Research Article

AYURMATICS- AN OVERVIEW

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ABSTRACT

Ayurveda, the ancient science of life and health, is a unique heritage of India. Ayurveda is made up of two Sanskrit words: "Ayu" which means life and "Veda" means the knowledge. "Ayurveda' means the Science of life. It incorporates all aspects of life i.e. physical, psychological, spiritual or social. The issues that attribute the beneficial and harmful to life, the happiness and sorrowfulness of life; all these life span allied issues are elaborately and emphatically discussed in Ayurveda. According to the ancient Ayurvedic scholar Charaka, "Ayu" is comprised of four essential parts. These are the combination of the mind, body, senses and the soul. Ayurveda which has proven in India for hundreds of years has kindled the interest of the entire world and they look at it as an alternative holistic global health care system. But Ayurveda is not yet equipped to meet the challenges of the cyber society. So, Ayurveda needs to be restructured in the global context to meet the rising demands of a cyber society. The computerized Ayurvedic studies by the application of information technology and Information & Communication Technology (ICT) bought changes in the background of Ayurvedic professionals, medicolegal climate and strategies for healthcare system. The major components which can be adopted in the healthcare systems of Ayurveda are Consultant Information System, Drug Information System, Patients Information System, Knowledge base in digital format. The Ayurmatics facilitates to connect distant resources to work as a part of the system letting the door to open for revalidation and modernization of Ayurveda in fundamental and applied aspects.

INTRODUCTION

"Ayurveda' means the Science of life and it is eternal because it has no beginning, it deals with things, which are inherent in nature and such natural manifestations are eternal. With the changing concepts of health and disease and shifting scenario of health needs of the present times, there has been an amazing arousal of worldwide interest in Ayurveda which is likely to be accelerated with the growing trends of information technology, economic globalization and industrial activism. In spite of its glorious past of over 5000 years as a global Medicare system, the influence of Ayurveda among the foreign public began after the Alma Ata declaration of WHO in 1980 recognised Ayurveda as an alternative system of medicine (Patel and Arvind, 2000), is because of its holistic approach and the most user and environment - friendly system of medicine. Ayurvedic physicians prescribe individualized treatments, including compounds of herbs or proprietary ingredients, diet, exercise and lifestyle recommendations.

Three ancient books known as the Great Trilogy were written in Sanskrit on Ayurvedic medicine - *Charaka Samhita, Sushrutha Samhita and Astanga Hridaya*. Ayurveda therapies have varied and evolved over more than two millennia (Meulenbeld and Gerrit Jan, 1999).Therapies are typically based on complex herbal compounds, minerals and metal substances. Ancient Ayurveda texts also taught surgical techniques, including rhinoplasty, kidney stone extractions, sutures, and the extraction of foreign objects (Wujastyk Dominik, 2003), (Mukhopadhyaya and Girindranath, 1913). Ayurveda treatises describe three elemental substances, the humours (Sanskrit doṣas), wind (Sanskrit vāta), bile (pitta) and phlegm (kapha), and the state of equality (Skt. sāmyatva) of the doṣas results in health, while inequality (viṣamatva) results in disease. For example unbalance vata shows anxiety disorders, pittha- anger disorders and kapha depression disorders. Doshas are balanced when they are equal to each other, while another view is that each human possesses a unique combination of the doshas which define this person's temperament and characteristics. In either case, it says that each person should

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modulate their behaviour or environment to increase or decrease the doshas and maintain their natural state.

Ayurveda names seven basic tissues (dhatu), which are plasma (rasa), blood (rakta), muscles (māmsa), fat (meda), bone (asthi), marrow (majja), and semen (shukra). Like the medicine of classical antiquity, Ayurveda has historically divided bodily substances into five classical elements viz. earth, water, fire, air and ether (Underwood and Rhodes, 2008) (Fig-2). There are also twenty gunas (qualities or characteristics) which are considered to be inherent in all substances. These are organized in ten pairs: heavy/light, cold/hot, unctuous/dry, dull/ sharp, stable/mobile, soft/hard, non-slimy/slimy, smooth/coarse, minute/gross, and viscous/liquid (Chopra, 2003).

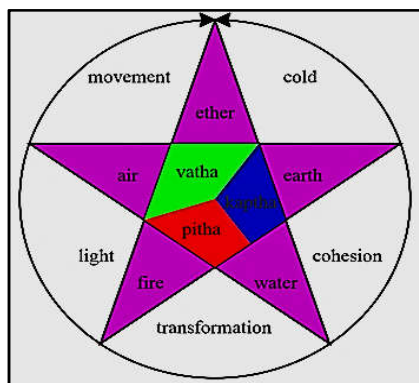**Fig 1** Charaka https://commons.wikimedia.org/wiki/File:Charak_statue.jpg

Fig 2 The three doṣhas and the five elements
from which they are composed
(Source: https://en.wikipedia.org/wiki/Dosha)

Origin of Ayurveda

The origin of Ayurveda has been traced back to around 5,000 BC, as an oral tradition. The first recorded forms of Ayurveda as medical texts evolved from the Vedas (Dikshith 2008), (Elizabeth R. Mackenzie and Birgit Rakel, 2006). Some of the concepts of Ayurveda have existed since the times of Indus Valley Civilization (Svoboda Robert E, 1992) Ayurveda is a discipline of the upaveda or "auxiliary knowledge" in Vedic tradition. The origins of Ayurveda are also found in Atharvaveda (Narayanaswamy, V 1981), (Frawley David and Ranade Subhash, 2001), which contains 114 hymns and incantations described as magical cures for disease. There are various legendary accounts of the origin of Ayurveda, e.g. it was received by Dhanvantari (or Divodasa) from Brahma (Dhanvantari, 2010); (Singh, Rana P. B. and Rana, Pravin S, 2002). Ayurveda is one of the few systems of medicine developed in ancient times that is still widely practiced in

modern times (Smith, Frederick M and Wujastyk, Dagmar, 2008).

Branches of Ayurveda

It is divided into eight branches.

1. Kaya chikistha (General medicine)
2. Bal roga or Kumar bhritya (Paediatrics; science of diseases of children)
3. Grah or bhoot vidya (Psychotherapy)
4. Shalakya tantra (Eye, ear , nose and throat related science)
5. Shalya chikistha (Surgery ; art of treating diseases with instrument)
6. Agad tantra (Toxicology; the Science of poisons)
7. Rasayana (Science of rejuvenation ; make young again)
8. Bajikaran (Science of aphrodisiac; sex stimulating)

Treatment

Two of the eight branches of classical Ayurveda deal with surgery (Salya-cikitsa and Salakya-tantra), but contemporary Ayurveda tends to stress attaining vitality by building a healthy metabolic system and maintaining good digestion and excretion. Ayurveda also focuses on exercise, yoga, meditation and sattvic diet. Ayurveda follows the concept of Dinacharya, which says that natural cycles (walking, sleeping, working, meditation etc.) are important for health. Hygiene, including regular bathing, cleaning of teeth, skin care, and eye washing, is also a central practice. Every anguish and distress of man is caused by his ignorance of the body and the mind. It is this anguish, which manifests as a disease. Appropriate and perfect knowledge retrieves man from his anguishes. Ayurveda attempts to understand and explain the human life in its entirety. It may not be completely true to characterise Ayurveda just as a science dealing with the human body and its life. Because, it is more than a healthcare system, it happens to be a philosophy of life (Varier and Regunath, 2001).

Ayurvedic Medicines

Whatever is natural, whether belonging to plants, animals, or minerals, is considered the source of raw material for Ayurvedic medicines. However 600 medicinal plant products, 52 minerals and 50 animal products are commonly used (Fig-3). Ayurvedic medicines are marketed in various forms. The main ones are tablets, pills, powders, fermentation products (Asva-arishta), decoctions, medicated fats (Ghrita and Tel). For topical use drops, creams, lotions, liniments and ointments are available. Dried plant extracts in capsule form are also in use presently (Sharma, 1987).

Fig 3 Ayurvedic medicines
Source: remedioscaserosenfermeria.com

There are several important factors that affect the current and future role of computers and information technology in Ayurvedic treatment. The computerized Ayurvedic studies by the application of information technology and information & communication technology bought changes in the background of Ayurvedic professionals, medicolegal climate and strategies for healthcare system. The major components which can be adopted in the healthcare systems of Ayurveda are Consultant Information System, Drug Information System, Patients Information System and Knowledge base in digital format. Above systems help to connect distant resources to work as a part of the system (Ram Mohan, 1998).

ICT in Ayurveda

Ayur-informatics is a science dealing with the application of bioinformatics to the Ayurveda medication to provide a scientific platform to the traditional Indian medications and application of information technology in the study of Ayurvedic research, medicine and patient care. Majority of India's population uses Ayurvedic medicine exclusively or combined with conventional Western medicine, and it's practiced in varying forms in Southeast Asia.

Ayurveda Practice and Education in India

In 1971, Central Council of Indian Medicine (CCIM) was established under Department of Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homoeopathy (AYUSH), Ministry of Health and Family Welfare, to monitor higher education in Ayurveda in India. Indian government supports research and teaching in Ayurveda through many channels at both national and state levels, and helps institutionalise traditional medicine so that it can be studied in major towns and cities (Wujastyk Dominik, 2003). The state-sponsored Central Council for Research in Ayurvedic Sciences (CCRAS) is designed to do research on Ayurveda. Many clinics in urban and rural areas are run by professionals who qualify from these institutes. As of 2013, India has over 180 training centers offer degrees in traditional Ayurvedic medicine. Kerala, which imbibed the pan- Indian Ayurveda, contributed its own share to this branch of knowledge (Varier, 1993). Kerala has produced a number of works on Ayurveda in Malayalam. Aitihyamala, a collection of popular legends on Malayalam contains many stories on the rare medical skill of various Astavaidyas, Kalari, the martial art of Kerala is a complimentary part of ancient medicine.

Due to globalisation, patents, intellectual property rights issues and Biopiracy are becoming a major problem in the indigenous traditional medical system like Ayurveda (Ramachandran, 2002). So there is going to be crises and challenges in the Ayurveda system. To fight Biopiracy and unethical patents, in 2001 the Government of India set up the Traditional Knowledge Digital Library as a repository for formulations of various systems of Indian medicine, such as Ayurveda, Unani and Siddha.

Electronic Web Resources for Research in Ayurveda

Tkdl Database: Traditional Knowledge Digital Library (TKDL) is a knowledge repository of Indian traditional knowledge related to medicinal, ethno-botanical plants and various concoctions of different formulations used in Indian systems of medicine. Council of Scientific and Industrial Research (CSIR) started TKDL project in 2001, as a collaborative effort with AYUSH, Ministry of Health & Family Welfare, Government of India. The objective of the TKDL is to protect the ancient and traditional knowledge of the country from exploitation through bio-piracy and undue patenting. TKDL is a collection of 148 books (transcriptions) on Ayurveda, Yoga and Naturopathy, Unani, Siddha and Yoga. All these works are available in public domain as the part of our traditional knowledge. TKDL, thus, is a database, capable of retrieval of text and its translation of ancient scripture into selected languages (AYUSH Research Portal, www.tkdl.res.in).

Ayurveda Practice in Other Countries

Unlike in India, the majority of the foreign government agencies have shown less concern in introducing Ayurveda in their country. The Alma Ata declaration of WHO in 1980, which recognized Ayurveda as an alternate holistic system of medicine has created major awareness in the West. This has expanded the scope of Ayurveda's official entry into Europe and America.

Nepal: Nepal has a special place in the history of Ayurveda. It is thought by many that the original knowledge of Ayurveda was obtained in the Himalayan foothills of Nepal. There are thousands of ancient Ayurvedic manuscripts located here. In addition, the biodiversity of Nepal makes it a fertile region for many Ayurvedic herbs. Besides the living tradition its National Archives has many Ayurvedic manuscripts, which are only available here and are yet to be published. About 75%-80% of the population of Nepal use Ayurveda (Alam and Zulfeequar, 2008) and it is the most practiced form of medicine in the country (Guneratne and Arjun, 2009).

Sri Lanka: Sri Lankan tradition of Ayurveda is similar to the Indian Ayurvedic tradition. Practitioners of Ayurveda in Sri Lanka refer to Sanskrit texts which are common to both countries. However, they do differ in some aspects, particularly in the herbs used. In 1980, the Sri Lankan government established Ministry of Indigenous Medicine to revive and regulate Ayurveda. Which offers undergraduate, postgraduate, and MD degrees in Ayurveda Medicine and Surgery, and similar degrees in Unani medicine? In the public system, there are currently 62 Ayurvedic hospitals and 208 central dispensaries, which served about 3 million people (about 11% of Sri Lanka's population) in 2010.

Bangladesh: Ayurveda in Bangladesh was as old as in India, because formerly it was part of India. There are five Ayurvedic colleges conducting 4-year diploma course and large number of Ayurvedic hospitals. Several Ayurvedic manufacturing units from India are exporting Ayurvedic medicines to Bangladesh. India's export of Ayurvedic drugs to Bangladesh was61 million rupees in 2001-2002(Sharma and Ajay Kumar, 2003).

Myanmar: AnAyurvedic College was started in Myanmar in 1976, which was renamed as college of Burmese Traditional Medicine. However, Ayurveda is the main subject of this course. It is a 3-year diploma course with one year compulsory internship. The Government of Myanmar has decided to upgrade this into a degree course.

Thailand: One Ayurvedic College is functioning in the suburbs of Bangkok. This was started in the private sector with a 4-year

course. Graduates of these colleges are appointed in primary health centres of Thailand.

Japan: Institute of Traditional Oriental Medicine, Tokyo conduct short term Ayurvedic Course for health professionals. In Japan, study, research and spread of Ayurveda is being carried out for the last 30 years. The Osaka Medical School has established Society of Ayurveda in Japan in 1969. Since then, various programs were organized for the propagation of Ayurveda. Many delegations from India including contemporary Ayurveda personalities visited Japan, giving good boost to the popularity of Ayurveda in Japan.

Canada: Ayurveda reached in Canada in 1972 by the efforts of Maharshi Mahesh Yogi Organisation of Transcendental Meditation. It has grown on par with the United States. There are a number of Ayurvedic practitioners in Canada. Canadian Association of Ayurvedic Medicine, Ontario provides training in Ayurveda for physicians and general public and the Maharshi Ayurveda Centre, Ontario also provides health care education according to Ayurveda principle.

China: Ayurveda is a system of traditional medicine developed during antiquity and the medieval period, and as such is comparable to pre-modern Chinese and European systems of medicine. However, in 1960s, Ayurveda has been advertised as alternative medicine in the Western world.

Europe: Many European countries have increasingly turned towards Ayurveda and natural health food supplements in the last decade of 20thcentury. People in Europe are turning towards Ayurveda because there are several grey areas in Allopathy medicine, which are merely suppressing the problem. The herbal medicine market in 2002 was $36.80 millions in the European Union countries.

United Kingdom: British Ayurvedic Medical Council which incorporates the British Association of Accredited Ayurvedic Physicians (BAAAP) is the only member of the Working Group which is actively encouraging the growth of Ayurveda in Britain. Once the self-regulation comes into force there are opportunities for Ayurveda to be offered in the mainstream publicly funded health care system (Warrier, Shrikala, 2003). There are more than one hundred qualified Ayurvedic physicians in the UK who are registered with the Ayurvedic Medical Association, UK.

United States: Baba Hari Dass was an early proponent who helped bring Ayurveda to the US in the early 1970s. He taught classes derived from the Suśrutha Saṃhitā and Charaka Saṃhitha, leading to the establishment of the Mount Madonna Institute, College of Ayurveda, Ayurveda World, and Ayurvedic pharmacy. He invited several notable Ayurvedic teachers, including Vasant Lad, Sarita Shrestha, and Ram Harsh Singh. The Ayurvedic practitioner Michael Tierra wrote that "the history of Ayurveda in North America will always owe a debt to the selfless contributions of Baba Hari Dass.

Russia: Russia now has keen interests in institutional collaborations for Ayurveda education and therapeutics resources. And an agreement was signed between the governments of Russia and India in the field of Ayurveda on July 1999. It was the first document that India has signed with another country in regards to traditional medicine. It was a historical landmark in introduction of Ayurveda in Russia's

healthcare system. Now Russia is all set to establish all round co-operations with Indian specialists in the field of Ayurveda and train their doctors in Ayurvedic system to promote its growth in Russia (Patel Aravind, 2000).

Italy: Ayurveda reached Italy in the early 1990. The institute of Italiano di Ayurveda at Firenze established in 1994 provides training, education and clinical practice of Ayurveda. The International Association of Ayurveda and Naturopathy in Italy organises various programs on Ayurveda including short-term courses. India's Ayurveda products export to Italy worth rupees 7.5 million in the year 2001 -2002.

Switzerland: Ayurveda Research Company, Walzenhausen, Switzerland provides Keralia Panchakarma treatment and health care education. There are more than 50 Ayurveda clinics in Zurich. India's export of Ayurvedic, medicines for therapeutic prophylactic uses to Switzerland is worth rupees 5.6 million during the year 2001-2002 (Gupta, 2003).

Netherlands: In Netherlands the major Ayurvedic centre is European institute for Scientific Research in Ayurveda which conducts research in Ayurveda medicine and its clinical effects to various diseases like Parkinson disease, Leukaemia, Cancer and AIDS.

Technology Integration in Ayurvedic Education

After the Industrial Revolution, the rate of growth in science and technology was very fast, resulting in the inventions of computers, which are having the capacity to memorise and analyze millions of data in a nanosecond. But in practice unfortunately even 50 per cent of the available data doesn't appear to be utilized by the present day Ayurveda practitioners, perhaps with very few exceptions. Hence there is an urgent need to link computer technology and Ayurveda so that it could be utilized for present practical applications of diagnosis and treatment (Shajahan, 1998). Ayurveda is also trying to prove its identity by searching newer remedies to overcome the disease for which there is no answer in modern medical science. With the growing institutionalisation of education in Ayurveda in the present century, need has been felt to launch research and development in order to update it in terms of its understanding and application to the present day need of people. Many practitioners still resort to the traditional ways to diagnose the disease (Mathew and Raju, 1998). The rules and regulations of this sector are quite old and totally incapable to support the industry in modern developments. Information technology is in fact an emergence of three strands of technologies, computer, microelectronics and communication.

Ayurvedic Software Systems

There are many computer based Ayurveda practices designed to assist Ayurvedic doctors to detect, communicate and interpret data for accurate diagnosis. The major decision support systems and expert systems are as follows.

AyuSoft

This interactive software has been developed in collaboration with C-DAC, Pune; Interdisciplinary School of Health Sciences and Department of Ayurveda, University of Pune; Jnana Prabodhini, NGO, Pune, India. It is a pioneering multidimensional effort for Indian traditional medical system that provides end-to-end medical solutions based on traditional

medicines and helps in making health decisions that are expected to be more informed, more accurate and quicker. The target end user for this software may include hospitals, practitioners and researchers. It has wide range of applications including disease diagnostics and treatment, diet and life style advice, personal management information system, multimedia based encyclopaedia, and textual and analytical report tool (Marques O, 2015).

Easy Ayurveda

It is developed by Vaidya Hukam Chand Arogyadham (VHCA) herbals which portray an excellent blend of Ayurveda and Information Technology. EasyAyurveda can make the process relatively easier and faster. EasyAyurveda is an Easy to use Ayurvedic software; contains database of more than 500 Medicinal Plants formulations; helps in advanced searching of herbs and formulations and herb's names in all Indian languages; Multiple string searching and single string searching, Indications about Ayurveda and modern diagnostic principles and terminologies are the features which one can easily search(Nair, 2005).

Body Tune

Computerized Ayurvedic Medicare (CAM): This software has been developed by Dr.M.A Shajahan in 1983 in Govt. College of Indian Medicine, Bangalore in collaboration with Indian Institute of Science, Bangalore, which was proved clinically successful by Gujarat Ayurveda University. A newer version of the software was developed in collaboration with Cyberveda Technologies in 1988. This particular software neither replaces a doctor nor avoids the importance of doctor-patient relationship. It helps organize diagnostic methods in a classical way envisaged by Indian sages of Ayurveda. This user friendly interactive software promotes accurate diagnosis in a faster and organized way (Janmejaya, 2013).

Prakes

This is one of the innovative software developed by Resource Center for Indian Language Technology Solutions- Malayalam, Center for Development of Advanced Computing, Thiruvananthapuram, Kerala, India in 1987 and is available in both English and Malayalam version. It is an interactive menu driven interface. It helps in examining the Lakshanas (Symptomatology) and assessing the dominance of Tridoshas (Three Humors). Advices on preventive promotive health care services depending on humeral dominance. The system records the interactions and results along with the bio-data for future references. It helps generate the hard copy of these recordings (Marques O. 2015), (Nair, 2005).

Prakrti

This is innovative and expert software which has been designed and developed by Chaitanya Consultancy, Pune in 1989. It renders services on different functionalities of Ayurveda such as Prakrati (Constitution), dietary advices, advices on daily regimens, likelihood of an illness and its precautionary measures (Janmejaya, 2013).

Pilex: As the name indicates, this particular software deals with entirety of piles. It is intended for the diagnosis, prognosis, complications and treatments of piles. It was designed and developed by Gujarat Ayurveda University, Jamnagar and Gujarat in 1990 (Nair, 2005).

Rasex

This innovative software was designed and developed by Government Ayurveda College, Trivandrum in collaboration with CIRA (Center for Information Research and Action), and C-DAC (Center for Development of Advanced Computing), Thiruvananthapuram in 1992. This package attempts to correlate the pharmacological properties with that of therapeutic properties with the help of computer. A database was created after collecting, organizing and storing all the pharmacological and therapeutic properties of single rasa drug using DBase III plus. A list of drugs, which conforms to the physician's specifications is collected and displayed in this package (Janmejaya, 2013).

Madhava: Ayurvedic Diagnostic System

Centre for Development of Advanced Computing (CDAC), Pune has developed this diagnostics expert system based on Ayurvedic System of Medicine to diagnose a wide variety of disease in 1991. This system is developed to aid physicians in cases when the necessary information for a precise diagnosis is unavailable. The system is capable of on – line learning as well as updating, thereby providing a scope for upgrading the system. In this system, the physician would conduct an interactive dialogue about the patient by proving information and responding to the questions generated by the system. The output of the system is a list of possible diagnosis with a certainty greater than a predefined level. The system acts as an advisor, and the physicians have the final responsibility about diagnosis of the disease as well as administration of the medicine and treatment.

Computer based Ayurveda Practice

The potential for Information technology to help medical practitioners to perform the complex information management tasks of patient care has long been recognised. Many promising systems that incorporate advanced information technology have been developed for clinical use, with regular improvements in availability, speed, and ease to use (Gorman, 1995). The computerized Ayurveda studies have identified several important factors that affect the current and future role of computers and information technology in Ayurveda treatment. These factors include advances in information science, biotechnology and computer hardware and software, changes in the background of Ayurveda professionals, changes in the medicolegal climate and changing strategies for healthcare.

Table 1 List of websites related to Ayurveda

Name of the website	Name of the website
www.ncbi.nlm.nih.gov	www.ayurdoctor.com
www.ovid.com /	www.ayurved-int.com /
www.dharaonline.org	www.ayurveda-herbal-remedy.com
www.ayurvedicdietsolutions.com	www.indiadiets.com
www.nccih.nih.gov /	www.biovatica.com /
www.ayurvedictalk.com	www.healthcarehouse.com
www.ccras.nic.in /	www.ayurvediccure.com
www.ayurvedic-healings.com	
www.nlam.in/ www.ayurveda-herbs.com	www.ayurvedacollege.net
www.ayurveda.com/	www.amfoundation.org/ayurveda.htm
www.ayurvedatraditions.com	www.ayurvedaways.com
www.indianhealthzone.com	www.wholehealthnow.com

At present there are few interactive Ayurveda softwares available for the diagnosis and treatment by the Ayurveda practitioners. Some of the useful websites and journals which contain huge information about Ayurveda and its practices are listed in table 1 and table2.

Table 2 List of Journals available for Ayurveda related publications

Topic	Name of the website
Aryavaidyan, Arya Vaidya Sala	www.aryavaidyasala.com
AYU, Institute for post graduate teaching and research in Ayurveda, Gujarat Ayurvedic University, Jamnagar	www.ayurveduniversity.com
BMC Complementary and Alternative Medicine	www.biomedcentral.com
Journal of Evidence-Based Complementary and Alternative Medicine	http://chp.sagepub.com
Evidence – Based Complementary and Alternative Medicine	www.hindawi.com/journals/ecam
International Journal of Ayurveda and Research	www.ijaronline.com
International Journal of Ayurvedic medicine	http://ijam.co.in
Journal of Ayurveda and Integrative Medicine	www.jaim.in
Journal of Translational Medicine	www.translational-medicine.com
Central Council for Research In Ayurvedic sciences	www.ccras.nic.in/publication/periodicals

CONCLUSION

The application of Information and Communication Technology (ICT) is very much required. This complex process of application of IT in the treatment and production of Ayurveda medicine needs to be studied in detail with sound theoretical and methodological foundations. In this age to meet the healthcare demands of the world community, the interactions between Ayurvedic medicine and Allopathic medicine are essential. For the smooth interactions between them, application of ICT in Ayurveda is quite essential. The latest technological aids used for diagnosis and treatment in modern medicine should be used in the Ayurveda medicine also. The ICT revolutionises the healthcare system through new thresholds of information connectivity and higher bandwidth. These technologies have enormous capability to enable reliable storage, retrieval, transfer of the communication elements viz. test, images, audio and visual data. Combination of Ayurveda and Bioinformatics with inputs from modern system of medicine is the most important area in the present scenario.

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