

Contribution Of Ancient Indian Wisdom In The Field Medical Science

Key Words: *Botany, Veterinary science, Genetics, Anatomy, General surgery, Plastic surgery, Ayurveda*

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Although it is an epic of modernization and technological advancement yet our ancient Indian values are still there in the modern society. Our ancient literature has been flourished with ancient Indian thoughts of learned people. The richest sources of our true knowledge are "The Vedas". Among all these Vedas Atharvaveda is based on medical science of India. Later on Ayurveda has been developed as separate branch of medical science. Thus, it can be conclude that ancient Indian wisdom has affected our modern medical science since a longer period of time and will also effect in future. With the presentation of this research paper the researcher wants to through light upon development of modern medical science and its relevance with ancient Indian wisdom.

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Man is the most intellectual being in the creation. He is endowed with the power to receive knowledge, perceive, think of, imagine, reflect and speculate about his past as well as his future. It has remained as a tradition from eras that knowledge is transmitted through teachers to their disciples from one generation to next. The term veda has been originated in very ancient time means "to know" the etymological meaning of veda is the knowledge of ways and means of achieving spiritual progress in life. There are four Vedas Rigveda, Samaveda, Yajurveda, Atharvaveda. Main sources of information about this period are all above four Vedas, the period is known as "Vedic period". The time span of this period remained from 1500-600 BC. The term Atharava means a purohit (Priest) During the Vedic period there was a Rishi whose name was Atharvan. The mantras in the veda were brought into light by this rishi. Therefore, the Veda was named as Atharavaveda. This Veda contains different type of mantras designed towards off evil and hardships and to conquer enemies. The mantras written in Vedas are both in prose as well as in verse. The Veda contains 731 hymns divided into twenty books. The Atharavaveda is collection of magic spells used against hostile diseases, animals, foes, wizards and demons. Some of the spells were auspicious by nature and aimed at bringing prosperity and good luck.

In Vedic period there was a curriculum having general subjects n`writing, arithmetic, geometry, economics (arthashastra), arts and crafts n`weaving, spinning, dying, printing, music, painting, poetry, sculpture etc ., vocational subjects- farming, cattle-breeding, medical science (minor surgery, major surgery, medicine, personal and public hygiene etc. Eight branches as mentioned in treatises of Charaka and Shushruta etc.) Military trainings in charioteering, club- fighting, archery, wrestling and other martial arts etc. The three types of vidyas (education) - logic (anvishiki), administration of justice (dandaniti) were must for royal children. In this period our country had made a tremendous progress in various sciences. In those days sciences were divided into two categories- Adhidavika vidya (worldly) and Adhyatma vidya (spiritual). The subjects under Adhidavika vidya were geology, Astronomy and chemistry and Adhyatma vidya physiology, psychology, and theology. In Atharavaveda various positive sciences are found

which indicate that ancient India definitely remained rich in scientific knowledge.

Kautilya has said, 'Sciences shall be studied and their precepts strictly observed under the authority of specialist teachers. Having undergone the ceremony of tonsure, the students shall learn the arithmetic. After investiture with sacred thread, he shall study the triple Vedas, the science of anvishiki under the teachers of acknowledged authority, the science of varta under the superintendents (heads of various departments as described in Arthashastra), and the science of dandniti under theoretical and practical politicians.' It was also emphasized that practical subjects should be learnt in close contact with their practice in actual life.

Under the head of vocational education 64 types of arts and crafts are explained in "Vatsyayana's Kamasutra". During the age of epics medical science flourished in various ways; development of different areas of medical science. Sir William Hunter remarked about ancient Hindu civilization's medicine and surgery 'Indian medicine dealt with the whole area of the science. It described that the structure of the body, its organs, ligaments, muscles, vessels and tissues. The materia medica of the Hindus embraces a vast collection of drugs belonging to the mineral vegetable and animal kingdoms, many of which have been now adopted by European physicians.' At another place he writes regarding different diseases and their cures 'They conducted amputations practised lithotomy; performed operations on the abdomen and uterus; cured hernia, fistula, piles; set broken bones and dislocations and were dexterous in the extraction of foreign substances from the body. A special branch of surgery was devoted to rhinoplasty; operation for improving deformed ears noses and forming new ones. They were expert in midwifery, not sinking from most critical operations and in the diseases of women and children.' About the progress of medical science Sushruta describes that there were 120 surgical instruments and a large number of surgical operations. He explores 'No accurate account of any part of the body, including even the skin, can be rendered without knowledge of anatomy; thorough knowledge of anatomy must prepare a dead body and carefully examine all its parts.'

During the age of epic the development of medical science registered very good progress. Minor surgery, major surgery, midwifery toxicology etc eight branches of medical science and as such the science was popularly called as "Ashtanga Aurveda".

In Ramayana it is mentioned that at the time of exile Ram asked to Bharat at Chitrakoot 'whether there are proper provisions for physicians.' The same was repeated in Sabha Parvan Marad poses a iQuestion to Yudhishtir 'whether the physicians skilled in all the eight branches of Ayurveda attend to your health or not?' The above discussion presents clear picture of the progress of medical science.

MEDICAL SCIENCE AS A NOBLE PROFESSION:

Medical science was considered to be one of the noble professions. It had its own code of ethics which is elaborated in the treatise of Charaka who was a physician. According to Charaka 'Not for money, nor for earthy object, should one treat his patients; in this way the physician's work excels all other vocations. Those who sell treatment, as an article of trade, neglect the true treasure of gold in search of mere dust.' These admonitions were followed sincerely by the physicians of the epic times.

BOTANY AS COUNTER PART OF MEDICAL SCIENCE:

The Indian vision of the spiritual unity in all existence, man and trees alike, is also reflected in our Vedas also. Rigveda confirms the unity and propounds that plants have life. It is clearly explained in a hymns of Rigveda that the God of wind Maruta with his thunder make even the mountains to shiver, the trees also get stumbled just as a woman sitting in a chariot gets stumbled due to movements of the chariot. The inference is that plants shiver due to fear but in Mahabharata it is clearly defined that various life activities of trees are shown as a result of specific reasons. In the epic age Mahabharata also supports evidences that plants are the living things and they have sense organs and soul. In the chapter "Shantiparvan" there a iQuestion has been posed whether trees have lives? It is supported by the views that action of plants as seeing, hearing, eating breathing show life in trees. Sir J. C. Bose an eminent modern botanist earned world- wide fame for propounding his theory of "Pulsation of ascent of sap in plant life" through his research papers. Later on many scientists as Godvesky etc propounded the theory of vital forces, challenged the "Bose's theory of ascent of sap". Peter Tompkins and Christopher Bird wrote a book on 'The secret of Plants'. The book mentioned above is based on the evidences that plants are living, breathing, communicating creatures endowed with personality and attributes of soul. Sushruta has mentioned 700 medicinal plants in his book. He was pioneer of anesthesia and has promoted

the proper use of wine with incense of cannabis for the anesthesia purpose. The use of henbane and Sammohini and Sanjivani was started in the later period. It is very astonishing conclusion by the above discussion that vision of Vyas, Sushruta and modern scientists is same and both says that plants are the living things like a human being and above medicines are also useful for anaesthesia purposes in modern time. Thus, botany always remained as counter part of medical science because it is the central dogma of whole Ayurveda.

VETERINARY SCIENCE AS BRANCH OF MEDICAL SCIENCE:

Nakul was a great exponent of horselore (ashwa -vidya), whose treatise on cattle-breeding etc termed as "Ashwa chikitsa" is also available still there. He was able to diagnose disease of horse by examining colour of urine. Twin brother of Nakul, named as Sahdev was also expert in animal husbandry. He had a skill to diagnose the disease on the basis of urine of sick bull. Both of them learnt these skills from his guru (teacher) called as Dronacharya. There are so many monographs on elephant-lore are also available. The animals like horses and elephants were the chief constituents of military of kings. Gurus (teachers) prepare their students in several sciences. If we talk about "Mahabharata" Dronacharya he made his pupils in different fields as Yudhishtir in administration, Bhim in gada, Arjuna in archery, Nakul in horse cure and Sahdev in animal husbandry. In modern time veterinary science has an important place as separate branch in medical science.

GENETICS AS A BRANCH OF MEDICAL SCIENCE:

Charaka elucidated in "Charaka n` Samhita" fundamentals of genetics and hereditary characters of animals and human beings. A genetic defect in a child like lameness or blindness was not due to any defect in the mother or the father rather than it is due to the chromosomal changing at the time of fertilization between ovum and sperm of the parents. He has described the factors determining the sex of a child. It is an accepted fact even present medical science.

ANATOMY AS A BRANCH OF MEDICAL SCIENCE:

Charaka studied the anatomy of various organs present in human body. He described that there are 360 bones present in the body. He told that human heart had one cavity because it is controlling centre of whole human body. He also claimed that the heart remains connected to the entire body through 13 main channels and instead of these

there are countless channels of various sizes which supply not only nutrients to various tissues but also provide passage to waste products produced in the body and any obstruction in the main channels led to a disease or deformity in the body. In the book "Sushruta-Samhita" Sushruta has presented detailed study of Anatomy 64 researches from mineral sources and 57 researches based on the animal sources. Modern anatomy is originated from ancient anatomy. **GENERAL SURGERY AS BRANCH OF MEDICAL SCIENCE:**

Maharishi Shushruta, son of Vishwmitra remained as legendary scholar, practitioner, teacher of Indian medical science and known as father of surgery. 2600 years ago Shushruta and his colleagues conducted a number of complex surgeries such as caesareans, artificial limbs, cataract, urinary stones, fractures, and most specially the plastic surgery. Shushruta wrote a book entitled "Shalya Tantra" and described all the surgical procedures and the amazing surgical procedures with the accuracy and curative efficacy. Later on the book was renamed as "Sushruta Samhita" now well known as "Ayurveda". Till today his findings are essential component of the Indian culture.

In the book "Sushruta Samhita" Sushruta classified the surgical operations in 120 chapters in five parts firstly and explained the plastic surgery as well as its tools. He had described round about eight special operations for surgery, such as the cutting, piercing, opening, scratching, inserting and stitching. He has described surgery of eye, amputations of the limbs and handling various complications after childbirth and explained 1120 illnesses. He also classified the bones along with their reaction to injuries and described the six types of dislocation of joints and twelve varieties of fractures of the shaft together with the principles of fracture treatment such as traction, manipulation, appositions and stabilization. Sushruta was well known about surgery of hemorrhoids and fistulae, urinary stones, varieties of stones, signs symptoms and method of removal, operational complications as well as the anatomy of intestinal obstruction, perforated intestines and abdomen accidental injuries. Modern doctors do surgery on the basic principles told by ancient wisdom.

PLASTIC SURGERY AS BRANCH OF MEDICAL SCIENCE:

Sushruta had described all the basic principles of plastic surgery by offering a suitable

physiotherapy before operation. The technique of the release of skin in order to cover all the small defects, rotation of the flaps to heal the partial loss and the pedicle flaps to cover the entire loss of skin from an area are well described by him. He has given various other methods together with the rotation graft, sliding graft, pedicle graft, rhinoplasty, labioplasty in his book "Sushruta-Samahita". In modern time doctors are also using tools and techniques described by Sushruta.

AYURVEDA AS A SEPARATE BRANCH OF MEDICAL SCIENCE:

Ayurveda is believed to be about 5000 year's old branch of medical science. There is an assumption about Ayurveda that Brahma imparted this knowledge to Prajapati Daksha, who in turn passed it on to the two Ashwini kumaras. From Ashwini kumaras this knowledge passed on to Indra and then to Sage Bhardwaja. Bhardwaja shared it with other sages, one of them was Punarvasu Atreya. Atreya passed it on to his disciples. Based on the knowledge thus imparted, Agnivesha, one of Atreya's disciple authored a treatise, which came to be known as Agnivesha-tantra. This work of Agnivesha was revised and enlarged by Charaka around the 5th century A.D. in the form of Charaka-samhita.

According to one the serpent-king sesa once visited the earth and found that the earth is full of sickness he moved back with pity and determined to become incarnate as the son of a Muni for alleviating disease; he was called "Charaka" (Sanskrit word "caraka" is a term used for a wandering religious student or ascetic) because he had visited the earth as a kind of spy or cara; he then composed a new book on medicine based on older works of Agnivesa and Atreya pupils. The book "Charaka-samhita" named after Charaka who was the ayurvedic counterpart of Hippocrates deals with the principles of health maintenance and treatment of various diseases. In modern period "Charaka-samhita", the work of 9th century has been revised and updated by a Kashmiri Pandit namely Dridhabala.

He was the first physician to present the concept of digestion, metabolism and immunity. He has described that a body functions because it contains three principles (dosha) as movement (vata), transformation (pitta) and lubrication and stability (kapha). The principles (dosha) are also sometimes called humors- bile, phlegm and wind. These dosha are produced when blood, flesh and bone marrow (dhatu) act upon eaten food materials. For the

same Quantity of eaten food materials body of an individual however produces principles (dosha) in certain amount. The Quantity of produced principles (doshas) differs from body of one person to another. Illness is caused when the balance among the three dosha in a human body is disturbed. To restore the balance among three doshas he has prescribed medicinal drugs. In modern time all the above mentioned principles (doshas) also have importance in Aurvedic treatment.

CONCLUSION:

Although we have achieved so much progress in the field of medical science yet we are using ancient Indian wisdom of many saints as Charaka, Sushruta, Dhanwantri etc. The knowledge of veterinary science, botany, genetics, anatomy, general surgery, plastic surgery, and Ayurveda provided by ancient is Quite relevant in medical sciences. The book "Charaka-samhita" remained a standard work on Ayurveda and as a result the book was translated into many foreign languages, including Arabic and Latin. Sushruta-Samhita is the key reference book for all the ayurvedic surgeons. The book was first translated into the Arabic, Latin and English languages. Sushruta's contribution towards the Indian traditional medicine and the ancient cultural heritage of India will always be a precious. When India got independence in 1947 all ayurvedic schools were again legalised. Due to fast effects of Ayurvedic medicines "Ayurveda" spread with the Hindu culture to Indonesia, Tibet, and eventually to the West, where some of its principles were picked up by the ancient Greek physicians. With the spread of Buddhism in China and other Asian countries it became popular in whole world. There are more than 100 ayurvedic schools in India and also equal in number to the Western ones and many Indian physicians incorporate Allopathic and Ayurvedic both styles into their practices. A modern ayurvedic doctor also begins by assessing the patient's Dosha pattern. Pulses play a critical role in this assessment n` a practitioner feels pulses throughout the body, looking for Dosha imbalances as reflected in the nature of pulse. Ayurvedic physicians do not focus on a specific disease or an organ system, but instead treat the entire body and mind. The two classics- "Charaka-samhita" and "Sushruta-samhita" are more than 2000 years old. In South Asia there are several legendary accounts of the origins of medical science. These are encyclopedias of the medical learning for doctors with special importance in the field of Plastic and Cataract surgery. (Continued on Page no. 93)

आज के समय की माँग है। नारी ज्ञान व शक्ति को भिन्न-भिन्न दृष्टिकोण से उपन्यास में प्रस्तुत किया गया है। उक्त उपन्यास में लेखिका का स्त्रीवादी विमर्श पूर्ण सक्षमता से प्रस्तुत हुआ है। कथा लेखिका का यह प्रयास महिला सशक्तिकरण की मुहिम को ताकत देता है। शायद इससे बड़ी राष्ट्रसेवा एक साहित्यकार के द्वारा नहीं हो सकती।

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(Continued from Page No. 49)

Thus we can conclude that ancient Indian wisdom is just like a sun in the sky which is shining from eras and universal truth because it is the only source of light which is showing path of development to modern medical science.

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