

## Chapter II

### Health System and Medicines in India

This chapter is written in view to provide a broader understanding about the prevailing system of medicine through out the historical time span of India. In order to understand health system in the Baroda State, it is essential to understand the system of medicine prevalent in India. An attempt is made to incorporate the various health system since ancient time and how the changes took place during the medieval and the British period.

Health is not only an issue of doctors, social services and hospital. It is an issue of social justice.<sup>1</sup> Health plays an important role in the growth of an individual as well as of society. As mind can work better in a healthy body same way progress of the society could be so easy and smooth if the diseases are properly controlled in the society. Therefore, health is important for individual and the society. But what we mean by health? Before directly jumping to converse the various health system of India, it is essential to understand the meaning of health from its commencement.

Health is one of those terms which most people find it difficult to define although they are confident of its meaning<sup>2</sup>. There are many definition of health which have been offered from time to time and some of them are as follows:

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<sup>1</sup> K Park, "Preventive and Social Medicine" 7<sup>th</sup> Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, p.11

<sup>2</sup> Ibid, p12

Since ancient times in most of the cultures health is probably understood as the “absence of disease” In some culture health and harmony are considered equivalent, harmony being defined as “ being at peace with the self, the community, god and customs”<sup>3</sup> The ancient and Greece both shared this concept.

Webster Dictionary defines health as “ the condition of being sound in body, mind or spirit especially freedom from physical disease or pain”

Health is also defined as “a *modus vivendi* <sup>4</sup> enabling imperfect man to achieve a rewarding and not too painful existence while they cope with an imperfect world”<sup>5</sup>

It is a duty of not only of individual but also the State to maintain health and healthy environment. Today in almost all the nations a very planned and organized health policy are made and health is generally defined as common condition of body and mind free from sickness and disease. However the widely accepted definition of health is that given by World Health Organization(WHO) in 1948 in its constitution, where health is defined as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"<sup>6</sup>. In the year 1978, this statement had been amplified to include the ability to lead a “socially and economically productive life”<sup>7</sup> The definition was updated in the 1986 by WHO "Ottawa Charter for Health Promotion" according to that health is a

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<sup>3</sup> K Park, “Preventive and Social Medicine” 7<sup>th</sup> Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, p.11

<sup>4</sup> It's a Latin word, meaning “mode of living”, The way that a person or a group lives

<sup>5</sup> R. J. Dubos, Man, Medicine and Environment, Harmondsworth, New York p.3

<sup>6</sup> Dr. Balaram Jana, “Preventive and Social Medicine”, Jain Publishers, New Delhi, 1986, p.19

<sup>7</sup> WHO, “ Health for All”, Sr. No 1, 1978

"resource for everyday life, not the objective of living", and "health is a positive concept emphasizing social and personal resources, as well as physical capacities."

Health is considered to be one of the a social issues rather it remains restricted to an individual. It is considered an important factor for the growth of individual, society and nation.

To maintain the health of all a mechanism is required which is generally called health system or can be identified as a method by which general health problem of mass taken care of. For the wellbeing of the society it is the duty and responsibility of the state to take the initiative. However state initiative in such a form of concrete health policy is a modern phenomena. Though in the ancient time's rulers had not adopted any direct health policy as such. However king patronised the growth of art and literature and seldom supported the scientific invasions. Therefore the advance medical system which we see today was developed slowly and gradually with the passage of time.

In India from antiquities several type of medical systems were practised which were developed and also changed with the changing rulers. For instance in Hindu period *Ayurveda* was in vogue, same way *Unani* system of medicine became popular during the Muslim period and with the introduction of the British rule modern medical science entered in India and gradually became popular.

Before coming of the Britishers, Indians had their own developed system of treatment. The medical science also made much progress during ancient India.<sup>8</sup> *Susruta, Chraka and Nagabhatta* contributed tremendously. Later their works were translated by *Arabs Turks* and Europeans. Indian Medical Science was given sufficient attention during the medieval times and a number of works were produced by eminent physicians of Medieval times like *Maulana Badruddin, Sadar-ud-din, and Azis-ud-din*<sup>9</sup>. Dubos goes one step further and states that “ancient medicine was mother of sciences and played a vital role in the integration of early cultures”<sup>10</sup>.

In India from antiquities health and medicines have always been a significant part of the Indian tradition. The people of India from the very beginning of their civilization were conscious, and concerned about the health. This can be traced from the architectural town planning of the Harappan civilization, where the people of that time were highly aware of public health and sanitation. For example, drainage system of the Indus people. In the words of A.L. Basham “we may assume that the pre-historic Harappan culture, which dominated the northern western part of the Indian subcontinent for several centuries before and after 2000 B.C., there was the system of medicine with professional healers. ....the Harappan culture contained the seeds of much of the characteristics of later Indian medicines”. In Mehrgarh, Pakistan, archaeologists made the discovery that the people of Indus Valley Civilization, even from the early Harappan periods (c. 3300 BC), had knowledge of medicine and dentistry. The physical anthropologist that carried out the examinations, Professor Andrea Cucina from the University of Missouri-Columbia, made the discovery when

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<sup>8</sup> S. C. Raychoudhary, “Social Cultural and Economic History of India”, Vol. I, Surjeet Publication, Delhi, 2005. p. 246

<sup>9</sup> Ibid p. 153

<sup>10</sup> R. J. Dubos, “Man Medicine and Environment”, Harmondsworth, New York pp 1-16

he was cleaning the teeth from one of the men. Later research in the same area found evidence of teeth having been drilled, dating back 9,000 years<sup>11</sup>. The excavation of Harappa and Mohen-jo-daro contain ample of such evidence to the proficiency reached by the people of the Indus Valley Civilization in matters of sanitation and hygiene.

India has a rich, heritage of medical and health sciences. During the Vedic times a separate medicinal branch of medical science “*Ayurveda*” evolved and practised and some scholars considered it as the fifth Veda. The philosophy of *Ayurveda* and surgical skills enunciated by *Charaka* and *Shusharuta*, bears testimony to our ancient tradition in the scientific health care of people. The approach of our ancient medical systems was of a holistic nature, which took into account all aspects of human health and disease. We get the first reference to the surgical operation of organic transplant in *Rigveda*, which says that when a young maiden named *Vispala* lost her leg in a conflict, the *Asvin*, the divine doctors, provided her with the an iron leg.<sup>12</sup> The Lord Ganesha<sup>13</sup> is the living example of organic transplantation of Hindu mythology.

The religion remained an important feature which influences the medical system throughout the centuries. In the beginning health and illness interpreted in cosmological and anthropological perspective. Medicine was habitually dominated by magical chant and religious beliefs, which were integral part of ancient culture and

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<sup>11</sup> BBC News, Science and Nature, stone age man used Dentist Drill, year 2006

<sup>12</sup> S.C.Raychoudhary, “Social Cultural and Economic History of India”, Vol. I, Surjeet Publication, Delhi, 2005. p. 247

<sup>13</sup> He was the incarnation made by cosmic energy by her mother Goddess Parvati, without being known by his father, lord Shiva. One day while keeping watch outside the cave of her mother, he even refused to allow Lord Shiva to enter in to the cave of his mother and with anger lord shiva cut downed the head of master Lord Gansha. After knowing the truth that Ganesha was his own son, to correct his mistake he transplanted the head of baby elephant over the body of Ganesha.

civilization.<sup>14</sup> As there is an organic relationship between medicine and human advancement, any account of medicine with such beliefs<sup>15</sup> at a given period should be viewed in relation or against to the civilization and human advancement at that time, i.e. philosophy, religion, economic condition, science and other social aspiration of the people. Such type of habits indicates the social and ethical perception of the development of medical science with the prelude of civilizations.

In this way it is difficult to contradict the ahead mentioned lines:

“Medicine was conceived in sympathy and born out of necessity; and that the first doctor was the first man and the first woman was the first nurse. The prehistoric man, motivated by feeling of sympathy and kindness was always at the behest of his kindness, trying to provide relief in times of sickness and suffering”.<sup>16</sup> The *Charak Samhita* an ancient medical text says, ‘to one who understands knowledge of nature and love of humanity are not two things but one’ nothing illustrate better the links between science and humanity.<sup>17</sup>

Over the centuries, with the invasion of foreign influences and mingling of cultures, various systems of medicine evolved and have continued to be practised widely. However, the allopathic system of medicine has, in a relatively short period of time, made a major impact on the entire approach to health care and pattern of development of the health services infrastructure in the country.

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<sup>14</sup> K Park, “Preventive and Social Medicine” 7<sup>th</sup> Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, pp. 1-12

<sup>15</sup> Belief in supernatural cause of ill health or disease

<sup>16</sup> K Park, “Preventive and Social Medicine” 7<sup>th</sup> Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, pp. 1-12

<sup>17</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi, 2001 p. xi

In India an organized medical system was evolved with its great Vedic Age though not uniform as in comparison to modern one. This was the oldest medical system which is still preferred as an alternative complimentary one and abundantly practised in India.

### **Medical System in Ancient and Medieval India**

The medical system that is truly Indian in origin and development are *Ayurveda* and *Siddha* system. *Ayurveda* is practised throughout India and due to its legacy it is some time also called as fifth Veda i.e. *Ayurveda*.<sup>18</sup> *Siddha* system is practiced in deep South, in Tamil speaking areas. However these systems differ very little in theory and practice.<sup>19</sup> The Arab system of medicine which generally known in India and urdu speaking area as *Unani* tibb was introduced in India with advent of Muslim rule. Both *Ayurveda* and *Unani* practitioners shared their science and knowledge and produce a nexus of indigenous medicine where much of synthesis of two medical system widely used throughout India before the coming of modern medical system of West.

It is one of the oldest fashion in the West to write about the East. The attempt to trace the history of medicine in India began in the first half of the nineteenth century. Hindi medicine attracted the attention of the western scholars at an early period of Indic study.<sup>20</sup> Prior to J.F. Royle's *Essay on the antiquity of Hindu medicine*, London 1837, which was the first book on medical wisdom published in Europe., H.H. Wilson, the great pioneer of Sanskrit Philology, introduced Hindu

<sup>18</sup> National Health Policy, Government Of India Ministry Of Health & Family Welfare New Delhi 1983 <http://mohfw.nic.in/kk/95/ii/95ii0101.htm#nhp0>

<sup>19</sup> K Park, "Preventive and Social Medicine" 7<sup>th</sup> Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, p. 1-12

<sup>20</sup> Henry. R. Zimmer, "Hindi Medicine" the Jhon Hpkins Press, Baltimore 1948, p. i-xxi

medicine to the forum of western sciences through an essay "On the medical and surgical science of the Hindus" in 1823.<sup>21</sup> During the intervening centuries Western and Hindu scholars, in turn, edited and translated the main text of Hindu medical traditions.<sup>22</sup> Therefore, it is not a first attempt to write the history of medicine of India but following the tradition with addition to integrate further advancement in the understanding of the same at national as well as at regional level.

In the field of the education one of the greatest achievements of the ancient Indians was the discovery and practice of *Ayurveda*. *Ayurveda* is the name which the ancient Indians gave to their science of medicine.<sup>23</sup> *Ayurveda* is India's age-old science of medicine. It is the ancient Indian holistic medical system, based on achieving physical and mental harmony with nature, which has been practised for more than 5000 years. *Ayurveda* effectively tackles the cause of illness rather than merely alleviating the symptoms. This is done by maintaining the natural balance of the constituents (the state of prakriti) of the body, mind and soul through the daily regimen (Dinacharya) and seasonal regimen (Ritucharya) for a healthy person and through medication mainly based on herbs, dietary regimen and yogic exercises to restore the prakriti back in the diseased.

### **Origin of the *Ayurveda***

*Ayurveda* means "science of life" and was first recorded in the Vedas the world's oldest surviving literature of the world. The term is significant from the semantic point of view, concerned not only with promoting positive health and longevity, ("Ayu")

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<sup>21</sup> Henry. R. Zimmer, "Hindi Medicine" the Jhon Hpkins Press, Baltimore 1948, p. i-xxi

<sup>22</sup> Ibid

<sup>23</sup>Dr. P. Kutumbiah, "Ancient Indian Medicine" , Orient Longmans 1962, p.i

while the second (“veda”) has religious overtones, being the term used for the most sacred text of Hinduism.<sup>24</sup> Literally “Ayu” meaning life and “Veda” meaning science or knowledge thus *Ayurveda* can be defined as a science of life or a knowledge by which the life can be prolonged or its nature understood.

*Ayurveda* as ‘science of age’ originated in the a magico-religious milieu but gradually progressed with Buddhist rationalism<sup>25</sup>. Its protagonist might have been inaccurate in their knowledge of human physiology but they were extremely good at plant morphology, its medical functions and therapeutics.<sup>26</sup> According to Charaka (c.s. 1.1.), *Ayurveda* originated from the Creator Brahma, who revealed it entirely to Prajapati, ‘Lord of the Creatures’.<sup>27</sup> From him it was passed on to the Asvins, the divine twin horsemen, the helper and healer among vedic gods. They passed it on to Indra, king of the gods, and from him mankind received its divine wisdom.<sup>28</sup> *Ayurveda*, an ancient system of healing and was part of the spiritual tradition of the Sanatana Dharma during the Vedic period. As far as its composition is concerned it was *Veda Vyasa*, the famous sage, believed to be an avatar of Vishnu, who compiled the complete knowledge of *Ayurveda* into the Vedas.

The origin of *Ayurveda* as revealed by Dhanvantari to Sushruta is as follows ; the *Ayurveda* is a subsidiary branch of Atharva-veda . Brahma composed it in the one hundred thousand slokas, before the creation of man. Afterwards in consideration of the short lives and the limited intellectual capacity of human beings, he divided it into

<sup>24</sup> Charles Leslie (ed) “Asian Medical System: A Comparative Study”, University of California Press, London/California, 1976, p20

<sup>25</sup> Dominik Wujastyk, “The Roots of *Ayurveda*”, Penguin, New Delhi 1998, pp. 1-38

<sup>26</sup> G. P. Majumdar, “Health and Hygiene”, *Indian Culture*, II, I-4, 1935-36, pp. 633-54

<sup>27</sup> Dr. P. Kutumbiahn “Ancient Indian Medicine”, ,Orient Longmans 1962, p.i

<sup>28</sup> Ibid

eight chapters, viz., *Salya*, *Salakya*, *Kayachikitsa*, *Bhutavidya*, *Kaumarabhrtya*, *Agada tantra*, *Rasyana tantra* and *vajikarana tantra*.

“Brahma first expounded the *Ayurveda* to *Prajapati*, who taught it to the two *Aswini Kumars*. From these twins Indra studied the subject and from Indra I obtained the knowledge. Now for the good of mankind it is my duty to impart this knowledge to those who seek for it in this world. It is I who cured the disease of the gods and prevented their deaths and decrepitude. I have now come to this world to lecture on *Salya Tantra* and other division of the *Ayurveda* in comprehensive way.”<sup>29</sup>

Both *Charaka* and *Sushruta* describes *Ayurveda* as an *upanga* or an *upveda* connected with the *Atharvaveda* and acknowledge it as the source of the medical knowledge

### **The Basics of *Ayurveda***

The following are some of the principle theories and practices of *Ayurveda*.

*Ayurveda* is divided into eight parts. Hence it is also known as *Ashtanga Ayurveda*.

These are as follows: *Kaya*, *Bal*, *Graha*, *Urdhwa*, *Shalya*, *Dhanstra*, *Jara* and *Vrishan*.<sup>30</sup>

1. *Kaya*: The part of *Ayurveda* which is mainly about the diseases related with body, related with digestion.

2. *Bal*: It is related with the paediatric age group. It is the treatment for the proper growth and diseases of children.

<sup>29</sup>Dr. P. Kutumbiah, “Ancient Indian Medicine” Orient Longmans 1962, p.iii

<sup>30</sup> *Ayurveda*, <http://Indianmedicine.nic.in/Ayurveda.asp> (accessed June, 2009)

3. *Graha*: It deals with stars and planets and other mental disorders.
4. *Urdhwa*: The diseases of upper part of the body above the neck. This part is also known as Shalakyatantra. In this part, disorders of ear, nose, throat, eyes, and oral cavity are considered.
5. *Shalya*: This is surgical branch of *Ayurveda* which is well developed by Sushrut.

The earliest re-plantations were done by Lord Shiva by attaching an elephant's head on his son's body and by Ashwini Kumars who successfully replanted the severed head of Yagna. Thus the history of plastic surgery in India dates as far back or before the Vedic times nearly 4000 years ago.<sup>31</sup> Frank McDowell has appropriately described Sushruta in the book "The source book of plastic surgery"

"Through all of Sushruta's flowery language, incantations and irrelevancies, there shines the unmistakable picture of a great surgeon. Undaunted by his failures, unimpressed by his successes, he sought the truth unceasingly and passed it on to those who followed. He attacked disease and deformity definitively, with reasoned and logical methods. When the path did not exist, he made one."<sup>32</sup>

There was a second method of rhinoplasty in India as practiced by Tilemakers. This involved using a free insert from the buttock of patient. The skin and the underlying tissue of the shape of the defect on the nose was beaten with wooden slippers and applied on the defect with some "cement"<sup>33</sup>. In the 4th century, another scholar named Vaghat wrote *Ashtanga Sangraha* and *Ashtanga Hridayans*. In *Ashtanga Hridayans*, he

<sup>31</sup> Rana R E, Arora BS. History of plastic surgery in India. J Postgrad Med 2002;48:76

<sup>32</sup> Frank McDowell. The Source Book of Plastic Surgery. Baltimore; Williams and Wilkins Company: 1977. p. 65-85.

<sup>33</sup> Rana RE, Arora BS. History of plastic surgery in India. J Postgrad Med 2002 p. 76

described rhinoplasty as done by Maharishi Atreya and emphasized the need for the provision of an inner lining by turning down the nasal skin.<sup>34</sup> The knowledge of rhinoplasty spread from India to Arabia and Persia and from there to Egypt and Italy in the 15th century. The first translation of *Sushruta Samhita* was in Latin by Hessler in 1844 and in Arabic by Ibn Abi Usaybia (1203-1269 AD) and later into German by Vellurs. Bhashagratna translated it in English in 1907<sup>35</sup>

6. *Dhanstra*: It is related to the tooth where animal bites, poisoning and its treatment is considered.

7. *Jara*: It is the branch related to geriatrics. It deals with treatment to avoid old age.

8. *Vrishan*: It is the branch related with healthy sex life and treatment related to complaints about intercourse etc.

However in *Charaka's*, classification, can be paraphrased as ; (1) general principles of medicine (*Sutrastana*), (2) pathology (*nidanasthana*) (3) diagnostics (*vimana-sthana*) (4) physiology and anatomy (*Sarira -sthana*) (5) prognosis (*indriya-sthana*) (6) therapeutics (*Chikita-sthana*) (7) pharmaceuticals (*Kalpa-sthana*) and (8) means of assuming success in treatment (*Siddhi-sthana*).<sup>36</sup>

Though the division or classification of *Ayurveda* in eight different branches vary from author to author and time to time, one thing is similar and acceptable, that is

<sup>34</sup> Goleria KS. Pedicle flaps - a historical review. Indian Journal of Surgery 1966, p.247-54.

<sup>35</sup> Frank McDowell. "The Source Book of Plastic Surgery", Williams and Wilkins Company, Baltimore

<sup>36</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976,p20

*Ashtanga Ayurveda* or a science having eight branches must have been established at this time. This marks the close of animistic period in ancient Indian medicine.<sup>37</sup>

### ***Ayurveda* - Concept and Principles**

The concept and principle of the *Ayurveda* generally deals with the Body Matrix, Health and Sickness. Life in *Ayurveda* is considered as the union of body, senses, mind and soul. Health was believed to be conditioned by the balance of three primary fluids (*dosas*, literally “defects”) in the body: wind (*vata*), gall (*pitta*) and mucus (*kapha*). The living man is an accumulation of three humours (Vata, Pitta & Kapha), seven basic tissues (*Rasa, Rakta, Mansa, Meda, Asthi, Majja & Shukra*) and the waste products of the body such as faeces, urine and sweat.<sup>38</sup> In this way the total body matrix comprises of the humours, the tissues and the waste products of the body.<sup>39</sup>

The body was considered a conglomeration (*samuchya*) of the modification of the five elements (*bhutas*), water (*ap*), fire (*tejas*), air (*vayu*), earth (*prithvi*), and ether (*akas*) (vacuum).<sup>40</sup> The growth and decay of this body matrix and its constituents revolve around food which gets processed into humours, tissues and wastes. Ingestion, digestion, absorption, assimilation and metabolism of food have interplay in health and disease which are significantly affected by psychological mechanisms as well as by bio- fire (*Agni*)<sup>41</sup>. All these *bhutas* are collectively known as “*Panchbhutas*” as they are five in number. The tissues of the body are the structures whereas humours are physiological entities, derived from different combinations and permutations of *Panchamahabhutas*.<sup>42</sup>

<sup>37</sup> Dr. P. Kutumbiahn, “Ancient Indian Medicine” Orient Longmans 1962, p.iii

<sup>38</sup> Ayurveda, <http://Indianmedicine.nic.in/Ayurveda.asp>, (accessed June, 2009)

<sup>39</sup> Ibid

<sup>40</sup> Dr. P. Kutumbiahn, “Ancient Indian Medicine” Orient Longmans 1962, p.xx

<sup>41</sup> Ayurveda, <http://Indianmedicine.nic.in/Ayurveda.asp>, (accessed, June 2009)

<sup>42</sup> Ayurveda, <http://Indianmedicine.nic.in/Ayurveda.asp>, (accessed, June 2009)

In *Ayurveda*, patient's complete body diagnosis is done. The physician takes a careful note of the patient's internal physiological characteristics and mental disposition. He also studies such other factors as the affected bodily tissues, humours, the site at which the disease is located, patient's resistance and vitality, his daily routine, dietary habits, the gravity of clinical conditions, condition of digestion and details of personal, social, economic and environmental situation of the patient. The diagnosis also involves the following examinations: General physical examination, Pulse examination, Urine examination, examination of the faeces<sup>43</sup>, examination of tongue and eyes and examination of skin and ear including tactile and auditory functions.

In ancient time, the celebrated Ayurvedic medicines were of *Atreya*, *Charaka*, *Sushruta*, and *Vagabhatta*... *Atreya* about (800 BC) is acknowledged as the first great Indian physician and teacher.<sup>44</sup> *Sushruta* often called as 'Father of Indian Surgery'. *Charaka* is supposed to had been the royal court physician of *Kanishka* (ruler of Kushna period) who had its capital in north-west<sup>45</sup> India.

*Ayurveda* had and has its own basic principles which gradually developed in ancient time. Those who are tracing the history of medicine in India admits that Indian medicine had played an important role in Asia, the same role as the Greek medicine

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<sup>43</sup> Stool

<sup>44</sup> K Park, "Preventive and Social Medicine" 7<sup>th</sup> Edn., Banarsidas Bhanot Publishers, Jabalpur,, 2002, p.2-11

<sup>45</sup> Jawaharlal Nehru, "The Discovery of India", 2004, Penguin Books pp116-117

in West<sup>46</sup>. It had spread in Indo-China, Indonesia, Tibet, Central Asia and as far as Japan, exactly as the Greek medicine has done in Europe and Arab Countries.<sup>47</sup>

### ***Siddha* System of Medicine**

*Siddha* system is one of the oldest systems of medicine in India. In the deep south *Siddhas* had developed knowledge of pulse and methods of diagnosis by eight kinds of clinical examination.<sup>48</sup>

The term *Siddha* means achievements. Another term in relation to *Siddha* is *Siddhars*, were saintly persons who achieved results in medicine. The *Siddhars* were also considered great scientists in ancient times. Eighteen *Siddhars* were said to have contributed towards the development of this medical system<sup>49</sup>. According to the tradition it was Shiva who unfolded the knowledge of *Siddha* system of medicine to his consort Parvati who handed it down to Nandi Deva and the *Siddhars*<sup>50</sup>. According to tradition, the origin of *Siddha* system of medicine is attributed to the great *Siddha* Ayastiyar. Some of his works are still standard books of medicine and surgery in daily use among the *Siddha* Medical practitioners.

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<sup>46</sup> K Park, "Preventive and Social Medicine" 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, p 2-11

<sup>47</sup> Ibid

<sup>48</sup> CK Sampath, 'Evolution and development of Sidhamedicine,' in S.V. Subramanian and V.R. Madhavan (eds.) *Siddha* Medicine, I.I.T.S., Madras, 1983, pp 1-20

<sup>49</sup> Siddha <http://Indianmedicine.nic.in/Siddha.asp>, (accessed, June 2009)

<sup>50</sup> Ibid

The *Siddha* was flouriest in south and *Ayurveda* prevalent in the northern part of India. . *Siddha* literature is in Tamil and it is practised largely in Tamil speaking part of India and abroad. The *Siddha* System is largely therapeutic in nature.<sup>51</sup>

### Basic Concepts

The principles and doctrines of this system, both fundamental and applied, have a close similarity to *Ayurveda*. Due to this some people also consider, *Siddha* is a Tamil language variant of *Ayurveda* practiced in South India and Ceylon.<sup>52</sup> According to this system the human body is the replica of the universe and so are the food and drugs irrespective of their origin.

Like *Ayurveda*, this system believes that all objects in the universe including human body are composed of five basic elements namely, earth, water, fire, air and sky<sup>53</sup>. As in *Ayurveda*, 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 faeces, urine and sweat. 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. This system also deals with the concept of salvation in life. The exponents of this system consider the major achievement of this state is possible by medicines and meditation.

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<sup>51</sup> Siddha <http://Indianmedicine.nic.in/Siddha.asp>, (accessed, June 2009)

<sup>52</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976,p20

<sup>53</sup> Siddha <http://Indianmedicine.nic.in/Siddha.asp>, (accessed, June 2009)

The *Siddha* System is effective in treating chronic cases of liver, skin diseases especially “Psoriasis”, rheumatic problems, anaemia, prostate enlargement, bleeding piles and peptic ulcer. The *Siddha* Medicines which contains mercury, silver, arsenic, lead and sulphur have been found to be effective in treating certain infectious diseases including venereal diseases. Practitioners have claimed that *Siddha* medicines are effective in reducing the highly debilitating problems that manifest themselves among patients of HIV (Human Immunodeficiency Virus)/AIDS (acquired immunodeficiency syndrome). More research into the efficacy of these medicines is presently in progress<sup>54</sup>.

### ***Yoga* System to maintain mind, body and soul**

The tradition of *Yoga* was born in India several thousand years ago during the vedic times. Similar to *Ayurveda* and *Siddha* its founders were also great Saints and Sages. The word ‘*Yoga*’ means union.<sup>55</sup> Probably it is derived from same root as the English word ‘yoke’ meaning joining. However meaning of *Yoga* in principle is a holistic approach towards the cause and treatment of disease.

According to *Yoga*, most of the diseases Mental, Psychosomatic and Physical originate in mind through wrong way of thinking, living and eating which is caused by attachment. The basic approach of *Yoga* is to correct the life style by cultivating a rational positive and spiritual attitude towards all life situation. *Yoga* does not treat gross body alone, it takes into consideration all the five Kosa’s (Sheaths) i.e. Manomaya Kosa, Annamaya Kosa, (grass Sheath) Pranamaya Kosa (External Body)

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<sup>54</sup> Siddha <http://indianmedicine.nic.in/Siddha.asp>, (accessed, June 2009)

<sup>55</sup> Jawaharlal Nehru, “The Discovery of India”, 2004, Penguin Books 194-199

(Psychic Body), Vijyanmaya Kosa (intellect Sheath) and Anandamaya Kosa (Bliss sheath). Like *Ayurveda* and Naturopathy *Yoga* also takes up the cleansing of the body as the first measure to fight disease. While *Ayurveda* performs its pancha karma through the help of ametics purgative *Yoga* performs them without the help of any drug i.e. by developing full efficiency and control of eliminative systems of the body. Which no other system of health care can do<sup>56</sup>.

The great *Yoga* philosophy is an Art and Science of living in tune with Brahmand-The Universe<sup>57</sup>. *Yoga* has its origins in the Vedas, the oldest record of Indian culture. It was systematized by the great Indian sage *Patanjali* in the *Yoga Sutra* as a special Darshana. Although, this work was followed by many other important texts on *Yoga*, but *Patanjali's Yoga Sutra* is certainly the most significant wherein no change is possible. The *Yoga* system of *Patanjali* is essentially a method for discipline of the body and mind leading up to psychic spiritual training.<sup>58</sup> It is the only book which has touched almost all the aspects of human life. *Patanjali*, rightly called as the "Father of *Yoga*" compiled and refined various aspects of *Yoga* systematically in his "*Yoga Sutras*" (aphorisms). *Yoga* is world known now in Europe and America, though little understood, and it is associated with quaint practices, more especially with sitting Buddha-like and gazing on one's navel or the of one's nose.<sup>59</sup> He advocated the eight fold path of *Yoga*, popularly known as "*Ashtanga Yoga*" for all-round development of human personality. They are-*Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana* and *Samadhi*.

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<sup>56</sup> *Yoga*, <http://Indianmedicine.nic.in/yoga.asp> (accessed, June 2009)

<sup>57</sup> *Ibid*

<sup>58</sup> Jawaharlal Nehru, "The Discovery of India", 2004, Penguin Books 194-199

<sup>59</sup> *Ibid*

Apart from *Hath Yoga*, there are a large numbers of methods of *Yoga* catering to the needs of different persons in society. They are broadly classified into four streams. Swami Vivekananda puts them as Work, Worship, Philosophy and Psychic control.<sup>60</sup>

In our country, generations of Yogis and Scholars have contemplated their life in timeless fashion to realize that there is a meaning to life and some purpose beyond the human sufferings.<sup>61</sup> In first decade of the twenty-first century *Yoga* gained momentum and became highly popular among Indian and foreigners. From second decade of the twentieth century onwards *Yoga* probably will get more popularity in every nook and corner of the world. The credit of this goes to Swami Baba Ramdev who not only rejuvenated the theory but also taught *Yoga* at huge mass level. It was because of his efforts that the authority of *Yoga* to control the disease got realised once again. This is almost similar to Dayanand Saraswati's slogan 'go back to Veda' for mental peace to control mind.

Swami Vivekananda defines *Yoga* as "It's a means of compressing one's evolution into a single life or a few months or even a few hours of one's bodily existence". By *Yoga*, Sri Aurobindo, meant a methodological effort towards self perfection by the development of potentialities latent in the individual.

*Yoga* is a science as well an art of healthy living physically, mentally, morally and spiritually. It's systematic growth from his animal level to the normalcy, from there to the divinity, ultimately. It's no way limited by race, age, sex, religion, caste or creed

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<sup>60</sup> Jawaharlal Nehru, "The Discovery of India", 2004, Penguin Books 194-199

<sup>61</sup> Ibid

and can be practiced by those who seek an education on better living and those who want to have a more meaningful life.

*Yoga* is not a religion; It's a philosophy of life based on certain psychological facts and it aims at the development of a perfect balance between the body and the mind that permits union with the divine i.e. perfect harmony between the individual and the cosmos.

Many different interpretations of the word *Yoga* have been handed down over the centuries. One of the classic definition of *Yoga* is "to be one with divine." It does not matter what name we use for the divine-God, Allah, Ishvara, or whatever- anything that brings us closer to understanding that there is a power higher and greater than ourselves is *Yoga*. When we feel in harmony with that higher power, that too is *Yoga*. In recent times there is a growing awareness among the people about the efficacy and utility of *Yoga* and Nature Cure in keeping one fit at physical, mental, emotional, social and spiritual planes. These systems are emerging as the effective methods and means to improve the total personality and to build a healthy society. Above all, these systems are adopted as a way of life rather than a mode of treatment.

### **Medical Science and Education in Ancient Time**

As it is mentioned earlier that the science of medicine made much progress during the ancient time. Mathematics, Astronomy, Medical Science and Architecture made remarkable developments in ancient time. Vijay Kumar Thakur describes development of medical science in following way;

“The science of medicine in early India unlike the other primitive sciences - Phonetics (*Siksha*), Grammar (*vyakarana*), Calendrical Astronomy (*Jyotisha*) and even Geometry, in a restricted sense of being a part of ritual technique (*kalpa*)- that originated in the priestly circles, thus carrying with the birth -pangs of anti -secularism and facing almost insurmountable constraints in developing towards science proper, is marked by a momentous transmutation quite early in its life from magico- religious therapeutics to rational therapeutics, that is, in the terminology of the famous medicine- man Charaka himself from *daiva- vyapashrya bhesaja* to *yukti- vyapashrya bhesaja*”.<sup>62</sup>

At the beginning of medical science it was influenced by religion. Personification of nature and its elements was a prompt phenomena of Vedic time, so the medical science also did not remain aloof to this. Dhanvantari is legendary founder of Indian science of medicine<sup>63</sup>. We find the earliest reference about the curative art in Rigveda which ascribes divinity to various herbs and plants<sup>64</sup>. In the Atharvaveda also certain herbs and metals endowed with medical properties considered divine attributes and legacy of some is still continue. The herb of tulsi is one among that, still considered holy deity or mother goddess and planted in the baranda of the household in most of the families.

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<sup>62</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi. p. 15

<sup>63</sup> Jawaharlal Nehru, “The Discovery of India”, 2004, Penguin Books 116

<sup>64</sup> S.C.Raychoudhary, “Social Cultural and Economic History of India”, Vol. I, Surjeet Publication, Delhi, 2005. p. 246



**Dhanvantari, the God of Ayurveda**



**Tulsi (holy basil plant)**

Though medical science has the celestial beginning gradually it became more and more rational. The medical science was first systematized and provided with rational basis by Charaka and Sushruta,<sup>65</sup> based on the teaching of Aitriya, Charaka compiled

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<sup>65</sup> S.C.Raychoudhary, "Social Cultural and Economic History of India", Vol. I, Surjeet Publication, Delhi, 2005. p. 246

his famous treatise on medicine, the "*Charaka Samhita*".<sup>66</sup> He mentioned about 500 drugs in that. The Indian snakeroot<sup>67</sup> (*rouwolfia*) was employed for centuries by the Indian physicians before reserpine extracted from the root and found spectacularly effective in the treatment of hypertension.<sup>68</sup> Sushruta compiled the surgical knowledge of his time in his book '*Sushruta Samhita*'. These books enumerate a large number of diseases and give methods of diagnosis and treatment<sup>69</sup>. They not only deal with surgery but also diet, hygiene, infant feeding, medicine etc.

The *Sushruta Samhita* was a more systematic and scientific work than that of Charaka. It is considered to be more modern origin and is supposed to have been re-written by the celebrated Buddhist scientist and philosopher, Nagarjuna. While the subject matter of *Charaka Samhita* is mainly medicine, Sushruta deals with surgery.<sup>70</sup>

The early Indians set fractured, performed amputations, treated tumours, repaired hernias and excelled in cataract operations and plastic surgery. It is stated that British Physician learned the art of rhinoplasty from Indian surgeons in the days of East India Company.<sup>71</sup> However during the Buddhist times, Indian surgery suffered a setback because of the doctrine of non-violence (*ahimsa*). However, it doesn't mean that it led to the stagnation in the growth of medical science in India.

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<sup>66</sup> K Park, "Preventive and Social Medicine" 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur,, , 2002, p 2-11

<sup>67</sup> In indigenous language snakeroot is know as *sarpgandha*

<sup>68</sup> K Park, "Preventive and Social Medicine" 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur,, 2002, p 2-11

<sup>69</sup> Jawaharlal Nehru, "The Discovery of India", 2004, Penguin Books 116

<sup>70</sup> S.C.Raychoudhary, "Social Cultural and Economic History of India", Vol. I, Surjeet Publication, Delhi, 2005. p. 247

<sup>71</sup> K Park, "Preventive and Social Medicine" 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur,, , 2002, p 2-11

Medicine made a great progress during the Jain-Buddhist period in India because Buddhism insisted upon alleviation of the suffering.<sup>72</sup> At this time a number of hospitals were opened not only for men but also for animals.

The Indians knew about the circulation of blood much before it was discovered by Sir William Harvey in the 17<sup>th</sup> century. This is borne out by the *Charaka Samhita*, sutra which says: “ from that great centre (the heart) emanate the vessels carrying blood into all parts of the body, the element which nourishes the life of all animals and without which life would be extinct. It is that element which goes to nourish the foetus in uterus and which flowing its body returns to the mother’s hearts.”<sup>73</sup>

The Indian medical science is surviving and still a large group of the people in the world have faith in this. In fact they became part of Indian culture and will continue to be an important source of medical relief to the population in India.

Apart from this the another important thing to be considered is the secular exchange of medical science of ancient India.. Like other branches of knowledge much liberal exchange of idea and experience took place among Hindu, Arab, Greek, Persian and Jewish scholars. Sanskrit work on astronomy, medicine ethics and administration were introduced by the Sind intellectuals to the translation bureau of Abassid.<sup>74</sup> The Samhitas of Charak and Sushruta were translated into Persian and Arabic about 800 A.D.<sup>75</sup>

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<sup>72</sup> S.C.Raychoudhary, “ Social Cultural and Economic History of India”, Vol. I, Surjeet Publication, Delhi, 2005. p. 247

<sup>73</sup> Ibid

<sup>74</sup> S. Rizvi, “the Wonder That was India”, Vol. II, Rupa and Co, P. 11

<sup>75</sup> K Park, “Preventive and Social Medicine” 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur, ISBN 81-900118-9-8, 2002, p 2-11

## Medical Education in Ancient Time

In ancient India, a physician graduated to his profession through one of the following procedures: he learnt the art and science of medicine from a teacher as his apprentice; he joined a *Gurukula*, a residential school situated in the forest away from crowded habitations; he enrolled himself as an understudy at the university of Taxila, or Kasi (Varanasi) or Nalanda.<sup>76</sup> Hindu medical lore has been handed down through generations, not by faculties bodies, college or research centres, but through the individual training of pupils by skilled practitioners, master of their craft.<sup>77</sup> It might be possible that in the beginning of the medical education Zimmer's points of view was acceptable but gradually as Taxila, Kasi and Nalanda emerged as big institutions for learning and education the view of Joggi cannot be considered wrong. The training of the *vaidya's* was analogues to that of the Brahman religious students.<sup>78</sup> In medical education also the caste system had its significance, apart from the other criteria's. Medical profession should belong to one of the three castes of Hindu Society.<sup>79</sup>

The initiation ceremony, performed on the student's embarking on his course of training, was the most solemn one.<sup>80</sup> It was called *upnayan Sanskara*, the same term as was used for the commencement ritual of a Brahman religious student.

<sup>76</sup>D.P Chattopadhyay (ed), "History of Science, Philosophy and Culture in Indian Civilization", vol. IX part 1 by O.P.Joggi, "Medicine in India: Modern Period", Oxford press, p 31

<sup>77</sup> Henry. R. Zimmer, "Hindi Medicine" the Jhon Hpkins Press, Baltimore 1948, p.75

<sup>78</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976,p25

<sup>79</sup> Henry. R. Zimmer, "Hindi Medicine" the Jhon Hpkins Press, Baltimore 1948, p.78

<sup>80</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976,p25

During this ceremony, the teacher charged him “you should give up lust, anger, avarice, folly, vanity, pride, envy, rudeness, deception, falsehood, idleness and all other reprehensible conduct. You should always have your hair and nails cut short, should put on red coloured cloth, lead a pure life, avoid sexual intercourse, and be ready to obey your superiors. You should remain, go about, lie down, sit down, eat and study according to my wishes and you should always ready to seek my welfare.”<sup>81</sup> Further he admonished with these words: If you fail in your duty, you will be committing a sin, and your learning will be fruitless”.<sup>82</sup>

The one, who was eager to adopt this profession, should be young and healthy, full of energy, bodily strength and endurance...pious, well mannered and clean.... His temper should be calm and self controlled.<sup>83</sup> Thus he had to be a combination of good health, and high morals and total dedication to this profession were primary requirements.

When both teacher and student were ready, the former taught the latter either quarter, half, or a whole stanza (*Sloka*) at a time, depending upon the student’s capacity to learn.<sup>84</sup> . In order to remember the oath the student then repeated the stanza many times in order to remember it.

The practical training of the student had three objectives:

1. preparation of medicine

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<sup>81</sup> D.P Chattopadhyay (ed), “History of Science, Philosophy and Culture in Indian Civilization”, vol. IX part 1 by O.P.Joggi, “Medicine in India: Modern Period”, Oxford press, p 33

<sup>82</sup> D.P Chattopadhyay (ed), “History of Science, Philosophy and Culture in Indian Civilization”, vol. IX part 1 by O.P.Joggi, “Medicine in India: Modern Period”, Oxford press, p 33

<sup>83</sup> Ibid

<sup>84</sup> Ibid



2. training in surgery and
3. examination of patient

The period of training of a medical student lasted for seven years. After the period of training was over, theory and practical examination conducted. Reference of such examination was found in Tibetan tale:

“Here Atreya asked his pupils ‘to go to a particular hill and fetch from it that plant which is no remedy’. While other student each brought certain things, Jivaka came back empty handed, saying there was nothing that was not a remedy for one disease or the other. Jivika was declared successful”.<sup>85</sup>

Theoretical examination was conducted by asking the student to read and explain a page from manuscript. If he explains it satisfactorily he was declared successful. The degrees were awarded to the successful candidate at a special ceremony called *samvartanaduring* which they were charged about their future conduct and behaviour.

Certain principles of conduct were expected from physician. Like he should attend wholly to cure of the patient and not injure him in any way. He should not look at the patient’s wife or property.<sup>86</sup> He should not disclose the events occurring at the home of the patients, and not utter a word even if he feels the patients death is near. He should give his medicines free of charge ‘to a Brahmana, a spiritual leader, the poor, friend, an ascetic and the like’ on the other hand he should not

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<sup>85</sup> D.P Chattopadhyay (ed), “History of Science, Philosophy and Culture in Indian Civilization”, vol. IX part 1 by O.P.Joggi, “Medicine in India: Modern Period”, Oxford press, p. 35

<sup>86</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi. p. 66

treat ‘ hounters, fowlers, outcastes, and sinner.’<sup>87</sup> Probably this formed the medical oath of that time.

### ***Unani* System of Medicine**

With the coming of the Islam in India, not only the political system changes took place but also the notable influence is seen on the social, cultural and educational pattern of India and the science of medicine did not remain aloof to it. It was the Arabs who introduced their medical system to the Indians. This Arabic medicine is called *Unani* by the Hindu- and Urdu speaking people.<sup>88</sup>

### **Origin of *Unani* System of Medicine**

The term *Unani* itself indicates the origin of the system. *Unani* is the English spelling of *Yunani* which is derived from the Arabic language and means Greek (ionian).<sup>89</sup> In the early Islamic period Muslims took over the medical system of the Greeks.<sup>90</sup> It was based on the humoral theory developed by the Hippocratic school and further refined by Galen.<sup>91</sup> All the literary form of the medical topics had been cultivated by the Greeks and were taken over by the Arabs, who “inherited” them by translating hundreds of Greek sources into Arabic.<sup>92</sup> This work was done by relatively small number of scholars, mainly during the ninth century. As already mentioned that, it is based on the teachings of Hippocrates and Gallen and it developed in to an elaborate Medical System by Arabs, further Rhazes, Avicenna,

<sup>87</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi. p. 66

<sup>88</sup> Charle Leslie (ed) “Asian Medical System: A Comparative Study”, University of California Press, London/California, 1976,p 44

<sup>89</sup> Charle Leslie (ed) “Asian Medical System: A Comparative Study”, University of California Press, London/California, 1976, p 44

<sup>90</sup> Oriental Medicine p. 39

<sup>91</sup> Ibid

<sup>92</sup> Charle Leslie (ed) “Asian Medical System: A Comparative Study”, University of California Press, London/California, 1976,p 44

Al-Zahravi, Ibne-Nafis and others played an important role in its development. *Unani* Medicines got enriched by imbibing what was best in the contemporary systems of traditional medicines in Egypt, Syria, Iraq, Persia, India, China and other Middle East countries.<sup>93</sup>

The Delhi Sultans (rulers) provided patronage to the scholars of *Unani* System and even enrolled some as state employees and court physicians. . By the 13<sup>th</sup> century, the *Unani* system of medicine, was firmly entrenched in certain towns and cities of India notably, Delhi, Aligarh, Lukhnow and Hydrabad.<sup>94</sup> During 13<sup>th</sup> and 17<sup>th</sup> century *Unani* Medicine had its glorious days in India. During the British rule, *Unani* System suffered a set back due to withdrawal of State Patronage, but continued to be practiced as the masses reposed faith in the system.<sup>95</sup> It was mainly Sharifi family in Delhi, the Azizi family in Lucknow and the Nizam of Hyderabad due to whose efforts *Unani* Medicine survived during the British period.<sup>96</sup>

### Concept and Principles

*Unani* treatment is based on its natural and remarkable diagnosis methods and is affordable. It is mainly dependent on the Temperament (*Mizaj*) of the patient, hereditary condition and effects, different complaints, signs and symptoms of the body, external observation, examination of the PULSE (*Nubz*), urine, stool etc. Unique and special treatment methods like Dieto therapy (*Ilaj-bil-Ghiza*), Climatic therapy (*Ilaj-bil-Hawa*) and Regimental therapy (*Ilaj-bit-Tadbir*), make it a different and remarkable and popular system. According to *Unani* system of medicine, there

<sup>93</sup> Unani, <http://Indianmedicine.nic.in/Unani.asp> (accessed, June 2009)

<sup>94</sup> K Park, "Preventive and Social Medicine" 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur, 2002, p. 2-11

<sup>95</sup> Unani, <http://Indianmedicine.nic.in/Unani.asp> (accessed, June 2009)

<sup>96</sup> Ibid

were four humours, akhlot, in human body: blood (dam or khun), phlegm (Balgham), black bile (al mirra al swada) and yellow bile (al mirra al sfara).<sup>97</sup> Since health according to Galen, consisted in the relative harmony of the humours, illness meant a disruption of that harmony.<sup>98</sup> *Unani* system of medicine had a holistic approach; health did not simply mean balancing the humours internally, it also meant living in harmony with the environment.<sup>99</sup>

In *Unani* Medicine, single drugs or their combination in raw are preferred over compound formulations. Further the Material -Medica of *Unani* Medicine being vast, the medicines are easy to get as most of them are available locally. The naturally occurring drugs used in this system are symbolic of life and are generally free from side-effects. Such drugs as are toxic in crude form are processed and purified in many ways before use.

*Unani* System has shown remarkable results in curing the diseases like Arthritis, Leucoderma, Jaundice, Liver disorders, Nervous system disorders, Bronchial Asthma, and several other acute and chronic diseases where other systems have not been able to give desired response. Now the system has crossed national boundaries and is popular among the masses globally.<sup>100</sup>

At present the *Unani* system of medicine, with its own recognized practitioners, hospitals and educational and research institutions forms an integral part of the

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<sup>97</sup> Oriental Medicine p. 39

<sup>98</sup> Ibid

<sup>99</sup> Oriental Medicine p. 39

<sup>100</sup> Unani, <http://Indianmedicine.nic.in/Unani.asp> (accessed, June 2009)

national healthcare system. Today, India is considered a world leader in *Unani* Medicine.<sup>101</sup>

### Medical Science and Education in Medieval India

During the medieval times the medical science did satisfactorily progress. *Barni* had provided a long list of the physicians and astronomers of the period in his famous book *Tarikh-i Firoz Shahi*. The chief minister of Sikandar Lodi rendered a great service to the medical science by getting the famous work *Tibb-i-Sikandari*, a work on medical science compiled.<sup>102</sup> Another important work on this subject was Mohammad Mumin Hussain's famous book *Tuhaphat- al- Mumeni* which was considered a standard work of medical science till the end of the 17<sup>th</sup> century. The most important Muslim medical text produced in India, Miyan Bhowas' *Ma 'damu'l shifa- sikandarshahi* (*The Mines of Medicine of King Sikandar,* ) completed in A.D.1512 and dedicated to sultan of Delhi, Sikandar Lodi.<sup>103</sup>

One can get sufficient evidence from different sources regarding the presence of a number of prominent physicians and medical scientists. Some of these specialised in operations and could make artificial limbs. Elphistone says that like their medicines, their operation technique were also well known particularly when they were fully ignorant of the system of the body.<sup>104</sup> For instances;

<sup>101</sup> Unani, <http://Indianmedicine.nic.in/Unani.asp> (accessed, June 2009)

<sup>102</sup> S.C.Raychoudhary, "Social Cultural and Economic History of India", Vol. II, Surjeet Publication, Delhi, 2005. p. 153

<sup>103</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976, p 44

<sup>104</sup> S.C.Raychoudhary, "Social Cultural and Economic History of India", Vol. II, Surjeet Publication, Delhi, 2005. p. 153

When in 1528, young Mughal Princess Gulbadan's arm was accidentally pulled so hard by her Afghan step mother that it got dislocated, it had to be set and bound up, not by physician but by a bow maker (Kamangar)<sup>105</sup>

However the case of surgery was also noted of this time, especially in case of nose transplantation. Italian traveller Nicholas Manucci, in his book *storia d mogor* provide the first evidence for the practice of nose-restoration in India 1686, he wrote;

“At the commencement of the war (between Aurangzeb and Bijapur), when the men of Bijapur caught any unhappy person belonging to the moguls who had gone out to cut grass or collect straw or do some other service, they did not kill them but cut off their noses. Thus they come back to the camp all bleeding. The surgeon belonging to the country cut the skin of forehead above the eye brows, and made it fall down over the wounds of the nose. Then giving it a twist so that the live flesh might meet the other live surface, by healing application they fashioned for them other imperfect nose..... in short time it would heal up, some obstacle being placed beneath to allow respiration. I saw many persons with such noses, and they were not so disfigured as they would have been without nose at all, but they bore between their eyebrow the mark of the incision.”<sup>106</sup>

Elphinstone also states that the surgeon of the medieval time could perform at least one hundred and seventeen types of surgery.

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<sup>105</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi. p. 79 further cited from Gulbadan Begam Memories (Humayun nama), edited and translated by Annette S. Beveridge, London, 1902, text, p. 19

<sup>106</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi. p. 80

The Muslim rulers of India did more to develop medicine than their Hindu predecessors.<sup>107</sup> Some of the Sultans notably two prominent Tughlaq rulers Muhammad bin Tughlaq and Firoz Shah Tughlaq were Physician (*Hakim*) themselves. And many of them founded the hospitals. Muhammad bin Tughlaq, Firoza Shah Tughlaq, Sikandar Lodi, Sher Shah Sur, and Akbar, they all supported the construction of hospitals in their realms. Here the work of encouraging hospital in the Mughal empire by Akbar is note worthy.

The development of hospitals was encouraged in India by large number of Iranian doctors who migrated there in the reign of Akbar, and through them the number of Hospitals increased in this and succeeding reigns.<sup>108</sup>

### **Medical Education**

The students of the medical sciences were for the most part instructed in private circles, which were held in the homes of distinguished teaching physicians. Hospitals used to be equipped with teaching rooms, and students were encouraged or even obliged to attend hospitals for practical besides training. When no systematic writings of Arabic authors were available selected work of Galen was used for theoretical study. The back bone of the theoretical instructions was the so called *Alexandrain Canon*, also labelled the Summaries of the Alexandrians<sup>109</sup> this was a selection of sixteen books out of hundreds of books written by Galen.<sup>110</sup>

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<sup>107</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976, p 44s

<sup>108</sup> Ibid, p 40

<sup>109</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976, p.48,

<sup>110</sup> Ibid, p. 49

Gradually with the coming of the Arabic authors writings such as of Razi, Ali ibn, Abbas al – Majusi, ibn Sina, and other, *Alexandrain Canon* lost its importance.

The medical texts in India were mostly in Arabic and Persian and they were not translated in the vernacular languages before the 19<sup>th</sup> century. The books contained all the technical as well as theoretical knowledge, it was imperative for the student to his guide dealing with the patients. All the interaction of trade, the individual examination of patients, the diagnosis subsequent prescription, manufacture of drugs, the surgical operations undertaken on serious cases had to be learned by observing and following the example of a practicing Hakim.<sup>111</sup> After completion of a certain period of instruction, the trainee/ future physician could finish his study by giving an examination. Such examination either set by their teacher or by government officials.

Thereby they gain the licence which stated what they had achieved and allowed them to practice on their own.<sup>112</sup> Although still their course could be considered complete until they won't take the oath. The physicians were bound to follow the ethical rules based mainly on the Hippocratic Oath,<sup>113</sup> that is;

'you do solemnly swear, each man by whatever he hold most sacred, that you will be loyal to the profession of medicine and just and generous to its members; that you will lead your life and practice your art in uprightness and honour; that into whatsoever house you shall enter, it shall be for the good of the sick to the utmost

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<sup>111</sup> Oriental Medicine p. 40

<sup>112</sup> Ibid

<sup>113</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976, p50

of your power, you holding yourself far aloof from wrong, from corruption, from the tempting of others to vice; that you will exercise your art solely for the cure of your patients and will give no drug, to perform no operation, for a criminal purpose, even if solicited, far less suggest it. That what so ever you shall see or hear of the lives of men which is not fitting to be spoken, you will keep inviolably secret. These things do you swear. Let each man bow the head in sign of acquiescence. And now, if you will be true to this, your oath, may prosperity and good repute be ever yours; the opposite, if you shall prove yourself forsworn.<sup>114</sup>

This Oath is still taken by medical students at the time of completion of their course whether they are trained in Allopathy, *Unani* or Homoeopathy system of medicine.

Badauni, in his book, *Nijatu'r Rashid*, stated that in the *Unani* physicians were forbidden to kill or to help in killing somebody by the use of their medical knowledge. They were forbidden to perform abortions. Unlike the oath for *Vaid*s, there were also not allowed to reveal the secret confident to them by their patients and to treat free of cost to the poor.

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<sup>114</sup> New Illustrated Columbia Encyclopedia, X, New York, 1978/79, p. 3111

### ***Ayurveda* and *Unani* system of medicine: A Comparative Swot**

When *Unani* medicine came to India *Ayurvedic* medical system was already in place. Like *Unani tibb*, *Ayurveda* was also humour based. To *Unani*,s four humours (blood phlegm, black and yellow bile), *Ayurveda* had three (phlegm, bile and wind). Both emphasised the necessity of a humoral balance for the well being of the patient.<sup>115</sup> The training of the student was similar in both the systems. Student were taken into the family setting of the practitioner and learned from him by following his example.<sup>116</sup> Though the renowned universities of India like Nalanda and Taxlia also had taught medicine but still the individual teaching system was in vogue. The knowledge interaction also took place between these two systems. For instance, pulse examination which is an important part in the *Unani* medicine began to play much greater role in the *Ayurveda* after the arrival of *Unani* medicine in India. *Ayurvedic* texts translated in the Arabic since 8<sup>th</sup> century and with the coming together of the two system in India more of the *Ayurvedic* system became available to the *Unani* Hakims.

Both system were based on holistic approach to health; they considered man in his totally within a wide ecological spectrum.<sup>117</sup> Magical and religious beliefs played a crucial part in both systems

Apart from having lots of similarities and interaction of knowledge there were certain points where the two systems vary from one another. Islamic practice laid

<sup>115</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976, p. 53

<sup>116</sup> Ibid

<sup>117</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study", University of California Press, London/California, 1976, p50

great stress on the study of individual case, and Arabic medical texts contain many case histories, which are quite absent from the text of *Ayurveda*.<sup>118</sup>

Whether or not the Hindus had a fully developed system of Hospitals, these are not mentioned in the Hindu medical texts. On the other hand, they were essential aspects of the Muslim medical system, and the *tabib* was advised to visit hospital regularly.<sup>119</sup>

In the ancient days, Medicine was dominated by magical and religious beliefs which were an integral part of almost all ancient cultures and civilizations. Although primitive man may be extinct, his progeny - the so called " Traditional Healers " , are found everywhere. They live close to the people and their treatment are based on various combinations of religion, magic and empiricism.

The practitioners of the two systems seems to have collaborated, because each had much to learn from the other and, whatever the *Ulema* and Brahmins might say, we have no records of animosity between Hindu and Muslim in the field of medicine.<sup>120</sup> As far as medicines or medical system is concern the cultural synthesis between the two communities is very well seen during this period.

The greatest Physician in Greek medicine was Hippocrates, who is often called the "Father of Medicine". He studied such things as climate, water, air, clothing, habits of

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<sup>118</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study" ,University of California Press, London/California, 1976,p 39

<sup>119</sup> Ibid p. 40

<sup>120</sup> Charle Leslie (ed) "Asian Medical System: A Comparative Study" ,University of California Press, London/California, 1976,p 39

eating & drinking and the effect they have in producing diseases. The Greeks believed that matter was made up of four elements - Earth, Air, Fire, Water and the same is applicable to body also. They also believed that the equilibrium among these elements maintains normal health status.

Medicine has moved from organism to organ and from organ to cell and from the cell to molecular properties. Despite spectacular bio-medical advances and massive expenditures, the death rate and the life expectancy in the developed countries have remained unchanged. Medicine, as practiced today has begun to be questioned and criticised. High technology medicine seems to be getting out of hand and leading health systems in wrong directions. There is an increasing concern about the cost and allocation of health resources, but the efficacy of modern medicine is fundamentally questioned through various points of view. Contemporary medicine is no longer solely an art and science for the diagnosis and treatment of diseases. It is also the science for prevention of disease and promotion of health. With increasing recognition of the failure of existing health services to provide health care, alternative ideas and methods to provide health care have been considered and tried in large scale in the recent past.

The sacred land of India, from the time immemorial contributed in its own way to the better living of mankind. *Yoga* & Naturopathy are the two of its kinds which can be the only answer to the rising levels of health care problems.

Unlike earlier, *Yoga* today is no longer restricted to a privileged minority of hermits; it has taken its place in our every day lives and have undergone a world wide

awakening and acceptance in the last few decades. The Science of *Yoga* and its techniques have now been re-oriented to suit modern sociological needs and lifestyle. Experts of various branches of medicine including modern medical science are realizing the role of these techniques in the prevention of disease and promotion of health.

Thus up to the coming of the Britishers the above mentioned system of medicines were at vogue. Princes as well as the people shown their faith in it and use the same to resolve their health problems

### **Dawn of Modern Medicine**

The period following 1500 AD was marked by revolutions- political industrial, religious and medical. Political revolutions took place in France and America, people claiming their just rights. The industrial benefits in the West brought great benefits leading to an improvement in the standard of living among people. With advancing degrees of civilization, medicine also evolved.

### **Revival of Medicine**

According to many historians, the revival of medicine encompasses the period from 1453-1600 AD. It was an age of individual scientific endeavour. The distinguished personalities during this period were: Paracelsus (1493-1541) who revived medicine.<sup>121</sup> He was born at a time “when Europe stretched her limbs after a sleep of thousand years in a bed of darkness”. Labelled genius by some and quack by others, Swiss born Paracelsus publicly burnt the work of Galen and Avicenna

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<sup>121</sup> K Park, “Preventive and Social Medicine” 7th Edtn., Banarsidas Bhanot Publishers, Jabalpur , 2002,p,24

and attacked superstition and dogma and helped turn medicine towards rational research. Fracastorius (1483-1553), an Italian physician enunciated the “theory of contagion” i.e. theory of infections. He envisaged the transfer of infection via minute invisible particles and explained the cause of epidemics. Fracastorius recognised that syphilis was transmitted from person to person during sexual relations. He became the founder of epidemiology. Andreas Vesalius (1514-1564) of Brussels did lot of dissections on the human body and demonstrated some of Galen’s errors. He realised the study of anatomy to a science, and has been called “the first man of modern science”. Vesalius’ great work *fabrica* became a classic text in medical education. What Vesalius did to anatomy, Ambrosie pare and (1510- 1590), French Army surgeon did for surgery and earned the title “father of surgery”. Pare advanced the art of surgery, but Jhon hunter (1728-93) thought the science of it. In the 1528 the united company of Barber Surgeons was established in England, which later became the Royal college of Surgeons. Another great name in the clinical medicine is that of Thomas Sydenham, (1624-1629), the English Hippocrates who sets the example of true clinical method. He made a differential diagnosis of scarlet fever, malaria, dysentery and cholera.

The 17<sup>th</sup> and 18<sup>th</sup> centuries were full of even more exciting discoveries, e.g. William Harvey’s discovery of the circulation of blood (1628) , Leeuwenhoek’s microscope (1670). However the progress in medicine as well as in surgery, during the 19<sup>th</sup> century would not have been possible but for Morgagni (1682-1771) who founded a new branch of medical science, pathology anatomy.

All these discoveries introduced to the various part of the world including India by the colonial masters.

In India during British rule, state and philanthropic intervention played a significant role in healthcare, though most of these facilities were located in large towns, thus projecting a clear urban bias and neglect of the rural population. Modern medicine gradually undermined systems of *Ayurveda* and *Unani*, and those traditional practitioners who survived often concentrated in the small towns and rural areas where modern medicine had not yet penetrated<sup>122</sup>.

### **Western Medicine in India**

The coming of the British was not all alone. They bring their culture way of education system of law and justice and scientific evolution along with them. Gradually as the colonialism and imperialism controls the Indian economy and polity, medical science of the west was also becoming influential in the area where Britishers had strong political control. Prof Deepak Kumar rightly remarks in his book 'Disease and medicine in India' about the colonial watershed as:

“Western medical discourse occupies an extremely important place in the colonization of India. It functioned in several ways; as an instrument of control which would swing between coercion and persuasion as the exigencies demanded and a site for interaction and often resistance. In its former role it served the state and helped ensure complete dominance”.<sup>123</sup>

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<sup>122</sup> “Health System in India: Crisis and Alternatives” National Coordination committee, Jan Swasthya Abhiyan p 12, 2006

<sup>123</sup> Deepak Kumar (ed) “Disease and Medicine in India”, Tulika, New Delhi. p. xvii

In the beginning when the several European nation who sent their voyages to search for the new land where they can establish their colony, their team comprised sea voyagers, a small trop, merchants and trader those who had the knowledge of languages and doctors. These doctors who accompanied every naval despatch from Europe emerged as powerful interlocutors.<sup>124</sup> They not only looked after the sick in ships and on land but were the first to report on the, Flora, Fauna, resources and cultural practices of a new territory.

The basic tendency of the British colonial master remained the same in India; to have as much as possible financial gains from their colony. Development of modern medical science and their process of becoming acceptance among the mass was a natural. As during the time of the Hindu rulers in ancient time the Vedic medicinal knowledge became popular same during the medieval rule *Unani* system of medicine progress in India. The case of European medical system i.e. Allopathy was not different from the first two. If the Britishers codified the Indian Laws it was for their benefit; to maintain law and order so that they can have a better control over a mass, if they introduced the modern system of education again it was for their use, to create an Indian class which was brown in colour but white in test, who will serve in the lower strata of their administration and will consume the British goods. To maintain healthy environment and healthy surrounding was highly required to fulfil their colonial desire. Preservation of European health in the new and hostile land was the first responsibility.<sup>125</sup>

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<sup>124</sup> Deepak Kumar (ed) "Disease and Medicine in India", Tulika, New Delhi. p. xvii

<sup>125</sup> Anil kumar, "Medicine and the Raj", Sage publication, New Delhi, 1998, p 11

However in the 19<sup>th</sup> century the attitude of the colonizers was not like this through out the world. Western medicine was far less dominating in its relation with indigenous societies and indeed was largely confined to the European themselves.<sup>126</sup> Rarely European Physicians offer their services to local rulers, that too with commercial rather than medical objective. Gabriels treatment of Shahjanhan's daughter and treatment of the Farruksayyiar the Mughal emperor are set example of this

Gabriel Boughton, surgeon of the English ship Hopewell, is said to have attended on the daughter of the emperor Shahjahan, who had been badly burnt.<sup>127</sup> The vazir Asud khan recommended his desire to get the assistance in this case from the European surgeon, message was sent to Surat and the Council at Surat nominated Gabriel. Gabriel successfully treated the young princes from the effects of her accident. As a result Gabriel became favourite at court .A liberty was given to him by the emperor to ask for his rewards, he sought for not any private emolument but pleaded for that his nation might have liberty to trade, free of all duties, to Bengal and establish factories in that country. *Firman* issued by Shahjahan comprising the acceptance of all the emoluments requested by Gabriel.

William Hamilton's treatment of the emperor was of great benefit to the English by bring them in high favour at the Mughal court.

O.P Joggi states Hamilton's High favour in Mughal courts as follow;

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<sup>126</sup> David Arnold (ed.) "Imperial Medicine and Indigenous Society" oxford University press, Delhi, 1989, p 11

<sup>127</sup> D.P Chattopadhyay (ed), "History of Science, Philosophy and Culture in Indian Civilization", vol. IX part I by O.P.Joggi, "Medicine in India: Modern Period", Oxford press, p 219

“Before the end of July, Hamilton was called in to treat Taqarab Khan, but found his case hopeless. In August he was required to treat the king for swellings in the groin, and did so with success. Two months later, in October, the Emperor Farrukh Siyar was again attacked by violent pain, and it was feared that he would develop fistula. Hamilton’s treatment was again successful and on December 7, the emperor’s marriage to the daughter of Raja Ajit Singh of Jodhpur which had long been delayed because of his illness, was celebrated. Hamilton was richly rewarded receiving an elephant, a horse, five thousand rupees in cash, two diamond rings, a jewelled aigrette, a set of gold buttons and models of all his instruments in gold.”<sup>128</sup>

Among all the British medical officers who served in India, William Hamilton was probably the most renowned physician and was certainly the one who was greatest benefactor of his company and his country because of his own influenza at the Mughal Court he opened the new avenue of the further commercial benefits to the company.

Prior to 1800 in striking contrast to the late nineteenth century European commonly sought the help of local physicians, probably because very few of their own were available and partly from the conviction that the indigenous physician likely to be more acquainted with the disease and medicine of their native place. The Spanish in the Americas, despite their general disregards for the indigenous culture, adopted a number of local medicines including the use of chichona (‘Peruvian bark’) as febrifuge; and until the Inquisition intervened, the Protégées in the

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<sup>128</sup> D.P Chattopadhyay (ed), “History of Science, Philosophy and Culture in Indian Civilization”, vol. IX part 1 by O.P.Joggi, “Medicine in India: Modern Period”, Oxford press, p. 220

western India used Brahmin 'Pondits' practitioners of Hindu Ayurvedic medicine, as their physicians.<sup>129</sup> Even the East India Company in India encouraged its servants to rely on local rather than expensive imported medicine.

Here the question arise if the both were benefitted by the other then why a new medical system overshadowed the other? Why the medical synthesis which took place between the *Unani* and *Ayurveda* not occurred again during the British rule?

Probably the superiority of culture and civilization (which was presumed )by the European could be one of the major reason behind. As already mentioned earlier number of medical discoveries took place in the 17<sup>th</sup> and 18<sup>th</sup> centuries. A growing conviction of the unique rationally and superior efficacy of western medicine began to process European doctors and lay man like.<sup>130</sup>

The modern medical science developed gradually in India. Looking to the demand of the medical practitioners by the changing society, modern medical education also began to take it derivation in India.

### **First medical school in India**

After the middle of the 18<sup>th</sup> century, the British surgeon in-charge of hospitals trained a few Indians in the general aspects of disease and in the European modes of treatment. This training , however was not systematic but useful for long term prospective. The demand for such trainees gradually increase and it was found necessary to establish an institution where a more uniform and better system of

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<sup>129</sup> David Arnold (ed.) "Imperial Medicine and Indigenous society" Oxford University Press, Delhi, 1989, p 11

<sup>130</sup> Ibid p. 12

education could be imparted. The medical board addressed a memorandum on May 9, 1822 to Secretary of the Government of India in the military department in which this matter was stressed.<sup>131</sup>

In April 1824, the Government sanctioned printing of a vocabulary of medical terms in the Roman, Persian and Devnagari Characters and a *Pundit* was appointed to assist the superintendent in his work and the school opened in October 1824 in Calcutta.

The following books seems to have been translated and lithographed at Government expense : Hooper's Anatomist's Vade-mecum, Surgeon's Vade Mecum, Thomson's Conspectus of the Pharmacopoeia, Fyfe's Manual of Chemistry, Conquest's Outline of Midwifery, Tropical Diseases by Twining and Smith, Plaque by Dr. Thomas and some books on vaccination.<sup>132</sup>

Thus the new era of system of medicine inaugurated and next in this direction was establishment of proper medical set-up and that was completed with the establishment of Medical Council in India.

### **Creation of the Indian Medical Council**

At the beginning of the twentieth century, in India, the Practitioners of the indigenous systems of medicine like Ayurveda, Siddha, Unani, etc.. anyone could style himself a doctor and start treating patients. Even the failed students of the medical colleges were not debarred from practicing side by side with qualified doctors. The result was

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<sup>131</sup> D.P Chattopadhyay (ed), "History of Science, Philosophy and Culture in Indian Civilization", vol. IX part 1 by O.P.Joggi, "Medicine in India: Modern Period", Oxford press, p. 41

<sup>132</sup> Ibid

that in a poor country like India, those practitioners who charged less had patients flocking to them even though their treatment was often mere quackery, frequently with disastrous consequences.<sup>133</sup> There was a need to protect patients from such unscrupulous 'healers'.

As far back as 1890, an unsuccessful attempt was made to pass a law for the registration of medical practitioners in the Bombay Presidency. Dr. W. K. Hatch had stated in a letter: It is a pity that the Indian public are so supine in regards to this most important matter which generally affects both public and private interests.

A development which prompted action in this regard was the continued proliferation of self-constituted but ill-equipped Colleges institutions and academies, granting diplomas and licenses to practice in Calcutta.<sup>134</sup>

The medical practitioners of Calcutta and its neighbourhood in a meeting held on 6<sup>th</sup> July, 1908 in the Hall of the Calcutta University adopted the following resolution: That the time has come for considering the question of preventing the granting of degrees which are properties of Indian Universities. By the Medical Registration Act or otherwise, and also for taking steps to safeguard the interests of persons practicing the systems recognized by the Indian Universities.<sup>135</sup>

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<sup>133</sup>D.P Chattopadhyay (ed), "History of Science, Philosophy and Culture in Indian Civilization", vol. IX part 1 by O.P.Joggi, "Medicine in India: Modern Period"; Oxford press, p.283

<sup>134</sup> Ibid

<sup>135</sup> Ibid 284

**Bengal Medical Act**

In April 1914, the Bengal Medical Act was passed. It conferred upon the Bengal Council of Medical Registration the duties of general supervision over the interests of the medical profession and the progress of medical education. It now rested with the council to decide when the training and equipment of a school or college were such as to justify the grant of registrable qualification to its successful students.<sup>136</sup>

**Bombay Medical Act**

A Bill on similar lines was earlier passed in 1911 for the Bombay Presidency; it was called the Bombay Medical Act, 1911. The object of this Bill was to protect the public and the medical profession from irregularly qualified practitioners who has received a training in medical science at unrecognized institutions, and to afford a ready means of ascertaining whether any particular medical practitioner possessed certain scheduled qualifications. These scheduled qualifications were: Doctors, Bachelor and Licentiate of Medicine and Masters, Bachelor and Licentiate of Surgery of the Universities of Bombay, Calcutta, Madras, Allahabad and Lahore. Also, any person trained in a Government Medical College or School who held a diploma or certificate granted by the government declaring him to be qualified to practice medicine, surgery and midwifery, or to be qualified for the duties of a military assistant surgeon, hospital assistant or sub-assistant surgeon.

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<sup>136</sup> <sup>136</sup>D.P Chattopadhyay (ed), "History of Science, Philosophy and Culture in Indian Civilization", vol. IX part 1 by O.P.Joggi, "Medicine in India: Modern Period", Oxford press, p.286

After this act come in to effect, no certificate from any medical practitioner or medical officer was valid unless the person signing the same was registered under the Act.<sup>137</sup>

### **All India Medical Act**

A more comprehensive Bill encompassing the whole of British India was introduced by Sir Pardey Lukies, at the meeting of the Imperial Legislature Council held at Simla on September 22, 1915 and passed in 1916. This was meant to prevent the grant to unqualified persons of titles implying qualification in western medical science. Sir Pardey Lukis, among other things, said : 'Seeing that Medical Registration Acts have already been passed in many of the large provinces of British India, and that others are under consideration, it is now considered necessary to supplement this provincial legislation by an Imperial Act restricting to duly constituted authorities the right to issue degrees and diplomas in the Western system of medicine and surgery so as to ensure that such degrees and diplomas are not issued to unqualified persons.

This Bill prohibits all persons save certain specified authorities from issuing or alleging that they are entitled to issued any degree or diploma in Western Medicine. It also penalizes persons who voluntarily and falsely assume any medical title which is granted either by the Local or the General Council of the Medical Education of the United Kingdom, or by the authorities constituted under the Act, and further it prohibits the use of any colourable imitations of such titles. The Bill does not affect the right of any person to exercise the profession of medicine or to practice as a physician or surgeon provided that he does not pretend to qualifications which he

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<sup>137</sup> D.P Chattopadhyay (ed), "History of Science, Philosophy and Culture in Indian Civilization", vol. IX part 1 by O.P.Joggi, "Medicine in India: Modern Period", Oxford press, p. 286

does not possess and its operation is rigidly restricted to the Western Methods or Allopathic Medicine and Surgery ; practitioners of the Homoeopathic. Ayurvedic and *Unani* systems being excluded from the purview of the Bill.