accumulation of weight and gravity in the body, inhibits normal function and causes hypo-activity because of tissue accumulation^{9,10}.

According to Ayurveda all objects in the universe including human body are composed of five basic elements called *Panchamahabhutas* namely, earth, water, fire, air and sky. There is a balance of these elements in different proportions to suit different structures and functions of the body and its parts. The tissues of the body are the structural whereas humours are physiological entities, derived from different combinations of *Panchamahabhutas*. The food is considered to be basic building material of human body which gets processed into humours, body tissues and waste products. The equilibrium of humours is considered as health and its disturbance or imbalance leads to disease or sickness.

Diagnosis: Ayurvedic methods of diagnosis are extremely simple. Stress is given on urine, stool, semen, vomiting, sneezing, yawning, hunger, thirst, tears, sleep and heavy breathing for diagnosis of a disease. It also stresses upon the use of a wholesome diet along with the use of drugs for successful treatment of diseases. Knowledge of the site of manifestation of the disease is essential. Pulse examination is carried out through the help of radial artery. It is carried out early morning when the patient is in empty stomach. The diagnosis also involves the following examinations¹⁰:

- Pulse examination
- Urine examination
- Stools examination

- General physical examination
- Examination of tongue and eyes
- Examination of skin and ear including tactile and auditory functions

Treatment: There are many different therapies applied in Ayurveda. They can all be grouped as follows^{10,11}:

- (a) Tonification (Supplementation- make heavy)
- (b) Reduction (Elimination- to lighten)

Reduction therapies decrease the body weight and are indicated for heavy weight, accumulation of toxins and aggravated humours. It is indicated in acute stages of disease, when the attack is strong and primarily for *Kapha*. Tonification methods nourish deficiencies in body and are indicated in debility or tissue weakness. They are indicated in chronic diseases, in convalescence or after reduction methods have been used, and primarily for *Vata*. A mixed therapy is required for *Pitta*. *Vata* is treated by mild application of oils, mild sweating and purification methods. *Pitta* is treated with the ingestion of ghee by purgation with sweet and cold herbs, by sweet, bitter and astringent foods and herbs, by applying cool, delightful and fragrant essential oils, by amounting the heart with camphor, sandalwood, vetivert oils, etc. *Kapha* is treated by strong emetic and purgation methods according to the rules, by all kinds of exercises, by smoking of herbs and by doing physical hard work. Treatment of diseases in Ayurveda is accomplished by any of the following methods:

- (a) **Shamanotherapy:** Elimination of vitiated *doshas* or humours. The process by which the vitiated *doshas* subside or return to normal without creating imbalance or other *doshas* known as *shamana*. The administration of carminatives, digestives, creation of hunger or thirst, exercises and exposure to sun are classified under *shamanotherapy*.
- (b) **Shodhanotherapy:** Emesis, purgation, enemas and blood letting come under *shodhana*. They are also called *Panchakarma*.
- (c) **Surgical treatment:** Ayurveda advocates surgical treatment for those diseases which are not curable by medical treatment or in case where surgical treatment may provide immediate relief.
- (d) **Diet:** Ayurveda lays emphasis on regulation of diet and other regimens as part of the treatment.
- (e) **Drug sources:** In Ayurveda drugs are classified depending on their taste, attributes, potencies, taste after digestion, and therapeutic effect. In addition to single drugs, compound formulations are used for the treatment of diseases in the form of pills, powders, decoction, infusions, tinctures, alcoholic preparations, medicated ghee, and fractional distillates. Several pharmaceutical processes are followed for the preparation of medicines for easy administration, making the products delicious to taste, easily digestible and assimilable, therapeutically more efficacious, rendering them non toxic and more tolerable and for preservation of medicine for a long time. Ayurvedic drugs are administered both externally in the form of ointments, dusting powders, collyrium, ear drops and eye drops, and internally as tablets, pills, powders, syrups. Along with medicine some regimens like sleep, walk, rest, physical excretion are also prescribed to the patient. Thus herbal medicine play major role in the treatment of vitiated *Vata*, *Pitta* and *Kapha*. Some of the plants used in Ayurveda are listed in **Table 2**.

c) Homoeopathic System of Medicine

Introduction: This system of medicine is a medical discipline whose primary emphasis is on therapeutics. It is a low cost system employing non toxic drug exclusively. This system derives its name from two Greek words *Homoios* (like) and *Pathos* (treatment). This system of medicine is a holistic approach that takes into consideration the whole person and the relation of lifestyle to disease. Its aim is to bring back the lost equilibrium of the sick individual by stimulating and strengthening the defence mechanism. Homoeopathy emerged as an important therapeutic modality during the later half of the nineteenth century and has undergone periods of expansion and decline during this century. It has been serving suffering humanity for over two centuries and has withstood the upheavals of time and has emerged as a time-tested therapy. In India it has become a household name due to the safety of its pills and gentleness of its cure. It is more than a century and a half now that Homoeopathy is being practiced in India¹³.

Homoeopathic system of medicine was started by the chemist, physician and pharmacist Samuel Hahnemann of Germany. He put forward the law of similar which says that like cures like. He believed that the symptoms are no more than an outward reflection of the body's fight to overcome illness and not a manifestation of illness. He stated that the medicine given to cure should reinforce these systems. He initiated the treatment of a disease with a low dose of drug which themselves produced similar symptoms of the disease in normal individuals. According to Hahnemann there is not any normal and natural method for diagnosis of disease except its symptoms. He further noted that no two substances produced exactly the same set of symptoms. Each

provoked its own unique pattern of symptoms. Furthermore the symptoms were not just confined to the physical plane. Every substance tested also affected the mind and the emotions apart from the body¹⁴.

According to Homoeopathic medical system the health of a person is governed by power of the body that controls the functions of all organs. A disease produced in the body and the brain will affect the other body organs. The habits of telling lie, theft, deceit, evil, under diet, anger, etc. are the symptoms of mental disease. After collecting the information about diseases, stress is given to know its basic cause and its rectification.

In Homoeopathy, the process whereby the healthy individual takes doses of an extract (mother tincture) to assess the symptoms it induces is known as *Proving*. The person proving the drug, the prove maintains the precise, detailed and accurate record of physical, mental and emotional changes that various doses induce. For proving mother tincture of freshly gathered material are used. For treatment purposes these concentrated mother tinctures are diluted to enhance their healing power. Mother tinctures are further diluted to decimal and centidecimal potencies. The more the drug is diluted, or potentized, the greater is the ability to cure. This process is known as *Potentiation*. Another essential part of preparation of homeopathic drug is vigorous rubbing, shaking or tapping- known as *Succussion*- that is believed to release the power to heal and develop the action of drug.

Table 2: Some of the plants used in Ayurvedic System of medicines^{8,9,11,12}

Plant Name	Ayurvedic Name	Part used	Uses
<i>Andrographis paniculata</i>	Kalmegh	Leaves	Tonic, febrifuge, hepatic dysfunction
<i>Aristolochia rotunda</i>	Mudharaj	Tubers	Antitumour, antifertility
<i>Artemisia indica</i>	Nagdoona	Leaves	Antidiabetic
<i>Bergenia ligulata</i>	Pakhan bed	Root, leaves	Kidney stones, tuberculosis
<i>Cassia absus</i>	Chaksu	Seeds	Astringent, cathartic, ringworm
<i>Cassia occidentalis</i>	Kasundi	Seeds, leaves	Purgative, diuretic, tonic
<i>Garcinia indica</i>	Kokam	Oil	Skin diseases, cardio tonic
<i>Hemidesmus indicus</i>	Antamul	Root, whole plant	Fever, rheumatism
<i>Mimosa pudica</i>	Lajalu	Leaves, roots	Sores, piles, wounds
<i>Momordica chrantia</i>	Karela	Leaves, root	Antidiabetic
<i>Mucuna pruriens</i>	Kiwachh	Seeds	Anthelminthic, astringent
<i>Nardosstachys jatamansii</i>	Balcchar	Roots	Antiseptic, laxative, diuretic
<i>Ocimum basilicum</i>	Tulsi	Oil	Diaphoretic, carminative, skin diseases
<i>Plumbago zeylanicum</i>	Chitrak	Roots	Diaphoretic, abortifacient
<i>Saraca asoca</i>	Ashoka	Bark	Rheumatism, urinary diseases
<i>Taxus baccata</i>	Talispatra	Leaves	Antispasmodic, aphrodisiac
<i>Terminalia arjuna</i>	Argun	Bark	Astringent, diuretic
<i>Terminalia bellirica</i>	Bahera	Fruits	Astringent, brain tonic, liver disorders
<i>Tribulus terrestris</i>	Chotagokhru	Fruits, roots	Diuretic, astringent, lithontriptic
<i>Vitexagnus castus</i>	Rennuka	Leaves, roots	Laxative, galactogouge
<i>Vitex negundo</i>	Sambhalu	Fruits	Tonic, expectorant, febrifuge
<i>Wrightia tinctoria</i>	Inderjao	Root, bark	Flatulence, psoriasis

Hahnemann's proving involves Cinchona that produced symptoms similar to those of malaria in normal individuals for which the drug was used. In the same way, Belladonna on administration produces symptoms similar to scarlet fever. If the symptoms of disease are considered a manifestation of body's own defence mechanism against the disease then the Homoeopathy system serve to stimulate such innate defensive and curative process. Hahnemann prepared a list of drug with their effects on healthy individuals. Later findings by

his associates showed that Nux-vomica simulated the common cold while as Gelsemium, (yellow jasmine) gave an influenza like response and thus became the drugs for the treatment for respective disease.

Concepts and Principles of Homoeopathic System of Medicine: Homoeopathy is the system of treatment based on scientific methods and demonstrable laws and principles, which are^{14,15} –

a) Law of Similars-The law stated as “Let the same substance which can produce specific symptoms in a healthy individual cure those same symptoms in a sick individual”. It is also called the Law of Cure. This law demonstrates that the selected remedy is able to produce a range of symptoms in a healthy person similar to that observed in the patient, thus leading to the principle of *Similia Similibus Curentur* i.e. *let likes be treated by likes*. The effects of peeling an onion are very similar to the symptoms of acute cold. The remedy prepared from the red onion, *Allium cepa*, can be used to treat the type of cold in which the symptoms resemble those we get from peeling onion.

b) Law of Direction of Cure-It states that in the progressive movement towards cure the symptomology moves from more vital to the least vital functional centers within the organism. In other words, from the vital organs to the skin and in the higher context of the whole individual from the mental to the emotional to the physical centers.

c) Law of Single Remedy - This law directs to choose and administer such a single remedy, which is most similar to the symptom complex of the sick person at a time. Any other remedy will have no real curative effect as it will not bear the necessary sensitivity towards the particular response of the defence mechanism of the patient.

d) Law of Minimum Dose - In Homoeopathy, treatment is arrived at in conjunction with the patient's very detailed case history and constitutes the use of often very active drugs in extremely low doses. The remedy selected for a sick should be prescribed in minimum dose, so that when administered there is no toxic effects on the body. It just acts as a triggering and catalytic agent to stimulate and strengthen the existing defence mechanism of the body. It does not need to be repeated frequently. This law accounts for the alleged lack of side effects of Homoeopathic drugs.

Thus Homoeopathy is a holistic as well as individualistic approach and articulates the concept of vital force which according to Hahnemann is the force that reacts against the forces, which produce disease. It becomes deranged during illness and the best-selected Homoeopathic remedies stimulate this failing vital force so that, as Hahnemann said "It (vital force) can again take the reins and conduct the system on way to health.

Hahnemann's fundamental propositions peculiar to Homoeopathy may be stated as:

- a) That the action of drugs is demonstrable by observing the subjective symptoms, objective symptoms and pathological changes that occur when they are administered to healthy human subjects.
- b) That the action of drugs so observed in a healthy human being constitutes their therapeutic potentiality with respect to sick individual.
- c) That a similarity between diseases process in a particular individual and the known effects of a particular drug in healthy human being will lead to its successful application in the treatment of diseased individual.
- d) The conception of dynamism is applicable in respect of health and disease.

Diagnosis and Treatment: The skill of a Homoeopath (a practitioner of Homoeopathy) lies in his ability to illicit from his patient the precise nature of symptoms of illness. Only then can he determine the key substance to stimulate innate healing response in the patient and assist the vital force of healing. After the process of diagnosis, the determination of appropriate remedy involves a fundamental principle of homeopathy called *Individualization*. Here every case is treated as peculiarly individual. Although the disease for which different patients are consulting the physician may be the same, the indicated Homoeopathic remedy may be different for each one. A highly refined individualizing process is used. A Homoeopath interviews the patient to know the unique way in which patient reacts to his illness. The whole range of mental, emotional and physical pathology is considered in order to understand the reaction of the patient defence mechanism. He seeks the most suitable remedy for these reactions. Physician's interest is not only to alleviate patients present system but also long term well being. Therefore, in the interview physician has to probe deeply into the unique response of patients defence mechanism to stress and to have a thorough understanding of the totality of the patient's disequilibrium.

Homoeopathic medicines are used in the form of mother tinctures, small pills, powders and distilled water. They have the distinct advantage of being free from side effects. The patient should not take any kind of food or

drink before and after one hour of the dose. Various plants that are used in Homoeopathic system of medicine are summarized in Table 3.

Table 3: Some of the plants used in Homoeopathy^{13,14,15,16}

Name of Plant	Common Name	Uses
<i>Aconitum napellus</i>	Wolf's bane	Facial neuralgia, sore throat, cold
<i>Allium cepa</i>	Onion	Common cold
<i>Arnica montana</i>	Leopard's bane	Mental and physical shock
<i>Atropa belladonna</i>	Belladonna	CNS stimulant, neuralgia, chicken pox, measles
<i>Berberis vulgaris</i>	Berberis	Renal colic
<i>Calendula officinalis</i>	Marigold	Sores, wounds
<i>Cephaelis ipecacuanha</i>	Ipecac	Morning sickness, nose bleeding
<i>Cinchona spp.</i>	Peruvian bark	Malaria
<i>Gelsemium sempervirens</i>	Yellow jasmine	Migraine, stress, cold
<i>Lycopodium clavatum</i>	Club moss	Dyspepsia, stress
<i>Rhus toxicodendron</i>	Poison ivy	Rheumatism, lumbago, herpes
<i>Thuja occidentalis</i>	Tree of life	Cystitis, warts, headache
<i>Urtica dioica</i>	Stinging nettle	Scalds, burns, stings

d) Siddha System of Medicine

Introduction

The Siddha system of medicine owes its origin to the Dravidian culture which is of pre-vedic period. According to Indian history prior to Aryans migration, the Dravidian was the first inhabitant of India of whom the Tamilians were the most prominent. The languages of India were divided into two great classes, the northern with Sanskrit and the southern with Dravidian language. The Siddha was prevalent in south and Ayurveda flourished in the north.

The Siddha System is largely therapeutic in nature. The origin of Siddha system of medicine is attributed to the great Siddha Ayastiyar. The term Siddha refers to saints and persons known as *Siddhars* who achieved results in medicine. The *Siddhars* were great scientists in ancient times. Eighteen *Siddhars* are believed to have contributed towards the development of this medical system. An examination of the ancient literature would reveal that the vedic Aryas owed allegiance to the cult of Shiva and the worship of *linga* which later on absorbed by and incorporated into the vedic culture. The Shiv cult is associated with its medical counterpart, the Siddha system of medicine. Siddha system is one of the oldest systems of medicine in India. Siddha literature is in Tamil and it is practiced largely in Tamil speaking part of India, Sri Lanka, Malaysia and Singapore where the Dravidian civilization was dominant^{17,18}.

Concepts and Principles of Siddha System of Medicine: The concept and the practice of the Siddha system have a close similarity to Ayurveda, with specialization in iatrochemistry. According to this system all the objects in the universe are composed of five basic elements namely, earth, water, fire, air and sky. The food, human body and the drugs are all, made of these five elements. The proportion of the elements present in the drugs varies which is responsible for their varied actions and therapeutic results. This system believes that the human body, foods and drugs are the replica of the universe. This system also considers the human body as a conglomeration of three humours, seven basic tissues and the waste products of the body such as stool, urine and sweat, quite similar to Ayurvedic concepts. This system also deals with an additional concept of salvation in life and the possible achievement of this state by medicines and meditation. This concept is uniquely advocated by this system of medicine.

The equilibrium of humours is considered as health and its disturbance or imbalance leads to disease or sickness. The food is considered to be basic building material of human body which gets processed into humours, body tissues and waste products¹⁹.

Diagnosis and Treatment: It is holistic in approach and the diagnosis i.e. identification of causative factors involves the study of person as a whole as well as his disease. The Siddha system of medicine emphasizes that

medical treatment should be not only disease-oriented but has to take into account the patient, environment, age, sex, race, habits, mental frame, habitat, diet, appetite, physical and pathological condition. This means the treatment has to be individualistic, which ensures that mistakes in diagnosis or treatment are minimal. The diagnosis of diseases is done through the examination of pulse, urine, eyes, study of voice, colour of body and tongue.

Siddha system believes in the principle of food itself being medicine. The Siddha system is effective in treatment of liver, skin diseases especially psoriasis, rheumatic problems, anemia, prostate enlargement, bleeding piles and peptic ulcer. The system has developed a rich and unique treasure of drug knowledge in which use of metals and minerals is very much advocated. The system uses mercury, iron, copper, silver, gold, red, white and yellow arsenic, lead and sulphur and other mineral drugs as well as vegetable poisons in its medicine that have been found to be effective in treating certain infectious diseases including venereal diseases. The Siddha system also deals with the problems affecting the women's health and a lot of formulations are available which can counter the problems especially menopausal syndrome. The system claims its effectiveness in treating urinary tract infections, diseases of liver and gastro intestinal tract, general debility, postpartum anemia, diarrhoea and general fevers in addition to arthritis and allergic disorders^{17,18}.

The knowledge of plants and minerals from all the branches of science is used in preparation of medicine. In Siddha system chemistry had been found well developed into a science auxiliary to medicine. The practitioners of Siddha use several operations divided into several processes such as calcinations, sublimation, distillation, fusion, separation, conjunction or combination, fermentation, purification, incineration of metals, liquefaction and extraction.

ACKNOWLEDGEMENTS

I am grateful to SRMS, CET Management for encouragement. Special thanks are due to Professor MD Kharya for his helpful comments.

REFERENCES

1. Ali M, Text book of pharmacognosy, C.B.S Publications, New Delhi 2nd Edition, 2002.
2. Kokate CK, Purohit AP, Gokhale SB. Pharmacognosy, Nirali Prakashan, Pune, 31st Edition, 2005.
3. Evans WC, Trease and Evans. Pharmacognosy, Harcourt Brace & Company, Singapore, 14th Edition, 2001.
4. Syed Khaleefathullah (). Unani Medicine. In: Traditional Medicine in Asia. Ranjit Roy Chaudhury and Uton Muchatar Rafei Eds. WHO- Regional Office for South East Asia- New Delhi. 2002; 31-46.
5. <http://indianmedicine.nic.in/unani.asp>
6. Mosaddegh M, Naghibi F. Traditional medicine and material medica, Vol. 1. Teheran, Traditional Medicine and Materia Medica Research Center, Shahid Beheshti University of Medical Sciences, 2000.
7. <http://www.indianmedicine.nac.in>
8. Dahanukar SA, Thatte UM, Ayurveda revisited: Ayurveda in the light of contemporary medicine, Popular Prakashan, Bombay, 1994.
9. Nath N, Gupta S, The Ayurvedic system of medicine, Neeraj Publications, Delhi, 1984.
10. Mishra LC, editor. Scientific Basis for Ayurvedic Therapies. New York: CRC Press; 2004a. Allergic reactions; pp. 203-207.
11. Billore KV, Yelne MB, Dennis TJ, Chaudhari BG. Database on Medicinal Plants Used in Ayurveda, Volume-6. New Delhi: Central Council for Research in Ayurveda and Siddha; Kumkuma (*Crocus sativu*) 2004; 110-132.
12. Raghunathan K, Mitra R. Pharmacognosy of Indigenous Drugs- Vol. I. New Delhi: Central Council for Research in Ayurveda and Siddha; 1982.
13. Prasad LV. In: Indian System of Medicine and Homoeopathy Traditional Medicine in Asia. Chaudhury Ranjit Roy, Rafei Uton Muchatar., editors. New Delhi: WHO- Regional Office for South East Asia; 2002; 283-286.
14. Chaurasia OP, Parimelazhagan T, Ahmed Z. High altitude trans-himalayan medicinal plants of defence importance. In: Sharma RK, Arora R, editors. Herbal Drugs: A twenty First century Perspective. New Delhi: JAYPEE Brothers; 2006; 182-189.
15. <http://indianmedicine.nic.in/ayurveda.asp>
16. Sharma PC, Yelne M B, Dennis T J, editors. Data base on Medicinal Plants used in Ayurveda Volume 4. New Delhi: Central Council for Research in Ayurveda and Siddha; Bhunimba (*Andrographis paniculata*) 2002; 34-60.
17. <http://indianmedicine.nic.in/Siddha.asp>
18. <http://altmedangel.com/am.html>
19. Narayanaswamy V. In: Introduction to the Siddha System of Medicine. T. Nagar, Madras (Chennai): Research Institute of Siddha Medicine; 1975.