

## CHAPTER V

### IMPARTING MEDICAL EDUCATION: MADRASAS AND COLLEGES

#### i. MEDICAL EDUCATION IN PRE-COLONIAL PERIOD:

The medical education in India can be traced from the ancient times when the knowledge was imparted and practiced by the *vaidyas* who enjoyed a responsible position in the society. Both Charaka and Susruta are widely known for having been good physicians and teachers who laid down certain principles for the men of medicine. Susruta sought certain qualities in a physician. According to both Charaka and Susruta a good physician must be a person who is well versed in the science of medicine and has attended to demonstration of surgery and medicine. Besides, a physician should practice the healing art, and is clean, courageous, light handed fully equipped with supplies of medicine, surgical instruments and appliance. Together with this, a physician also must be intelligent, well read, and is a name of ready resources and is further endorsed with all moral virtues.<sup>1</sup>

The *Ayurvedic* physicians or *vaidya* formed a recognized craft group not distinct as a caste but often following the profession of their fathers and forefathers.<sup>2</sup> They distributed the medicines to their patient, which were prepared by them. The relationship between the *vaidyas* and their patients was

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<sup>1</sup> *Susruta Samhita*, 34.9.op.cit.

<sup>2</sup> A.L. Basham, "The practice of Medicine in Ancient and Medieval India", in Charles Leslie (ed.), op. cit., p.23.

totally religious. They were well versed in religious matters. They also served as teachers and trained their pupils in the art of healing.<sup>3</sup> People from the various castes were engaged in this noble profession. For example it is reported from Orissa that a village *vaidya*, who was a member of the warrior class and a holder of a small plot of land cured many people of their diseases. This indicates that people belonging to different caste and class also practiced as *vaidya*.<sup>4</sup>

The students (*sishya*) would assist their teachers in dealing with the patients. They would also prepare medicine under the guidance of their guru<sup>5</sup>.

The advent of the Muslims in India brought a tremendous change not only in the social and political sphere but also in the domain of education and learning. The Muslim rulers patronized the education alike both the Hindu and Muslim subjects.<sup>6</sup>

The first centre of *Unani* medicine in the whole of South Asia was set up at Lahore in or around 1160 under the patronage of the Ghaznavide rulers.<sup>7</sup> The court of the early Turkish ruler of the Delhi Sultanate became a bee-hive of

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<sup>3</sup> Girindra Mukhopadhyaya, *History of Indian Medicine*, Calcutta, University Press of Calcutta, 1926, Vol II. p. 21.

<sup>4</sup> F.G. Bailey, *Caste and Economic Frontier*, Manchester, England, Manchester University Press, 1957; cf. Charles Leslie (ed.), *Asian Medical Systems: A Comparative Study*, University of California Press, Berkeley, 1976, p.38.

<sup>5</sup> For the system containing in modern Bengal see Brahmanade Gupta, *Indigenous Medicine in Nineteenth and Twentieth Century Bengal*, in Charles Leslie (ed.), op. cit., p. 368.

<sup>6</sup> See for example Narendra Nath Law, *Promotion of Learning in India* with a forwarded by H. Beveridge, Longmans, Green & Co, London, Calcutta, 1916, pp. xiv-xivi.

<sup>7</sup> See Tazeemuddin Siddiqi, "Unani Medicine in India during the Delhi Sultanate", *Studies in History of Medicine*, Vol. 2, no.3, 1978, pp.183-89.

literary men, poets' philosophers and scientists who gave great impetus to the literary life of the day.

Alberuni, gives us an insight into the rapid progress that Arabic and Persian literature were then making in unveiling the rich store of knowledge imbedded in both Sanskrit and Greek literature. Ancient mathematics, astronomy, astrology, philosophy, medicine and pharmacology were favorite subjects of study with Muslim scholars. The translations of Indian works, including a large portion of narrative literature was being made into Arabic and Persian by these energetic and inquisitive scholars.<sup>8</sup>

Firishta informs us that under the Khalji rule:

“Places, mosques, universities, baths, mausoleum, forts and all kinds of public and private buildings seemed to rise as if by magic. Neither did there in age, appear such a concourse of learned men from all parts. Forty five doctors, skilled in the sciences were professors in the universities.”<sup>9</sup>

Those who taught Unani medicine were known as *hakim* and the teachers of the *Ayurveda* were the *vaidyas*. Like *vaidyas* the *hakims* also had a reputed position in the society. Quite a number of *hakims* had specialties in the medical treatment side by side both systems of medicine seem to have

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<sup>8</sup> See Preface Edward C. Sachan (ed.), *Alberuni's India: An Account of the Religion, Philosophy, Literature, Geography, Chronology, Astronomy, Custom, Laws and Astronomy of India about A.D. 1030*, with notes and Indices, S. Chand & Co., New Delhi, First Indian reprint, 1964. cf Narendra Nath Law, op. cit., pp.13-14.

<sup>9</sup> Abul Qasim Firishta, *Tarikh-i Firishta*, eng. tr. *The History of the Rise of the Mahometan Power in India*, London, 1829, Vol. I, p.35.

collaborated because they learn from each other. There is hardly any evidence to suggest that there was animosity between *vaidya* and *hakim* in their field.<sup>10</sup>

Firoz Shah Tughlaq was himself skilled in the Science of medicine, logic, astronomy and mathematics. He used to attend on patients afflicted with any extraordinary disease in order to acquaint him with its symptoms.<sup>11</sup> Another contemporary work of Abdul Abbas Ahmed mentions that at the royal court at Delhi, there were a thousand poets skilled in one of the three languages Arabic, Persian, or Indian and twelve hundred physicians.<sup>12</sup> He also mentions that in Delhi alone there were thousands of colleges and about seventy hospitals called *Daru-sh-shifa* or house of cure.<sup>13</sup>

The Mughal emperors also extended the educational activities of the Sultanate period. They were uniformly interested in the development of medical sciences and in the organization of hospitals and clinics.

Unani Medicine received liberal encouragement from the Mughal rulers. According to Abul Fazl, there were 29 physicians in the state service<sup>14</sup> (both Hindus and Muslims). Their actual number would have exceeded thousands when the whole country was considered. According to Abul Fazl, Akbar had

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<sup>10</sup> A.L. Basham, "The practice of Medicine in Ancient and Medieval India", in Charles Leslie (ed.), *Asian Medical Systems: A Comparative Study*, University of California Press, Berkeley, 1976, pp.39-40.

<sup>11</sup> N. N. Law, *op.cit.* p.44.

<sup>12</sup> Shahabuddin Abdul Abbas Ahmad, *Masalikul Absar fi Mamalikul Ansar* in Elliot and Dowson, *op. cit.*, Vol. iii, p.579.

<sup>13</sup> *Ibid.*p.576.

<sup>14</sup> Abul Fazl, *Ain i Akbari*, Translated into English by H. Blochmann, edited by D.C. Phillot, Vol. I, Low Price Edition, Delhi, reprint, 2008, pp.611-13.

directed the instruction of *tibb* with the other sciences in the school curriculum.

In one the passages of the *Ain Abul Fazl* informs:

“...this method of teaching be adopted, a boy will learn in a month, or even in a day, what it took others years to understand, so much so that people will get quite astonished. Every boy ought to read books on morals, arithmetic, the notation peculiar to arithmetic, agriculture, mensuration, geometry, astronomy, physiognomy, household matters, the rules of government, *tibb*, logic the *tabii*, *riyazi*, and *ilahi*, sciences and history; all of which may be gradually acquired.”<sup>15</sup>

Probably the teaching of *tibb* under the Mughals was mainly tutor oriented.<sup>16</sup> That is why in India, there were not many specialized colleges for medical sciences as we find in the contemporary Aleppo, Egypt or Iran.<sup>17</sup>

The author of *Masir-i Rahimi* of clearly mentions the medical educational system prevalent in the *madarsas*. Two prominent *hakims* of this period named Hakim Shams and Hakim Muin run a *madarsa* at Thatta and also taught medicine there.<sup>18</sup> Similar information is given by Shah Nawaz Khan in *Masir ul Umara* in which he discusses about a Gujrati physician who had his own *makhtab* in which he divulged education.<sup>19</sup> In these institutions, the

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<sup>15</sup> Ibid.p.289.

<sup>16</sup> See amongst others, Abdul Jalil, “The Evolution and Development of Graeco-Arab Medical Education”, *Studies in History of Medicine*, Vol. II, No, 3, September, 1978, p.195.

<sup>17</sup> See S.A.N. Rezavi, Physicians as Professionals in Medieval India, in Deepak Kumar (ed.), *Disease and Medicine in India: A Historical Overview*, Indian History Congress, Tulika Publication, New Delhi, 2001, p. 41.

<sup>18</sup> Nahawandi, Abdul Baqi, *Masir-i-Rahimi*, ed. Hadayat Hussain, Vol. II, Calcutta, 1931, p. 274.

<sup>19</sup> Shah Nawaz Khan, *Masir ul Umara*, edited by Maulvi Abdur Rahim, Vol. III, Calcutta, 1888-90, pp.280-81.

teachers were not only responsible for the medical education and training but also looked after the general welfare of the students. While these students were residing with their teachers, the physician's clinics and the homes were turned into the great centres for learning. The medical education was always provided along with religious instructions.<sup>20</sup>

During the reign of Aurangzeb, Hakim Mir Muhammad Hashim better known as Hakim Hashim flourished. He opened a well-known *madarsa* at Ahmadabad.<sup>21</sup> Similar *madarsa* was run by Hakim Alimuddin Wazir at his native palace Chiniot in Punjab.<sup>22</sup> The *Tibb* was taught through *dawakhanas* (dispensaries) and *sharbatkhanas* (syrup houses) often run through state munificence.<sup>23</sup>

The skill of the students of colleges which existed in India were not however inferior to any. Monserrate mentions a school of medical science at Sirhind which was very famous and whose products were widely practicing all over the empire.<sup>24</sup>

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<sup>20</sup> S. L. Bhatia, *A History of Medicine with Special Reference to the Orient*, Office of the Medical Council of India, New Delhi, 1977, p.126.

<sup>21</sup> Abdul Hamid Lahori, *Padshahnama*, edited by Kabiruddin Ahmad and Abdul Rahman, Vol. I, Part II, Calcutta, 1867, pp.345-46.

<sup>22</sup> *Masir-ul-Umara*, op. cit., Vol. III, p.936.

<sup>23</sup> Abdul Jalil, "The Evolution and Development of Graeco-Arab Medical Education", *Studies in History of Medicine*, Vol. II, No, 3, September, 1978, p.125.

<sup>24</sup> *The Commentary of Father Monserrate*, translated by J.S. Hoyland, annotated by S. N. Benerjee, Calcutta, 1922, p.103.

The actual needs of the physicians in the Mughal Empire were not fulfilled by these *madarsas* and there was a great scope for people getting educated outside the country.

A considerable number of physicians of Mughal period acquired the knowledge from various academics in places like Lihijan (Gilan), Mashhad, Ishfahan, Iran, Shiraz and Arab came to India for their better fortune.<sup>25</sup> But some existing evidences indicate that contrary to the above flow of scholars from outside some Indian scholars also went to Iran for training and education in *tibb*. Ahmad Thattavi went to Iran from Sindh and studies in Shiraz <sup>26</sup>and Muhammad Akbar Arzani, the court physician of Aurangzeb and native of Delhi went to Iran for further studied in *tibb*.<sup>27</sup>

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<sup>25</sup> For Example see, Abdul Hayy, *Nuzhat-ul-Khawatir*, ed by Sharifuddin Ahmad, Vol. VI, Hyderabad, 1962-79, p.357, 364; Hakim Abdul Hameed, Hakim Abdul Hameed, *Medicine during Mughal Period*, in *Interaction between India and Central Asia: Science and Technology in Medieval Times, Vol. II, Medicine, Technology, Arts and Crafts, Architecture and Music*, INSA, New Delhi, 1990, p.39; Kausar Chand Puri, *Atibba-i Ahd-i Mughaliya*, Hamdard Academy, Karachi, 1955, p.207.; Abdul Hamid Lahori, *Badshahnama*, Vol. I, Part, II, pp.345-46; C. Storey, *op.cit*, II, p.276; A. Rahman, *op.cit*. p.75; Mirza Muhammad Saqi and Munshi Muhammad Kazim, *Alamgir Nama*, Matba Ilahi, Agra, 1873, p.399; Shahnawaz Khan, *Maathir-ul-Umara*, Vol. 1, Lahore, 1968, p. 594; Muhammad Bukhtawar Khan, *Mira't ul Alam*, edited by Sajida Alavi, Lahore, 1979, Vol. I, p.297; Abdul Hamid Lahori, *Padshahnama*, Asiatic Society of Bengal, Calcutta, 1868, Vol. I, p.441; Maulana Ghulam Ali Azad Bilgrami, *Maathir al-Karam*, Book-2, p.201.

<sup>26</sup> Shahnawaz Khan, *Maasir-ul-Umara*, Vol. III, p.263.

<sup>27</sup> S.A.N. Rezavi, *Physicians as Professionals in Medieval India*, in Deepak Kumar (ed.), *Disease and Medicine in India: A Historical Overview*, Indian History Congress, Tulika Publication, New Delhi, 2001, p. 42.

A large number of physicians came to India from outside as well. Hakim Mir Muhammad Mehdi Ardistani an Iranian physician came to India and joined Aurangzeb's court.<sup>28</sup> Hakim Abdurrazzaq Mashrab also came to India from Ishfahani during the days of Emperor Aurangzeb.<sup>29</sup> Hakim Abdurrazzaq Ishfahani distinguished himself in medicine. He came to India during the reign of Alamgir and settled in Bareilly.<sup>30</sup> Hakim Sheikh Hussain Shirazi belonged to Arabia but came to be known as Shirazi. He came to India during the reign of Aurangzeb and got attached as a physician to the court of Muhammad Azam Shah son of Aurangzeb.<sup>31</sup> Famous physician Muhammad Hashim bin Hadi bin Muzaffaruddin Alavi Khan Shirazi following his education in Shiraz came to India in 1700 A.D. Emperor Aurangzeb who bestowed on him the robe of honour and gifts and deputed him to the service of his son, Muhammad Azam.<sup>32</sup> Hakim Hashim acquired knowledge in Iran but flourished

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<sup>28</sup> Mirza Muhammad Saqi and Munshi Muhammad Kazim, *Alamgir Nama*, Matba Ilahi, Agra, 1873, p.399; Shahnawaz Khan, *Maasir-ul-Umara*, Vol. I, Lahore, 1968, p. 594; Abdul Hayy, *Nuzhat-ul Khawatir*, ed. by Sharifuddin Ahmad, Vol. VI, Hyderabad, 1962-79, p.357; See also, Muhammad Bukhtawar Khan, *Mira't ul Alam*, edited by Sajida Alavi, Lahore, 1979, Vol. I, p.297.

<sup>29</sup> Abdul Hamid Lahori, *Badshahnama*, Asiatic Society of Bengal, Calcutta, 1868, Vol. I, p.441 ; see also, A.K. Bagchi, *Medicine in Medieval India: 11<sup>th</sup> to 18<sup>th</sup> Centuries*, Konark Publication, New Delhi, 1997, p.104

<sup>30</sup> Abdul Hayy, *Nuzhat-ul Khawatir*, op .cit., Vol.6, p.147.

<sup>31</sup> Maulana Ghulam Ali Azad Bilgrami, *Maathir al-Karam*, op. Cit., Book-2, p.201.

<sup>32</sup> Abdul Hayy, *Nuzhat al-Khawatir*, vol.6, p.364; Hakim Abdul Hameed, *Medicine during Mughal Period*, In *Interaction between India and Central Asia: Science and Technology in Medieval Times, Vol. II, Medicine, Technology, Arts and Crafts, Architecture and Music*, INSA, New Delhi, 1990, p.39; Kausar Chand Puri, *Atibba-i Ahd-i Mughaliya*, Hamdard Academy, Karachi, 1955, p.207.

in India during Aurangzeb reign.<sup>33</sup> Hakim Sikander bin Hakim Ismail Yunani came from Istanbul to India towards the end of Mohammad Shah's reign.<sup>34</sup>

As far as *madarsas* in the Mughal Empire imparting education in *tibb* is concerned, the largest information comes from the reign of Aurangzeb. During his reign several such *madrasas* were established. Special mention may be made of *Firangi mahal madarsa* at Lucknow which emerged as one of the famous and advanced *madarsas* of the eighteenth century India.<sup>35</sup>

Bernier mentions that the *Firangi Mahal* was a Dutch building at Lucknow and Aurangzeb allotted it for a *madarsa*.<sup>36</sup> In the late eighteenth century the *Firangi Mahal* became a major institution where students arrived for further medical apprenticeship to the clinics of the *hakim* of Oudh. The *dars-i-nizamiya* or curriculum of the *Firangi Mahal* was prepared with the consideration to fulfill the basic requirement of the *tibbi* education. Most young *hakims* at Lucknow first trained at the *madarsa*, where they received basic instruction in both rational sciences (*muaqulat*) and religion (*manqulat*) before

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<sup>33</sup> Abdul Hamid Lahori, *Padshahnama*, Vol. I, Part, II, pp.345-46.

<sup>34</sup> See Charles Ambrose Storey, *Persian Literature A Bibliographical Survey, Vol. II, Part 2, E. Medicine*, The Royal Asiatic Society of Great Britain and Ireland, Luzac and Co. Ltd, London, 1971, p.276; See also, Alvi, M.A. & Rahman, A. et al, *Science and Technology in Medieval India: A Bibliography of Source Materials in Sanskrit, Arabic Persian*, INSA, New Delhi, 1982p.75.

<sup>35</sup> Jigar Muhammad, "Mughal Support to Madarsa Education (1556-1748)", Paper presented at National Seminar, April 5<sup>th</sup> -7<sup>th</sup> 2005, Centre of Advanced Study Department of History, Aligarh Muslim University, Aligarh.(unpublished)

<sup>36</sup> Francois Bernier, *Travels in the Mogul Empire, AD 1656-1668*, translated from French by Irving Brock, revised and annotated by A. Constable, London, 1891; This version, revised and annotated by V.A. Smith, London, 1914, 1916, rep., New Delhi, 1968, p.292.

graduating to attend indebt lectures and course in medicine.<sup>37</sup> Until the mid-eighteenth century the students of Unani medicine were taught in *madarsas*, individual clinics and homes.<sup>38</sup>

After the collapse of Mughal Empire Unani medicine came under the patronage of regional elites or like *zamindars*, *talluqdars* and the *nawabs*.<sup>39</sup> From the mid eighteenth century onward their position of physicians was further strengthened on account of the discoveries of new elements and techniques in the realm of the medical sciences.<sup>40</sup>

From the above discussions it clearly emerges that for the ancient period we have scanty information about how teaching was imparted on the subject. Medicine was practiced and local level institutions were maintained by individual *vaidyas*. Medical education received some impetus during the medieval period. The economic prosperity of Mughal India provided ample opportunity to the *hakims* to raise their position. They also enjoyed a respectable status in the society and were well paid for their practice. Mughal Emperors also took personal interest in the development of medical sciences

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<sup>37</sup> Francis Robinson, *The Ulema of Farangi Mahal and Islamic Culture in South Asia*, Delhi, 2001, p.

<sup>38</sup> Seema Alavi, "A National Medicine in Colonial India: The Muslim physicians and the Takmil-ul Tibb College at Lucknow", (I am Thank full to My Supervisor Dr. S.A.N. Rezavi for providing the article copy to me.)

<sup>39</sup> Ibid.

<sup>40</sup> Nrendra Kumar Dutt, *Origin and Growth of Caste in India*, (2 vols combined in single book) Vol. II, Calcutta, pp.252-6.

and hence established a number of centres and institutions (*madarsas/matabs*) for the same purpose.

The method of teaching in Unani system of medicine in Mughal period was mainly teacher oriented and the students studied some books of medicine and were attached to the clinics of some celebrated physicians. The students spent most of their time with their teacher, sat by his side when he examined the patients, watched the diagnosis listened to the report given by the patients the question put to him and recorded prescription as dictated. During off hours or at night the senior *tabib* taught his students. The students also engaged in preparation of medicines. The clinics of reputed physicians served as school or tutorials where education in Unani medicine both in theory and practical were given. There were also concepts of physician's family in Mughal period. These physicians used to teach *Tibb* to their sons at their homes and made them well-versed in the medical profession, the father or the grandfather acted as the teacher or enter for their some and grandiose.<sup>41</sup>

The political disintegration during eighteenth century greatly affects the educational system at whole. Buchanan, a Scottish man of medicine surveyed various parts of country under aegis of court of director of the East India Company towards the end of eighteenth and beginning of the nineteenth century. He noticed the impact of changes on indigenous medical system of India. When he was surveyed the Bihar, stated that:

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<sup>41</sup> A.H. Israili, 'Education Of Unani Medicine During Mughal Period', *Studies In History Of Medicine*, Vol. IV, No.3, September, 1980, pp. 179-180.

“Medicine is taught by several of the Pandits (Brahmans) of whom also although they are grammarians, practice the art. The books of medicine chiefly studied in that districts are the Saranggadhar (Sarigadhara), Babhat (Vagbhata), and Chakradatta. Saranggadhar was the son of Damodar, a Brahman, but where he lived I cannot learn. Babhat and Chakradatta are also the names of the authors but the people know nothing of their history”.<sup>42</sup>

Among Muslims, the practitioners of medicine, who studied Arabic, were usually called ‘Yunani’ as the science of medicine was introduced among the Arabs by bad translations of the Greek authors, which are still much studied. A small part only practitioners understand Arabic, and the greater part of them content themselves with translations of Arabian authors into the Persian language and many I suspect understand very little even of these they are generally educated as private pupils, attaching themselves to some practitioners.<sup>43</sup> At Purnea, there were five Unani physicians and they were superior to Hindu physicians but their doctrines were almost same and based on Galen.<sup>44</sup>

Besides the professor of medicine, about 700 families of Brahmans almost all of *Sakadwip*, practice that art and are the only Hindu Physicians who possess anything like science except three of the medical tribes of Bengal, who have settled at Patna, and about 60 Mohammedans, chiefly at Patna and Daud

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<sup>42</sup> F. Buchanan, *An Account of the district of Bihar and Patna in 1811-12*, Vol. I, Usha Press, Patna 1934, Pp.301-302.

<sup>43</sup> F. Buchanan, *An account of districts of Behar and Patna*, p.302.

<sup>44</sup> F. Buchanan, *An Account of the District of Purnea in 1809-10*, Patna, 1928. p.185.

Nagar. It is only in a few places that there are any of those who practice medicine without some sort of learning, and without books.<sup>45</sup>

Regarding the education of Unani system of medicine he mentioned that, Maulvi Mosafar who was formerly Mufti of the court of Appeal, taught medicine to several pupils, although the professor all other branches of Arabic sciences and not a practical physician.<sup>46</sup> No person teaches medicine in this district (Patna) and indeed proper physician are very few in numbers.<sup>47</sup>

It has been argued [See Chapter III (Literature)] that with the decline of Mughal Empire in the eighteenth century Arabic became to language of the scribes to store medical knowledge. However, as we have already demonstrated that the medical learning in Persian continued to be patronized. However the collapse of the Mughal Empire in the early eighteenth century caused devolution in the patronage of medicine to regional courts of the local rajas and zamindars. Persian and Arabic manuscripts were preserved under regional states like Awadh in the north and Mysore in the South. In Topkhana and Farhad Baksh libraries there were at least 6000 Persian and 310 Arabic manuscripts. Topkhana library of the king had 48 manuscripts on Unani medicine.<sup>48</sup>

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<sup>45</sup> Ibid, p.303.

<sup>46</sup> F. Bihar & Patna 1811-12, Vol. I, P-302.

<sup>47</sup> Martin, *Eastern India*, Vol. III, pp. 720-21.

<sup>48</sup> Seema Alavi, *Islam and Healing: Loss and Recovery of an Indo-Muslim Medical Tradition 1600-1900*, Permanent Black, Ranikhet, 2007, p.44.

Unani physician of the period excelled in diagnosis and relied on the patient getting well through the curative power of nature.<sup>49</sup> A French doctor, M. S. Hondart comments in 1836:

“Violently attacked this medical doctrine on the ground that it neglected the physician’s prime duty, which is to effect a cure... ‘Diagnosis’ is neglected in the cult of prognosis: no attempt is made to localize the seat of disease; the observations in the epidemics are directed towards superficial symptoms without any attempts to trace them to their real cause. The writer is an interested but callous spectator who looks on unmoved while his patient dies”<sup>50</sup>.

Similarly Manfred Ullmann who wrote extensively on the System of Unani medicine gives:

“In India right down to the present day the Unani medicine, that is Greek medicine transmitted through Arabis and Persian sources, is practiced alongside ayurvedic and modern European medicine. Here the tradition...was never broken off. The main text book of this Unani medicine is as always the canon of Avicenna, together with other (commentaries) and elaborations.”<sup>51</sup>

The dilemma of Unani systems of medicine is best summed up in the words of Hakim Ajmal Khan, who however uttered them at the beginning of the 20<sup>th</sup> century. Although meant for a later period, the words hold true even for the period under study:

“In this age of enlightenment we have stopped writing and publishing new books. Today, we still consider Sheikh’s *Qanoon* (Avicenna’s *Canon*) as the last word; it should not be so. New diseases are emerging. We have forgotten Galen, while Doctors have translated almost all the

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<sup>49</sup> J.D. Bernal, *Science in History*, Vol. I, Harmondsworth, 1969, p.60.

<sup>50</sup> W.H.S. Jones (ed.), *Hippocrates*, Vol. I, London, 1972, pp. xvii-xviii.

<sup>51</sup> Manfred Ullman, *Islamic Medicine*, Edinburg University Press, Edinburg, 1978 p.52.

works of Galen. We are ignorant of the fact that many things which are considered to be the products of modern research are, in fact, found in our system. We have not explored our medicinal plants. We conceal our compositions so that they die with us. All these things have caused some faults in our medical system and it is our collective duty to remedy them.”<sup>52</sup>

## ii. MEDICAL EDUCATION IN COLONIAL INDIA:

The Portuguese introduced European Medical Education when they established their hospitals on the Indian soil. Medicine, as a subject was taught in the well-known Royal Hospital at Goa. The instruction commenced in 1703 and Cipriano Valadares was appointed the teacher. In the early days focus was principally based on the lack of the medical and sanitary facilities in Goa. The emphasis was also on creating interest amongst the people of Goa to learn European Medical Sciences.<sup>53</sup>

From the last decades of sixteenth century, due to poor sanitation deadly epidemics spread resulting to population being reduced from 400,000 to 40,000 in 1670. In Goa ten viceroys including Viceroy D. Garcia Noronha, S. Vincente also died. Frei Diogo de Santana informs us that 25,000 soldiers died in the Royal Hospital between 1602 and 1632 as well.<sup>54</sup>

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<sup>52</sup>*The all India Vaidic and Unani Tibbi Conference Ke Pehle Salana Jalsa*, 1910, (Address of Hakim Ajmal Khan).

<sup>53</sup> S. L. Bhatia, *A History of Medicine: With special reference to Orient*, New Delhi, 1977, p.162; See also N. H. Keshwani, “Medical Education in India Since Ancient Times”, in C. D. O’ Malley (ed.), *The History of Medical Education*, California, 1968, p.324.

<sup>54</sup> S. L. Bhatia, *A History of Medicine*, op. cit., p.162.

In these severe situations Viceroy, D. Cristovan de Souza Coutinho made an appeal to the State Secretary for the Overseas on 8 December 1687:

“If two or three masters had come to this State, they would have taught physics to many of the natives, who are very quick-witted and have the gift of learning and would not be of the worst, and so that the hospital would have many doctors to help cure the diseases of your Majesty’s Vassals”.<sup>55</sup>

Such appeals resulted in the introduction of fundamental teaching of medicine at the Royal Hospital from the beginning of 1703 under the guidance of Cipriano Valadares. In 1801 Miranda and Almeida started a three-year course of medicine and surgery at the ‘Military Hospital’ of Goa which was situated at Panvelim. The course being taught at this college included the teaching of Anatomy, physiology, pathology, knowledge of surgical operation and midwifery.<sup>56</sup>

As early as 1818, Fonseca Torric, Director of the School, stated that out of 67 physicians in the Portuguese Overseas Territories, 43 had qualified at the Goa School. He also said that the physicians of the Goa School were intelligent, good doctors and had profound knowledge of tropical diseases too. In 1821, the three years course was extended to four years. The first year course consists of full concentration on anatomy while second year onwards physiology, biochemistry and other subjects were taught.<sup>57</sup>

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<sup>55</sup> O. P. Jaggi, *Medicine in India: Modern Period*, Vol. IX, part I, PHISPC, OUP, New Delhi, 2000, p.40.

<sup>56</sup> O. P. Jaggi, *Medicine in India*, op. cit., p.40; See also S. L. Bhatia, *A History of Medicine*, op. cit., p.163.

<sup>57</sup> Ibid.

Goa Medical School was founded at Panjim on 5<sup>th</sup> November 1842 which was based on the outline of Continental Medical School of Portugal and France. The teaching Programme was spread over four years and in 1846 the first batch of eight students passed out. In 1847, the course was extended to five years and the school was named as Escola Medico-Cirurgica De Nova Goa – the School of Medicine and Surgery of New Goa. Consequently, the staffs was also increased in 1871 by the addition of seven more teachers of which three were graduates of this very medical school. In 1881, a course of Midwifery, Gynecology and Pediatrics was added apart from existing syllabus. An ordinance was passed in January 25, 1888 which converted the existing school into a Naval and Colonial School of Medicine.<sup>58</sup>

The doctors who received training from the School of Medicine at Goa were also valuable to serve colonial campaigns and sanitation of the Portuguese overseas territories. For example, the Mozambique Board of Health in 1854, the Timor Board in 1856, the Board of Angola in 1863, St. Tome in 1866, Cabo Verde in 1870, and Nacau in 1880 of Portuguese Guinea, they all welcomed a doctor from the Goa Medical School.<sup>59</sup>

When Charter of East India Company was in the process of renewal in 1793, an attempt was made by some people in England to compel the Company

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<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

to spend a portion of the revenues of India on the scientific and other education of Indians.<sup>60</sup>

The earliest definite regulations on the subject are those issued in the General Order of 15 June 1812 which direct for the training of European and Eurasian boys to form a sub-medical service for the army. However, Indians were not admitted to this class.<sup>61</sup>

The Medical board submitted a memorandum to the government on 9<sup>th</sup> of May 1822 in which the needs of native doctors for the supply of various establishments connected with the civil and military branches of the service was pointed out. This memorandum also includes an important suggestion regarding the establishment of a school for native doctors which was to be maintained at the expense of the government. It emphasized that this could be the only means by which the deficiency could be supplied. Consequently, the government approved the suggestions and took keen interest by calling upon the Medical Board to submit more detailed arrangements of their plan in the form of a regulation for the proposed institution.<sup>62</sup> Accordingly, on the 30<sup>th</sup> of May, Board submitted their plan of a school for native doctors. In consequence, after the meeting the government approved it and a general order was issued

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<sup>60</sup> B. D. Basu, *History of Education in India, under the rule of the East India Company*, The Modern Review office, Calcutta, Second Edition, 1867, p.5.

<sup>61</sup> D.G. Crawford, *A History of Indian Medical Service 1600-1900*, 1914, London, Vol. 2, p.434.

<sup>62</sup> A. N. Basu, (ed.), *Indian education in Parliamentary Papers, Part I (1832), Under the Patronage of the Government of India, Narayanrao Topiwala Memorial Educational Research Series, Vol. II*, Asian publishing House, Calcutta, 1952, pp.85.

for establishment of school on the proposed plan on the 21<sup>st</sup> June 1822. The proposal was as follows:

“The school to be established at the presidency for the instruction of natives in medicine, with a view to the military and civil service: to be under a medical officer as superintendent; to consist of 20 students; no student to be admitted who cannot read and write the Hindoostanee language in the Nagree or the Persian character, and whose age is under 18 or above 26 years; Hindoos and Mussulmans equally eligible, if respectable; the sons of native doctors in service to be preferred; students to be regularly enlisted as soldiers, and supported by the Government, and when duly qualified, to receive certificates to that effect and practice; entitled to their discharge after 15 years; the superintendent to direct the studies; practical pursuits, and general conduct of students; to prepare manuals of the most necessary parts of medical science for their use in the native language, to give demonstrations, and to deliver courses of lectures to them on those subjects, and generally, to take every available means of them on those subjects, and, generally, to take every available means of imparting to them a practical acquaintance with the diseases of most frequent occurrence in India, the remedies best suited to their cure, and the proper mode of applying those remedies”<sup>63</sup>

According to the Government Order only 20 Indian students were to be admitted in this institution and they were to be recruited by the Superintending Surgeons. Interestingly, the Superintendent of the Institute was directed to translate medical books and to instruct the students in the Vernacular languages as well. A stipend of Rs. 8/-per month was also started for the students during their education period. If they qualified for the government services they were required to serve the Army or Civil Department for 15 years and their salary

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<sup>63</sup> A. N. Basu, (ed.), *Indian education in Parliamentary Papers*, op. cit., pp.85-86.

was fixed as Rs. 20 per month with an extra allowance of Rs. 5, when they were on field service. Surgeon James Jamieson was appointed the first Superintendent of this native Medical Institution on a salary of Rs. 800 per month and a peon was also appointed at Rs. 5 per month.<sup>64</sup>

In April 1824, the government sanctioned a sum for printing of a vocabulary of medical terms in Roman, Persian and Nagari Characters. This followed an appointment of a Pundit who was to assist the Superintendent in the task. An amount of Rs. 709.3.9 was further sanctioned by the government for the purchase of two skeletons for the study of the students. The school opened in October 1824. Another significant work done during this period was the translation of London Pharmacopoeia which was completed in March 1825.

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In May 1825, the Medical Board submitted a report explaining the reasons why it appeared imprudent to adopt the Madras system of employing doctors in Calcutta those who had served as dressers in the hospitals.<sup>66</sup> Eight students of the native school of Calcutta were appointed as native doctors and were sent with troops serving in Arracan.<sup>67</sup>

In February 1826, Medical Board extended the benefits of the native institution to 50 scholars and the monthly allowance increased to Rs.10.

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<sup>64</sup> Ibid. p.86.

<sup>65</sup> Ibid. See also O. P. Jaggi, *Medicine in India*, op. cit., p.42.

<sup>66</sup> Ibid. p.87.

<sup>67</sup> Ibid.

Medical Board also determined the age of admission at between 14 and 18 instead of 18 and 26.<sup>68</sup>

For the Sanskrit medical classes Calcutta Sanskrit College was allotted and the Urdu classes were held at the Calcutta Madrassa. Hence, instructions were imparted through the medium of the Sanskrit and Urdu languages by translating short treatise on different subjects. The following books seem to have been translated and lithographed at government expenses: Hopper's *Anatomist's Vademecum*, *Surgeon's Vademecum*, Thomson's *Conspectus of the Pharmacopoeia*, Fyfe's *Manual of Chemistry*, Conquest's *Outline of Midwifery*, *Tropical Diseases* by Twining and Smith, *Plague* by Dr. Thomas and some books on Vaccination. Pandit Madhusudhan Gupta had been paid Rs.1000 for translating Hooper's *Anatomist Vademecum*.<sup>69</sup>

The training period was fixed for three years at this school. In the first year also known as junior class, Pharmacy, Materia- Medica, Physiology and Anatomy were taught. Medicine and Surgery were taught in the following year. Finally for clinical study the students were required to attend the native hospital, the General Hospital, the Company's Dispensary, the Branch Dispensaries at Colingrah and Gurrnhatta, the Eye infirmary, and the Department of Superintendent of Vaccination. However, the dissection of the human body was not performed and the only practical information given on this subject was obtained from the dissection of lower animals and from the

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<sup>68</sup> Ibid.

<sup>69</sup> Cf. O. P. Jaggi, *Medicine in India*, op. cit., p.42.

postmortem examination at the general hospital which the students of the native medical institution were permitted to be an observer.<sup>70</sup>

It is significant to note that in the medical classes at the Sanskrit College, the works of Charaka, Susruta and other old Hindu writers were studied along with medical treatises in Urdu which had already been prepared for the students of the Native Medical Institution in the medical classes at the *Madrassa*, the works of Avicenna and other physicians of the Arabic school were studied in addition to the same Urdu treatises. Some of the noteworthy Arabic books studied were: *Sharah Asab*, the *Aksuræ*, the *Sudede*, the *Kanunchah*, and the *Anees ul-mosharra* which was a translation of Hopper's *Anatomist's Vade-mecum*.<sup>71</sup>

The method of teaching adopted in the school is described in a report submitted by Dr. Bretton to the Medical Board in April 1826. Some of excerpt from it are as follows:

“The system adopted for the tuition of the students is this: Thursday and Sundays are appropriated to the giving of lectures on any subject previously prepared in Hindustani, to the performing of experiments of any kind, to the preparing of different substances such as sulphate of soda, magnesia,, muriatic and nitric acids, calomel, hyd, preciprubrum, caustic bougies, spirits of wine from rice and *gur* and distilling the same, and to the purifying of substances by sublimation as benzoin, camphor and sulphur.

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<sup>70</sup> Ibid.,

<sup>71</sup> General Committee of Public Instruction, 1833, Vol.2, pp.32-7, in W.C.B. Eatwell, *On the Rise and Progress of Rational Medical Education in Bengal*, p.17, 1860.

When not engaged in these operations, the students are made to read the Pharmacopoeia and Ramsay's *Materia-Medica*, and to explain every part they read. This plan enables them to comprehend thoroughly the compounding of every article enumerated in the pharmacopoeia, and will conduct to the medical officers and native doctors rendering themselves intelligible to each other in the preparing and dispensing of medicines.

Every Monday, Wednesday and Friday night from 8 to 10 o'clock, the students are convened and made to read the medical tracts prepared for them. The seniors are each made to describe from memory before me and two of my assistants the component parts of the brain, viscera, bowels and structure of the eye, and to answer such medical questions as may be put to them. This keeps their minds constantly exercised and impresses thoroughly in their recollection what they see and learn, and the other pupils are made individually to read medical tracts, etc., before the other assistants and four of the capable students, who as monitors, assist in keeping every one present fully exercised.

Dr. Bretton went to say:

'I have recently been able with the apparatus in my possession to show the students a variety of experiments with the air pump, and on electricity. These have given them a little insight into the properties of air and the phenomena of lighting, of which they had not the remotest conception, and serve to render their studies more pleasing than irksome.'

Dr. Bretton noted that:

'The Zeal and diligence with which the pupils prosecute their studies even in the least attainable part i.e. Anatomy, afford a very cheering prospect of their ultimately becoming one of the most useful class of servants in the service of the British Government in India.'<sup>72</sup>

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<sup>72</sup> K. McLeod, *History of the Medical School of the Bengal Presidency*, 1872; cf. O. P. Jaggi, *Medicine in India*, op. cit., p.43.

The students of the Sanskrit medical class displayed considerable knowledge of Anatomy and Physiology. Some of the successful students were also appointed to responsible positions under the Civil Surgeons, or in hospitals.<sup>73</sup>

At the same time a controversy developed regarding the medium of teaching, whether it should have imparted in vernacular languages or in English. Dr. Tytler, a versatile oriental scholar who had translated many European texts into the vernacular languages especially for the medical students voted in favour of vernacular medium for Indian students if possible. He further argued that the English language should not be thrust upon them, although he felt that instruction imparted in this manner remained rudimentary in character. Anatomy was very imperfectly taught from plates and models. There was another opinion also which believed that the vernacular medium did not further advance study and assimilation of the great treatise of European medicine.<sup>74</sup>

In October 1833, Lord William Bentinck, then Governor-General of India, appointed a committee to improve the structure of education system and to extend the benefits of the native medical institution and suggested regarding a system of management to achieve the wishes of the Government in this respect. The committee finally came out with a lengthy report on 20 October 1834. On the one side they acknowledged the merits of the native medical

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<sup>73</sup> K. McLeod, "Medical Education in India", *Caledonian Medical Journal*, January 1908, pp.8-9; cf. O. P. Jaggi, *Medicine in India*, op. cit., p.43.

<sup>74</sup> *Ibid.*

institution and the other side they also summarized its defects. According to this report these defects were (1) absence of a proper qualifying standard of admission; (2) scantiness of means of tuition; (3) entire omission of practical human anatomy in the course of instruction; (4) want of regularity at the time of admitting students; (5) want of means and appliances for the convenience of private study; (6) desultory character of the students' attendance; (7) inconclusive nature of the power and authority wherewith the superintendent was vested; (8) mode of conducting the final examination.<sup>75</sup>

Detailed recommendations were submitted to remedy these defects. The members of the committee were having different opinion on the issue of the medium of instruction. The 'Anglicists' finally prevailed over the 'Orientalists' and it was emphatically laid down that:

“a Knowledge of the English language we consider as a *sine quanon*, because that language combines within itself the circle of all the sciences and incalculable wealth of printed works and illustrations, circumstances which give it obvious advantages over oriental language in which are only to be found the crudest elements of science or the most irrational substitutes for it”.<sup>76</sup>

Hereafter, the recommendations of the committee were comprehensive and radical. The committee's advice included the immediate abolition of the native medical institution and the abolition of medical classes at the Sanskrit

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<sup>75</sup> C. H. Philips (ed.), *The Correspondance of W. C. Bentinck*, Vol. II, 1832-35, Oxford, 1977, p.1399; cf. Anil Kumar, *Medicine and the Raj: British Medical Policy in India 1835-1911*, New Delhi, 1998, p.21.

<sup>76</sup> K. McLeod, “Medical Education”, op. cit., pp.8-9; See also Anil Kumar, *Medicine and the Raj*, p.22.

college and at the *madrassa*. Further it suggested the establishment of a medical college for Indians in which various branches of medical sciences were to be taught on the pattern of European System.<sup>77</sup>

Finally, the recommendations of the committee were approved by the Governor-General and the foundation of the medical college was sanctioned from 1 February 1835 under General Order No.28 of 28 January 1835. The native medical institution and the medical classes at the *madrassa* and at the Sanskrit College were thus abolished and the same order sanctioned for the foundation of Calcutta Medical College. The Governor-General of India Lord William Bentinck was pleased to pass the following resolutions:

“(1) That the Sanskrit College medical class, the medical class of the *Madrassa*, and the native medical institution be abolished from the first proximal, (2) that such of the students of the native medical institution as are now capable of passing their final examination, shall be appointed native doctors, and all the other students of that institution be transferred to the native corps of the Army, upon their present salaries, to become native doctors when represented to be duly qualified by a committee of medical officer or if not found qualified in two years, to be discharged, (3) that a new college shall be formed for the instruction of a certain number of native youths in the various branches of medical science, (4) that this college shall be under the control of the education committee, (5) that the education committee shall have the assistance of the following medical officers, *ex-officio*: the surgeon of the General Hospital, the surgeon of the native hospital, the Garrison Surgeon of Fort William, the Superintendent of the Eye infirmary, and the Apothecary to the Hon’ble Company, (6) that instruction be given through the medium of the English language, (7) that a certain number

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<sup>77</sup> K. McLeod, “Medical Education”, op. cit., 1908, p.2.

of native youth whose ages shall not exceed twenty years or be less than fourteen years, shall be entered upon the foundation as foundation of pupils of the institution, (8) that all candidates for admission as foundation pupils be required to present respectability of connections and conduct, shall be able to write and read English and Bengali or English and Hindustani, and shall be equally eligible without exception to creed or caste, (9) that the candidates shall be examined by the education committee and the superintendent of the institution, and that the selection of the pupils shall be determined by the extent of their acquirements. (10) That the number of the foundation pupils shall be limited to fifty. (11) That the foundation pupils shall each receives a monthly stipend from government of Rs. 7, which may be increased according to the following scale. That all foundation pupils be divided into three classes, each class having a different salary: the first class, Rs.7 each month; second, Rs.9; third, Rs.12. (13) that the formation of these classes shall be entrusted to the management of the education committee and the superintendent of the institution, it being distinctly understood that the classification will depend upon the acquirements of the pupils, and not upon the periods of their studies; excepting, that no pupil shall during the first two years of being on the foundation, receive a salary higher than Rs.7 per month, but afterwards the increase will depend upon the classification. (14) That the foundation pupils shall be expected to remain at the institution for a period of not less than four years and not exceeding six years. (15) That all foundation pupils be required to learn the principles and practice of the medical science in strict accordance with the mode adopted in Europe. (16) That all the pupils who shall have completed their studies according to the form prescribed, shall be entitled to have certificates signed by the superintendent to enable them to present themselves for final examination. (17) That the final examination for granting certificates of qualification to practice surgery and medicine, or for admission into the service, shall be publicly made by the committee of education, assisted by the medical officers above mentioned. (18) That such pupils as shall

be deemed qualified to practice surgery and the medicine shall receive certificates of qualification signed by the President of the Committee of Education and counter-signed by the Secretary of that Committee and the Superintendent of the institution. (19) That the public service shall be supplied with native doctors from the institution, and with a view to this object, whatever appointments may happen to fall vacant during the period which intervenes between the examinations, shall be offered for the acceptance of the students who passed at the examination next ensuing. The selection shall be regulated by the extent of professional acquirements. (20) That as an inducement for pupils of a respectable class to enter the institution, the pay of the native doctors who shall have been educated at the college and have received the certificates of qualification, shall be Rs.30 per month; after seven years' service their pay shall be Rs.40 per month, and after fourteen years, Rs.50 per month. After twenty years' service they shall be entitled to retire upon a pension regulated according to the proportions granted to native commissioned officers of the army, if no longer capable of performing duty from age, disease or wounds. (21) That the education committee shall be charged with providing a suitable building for the college, a library, anatomical preparations, and all other objects of indispensable necessity for the education of the pupils, the expense being previously submitted for the sanction of the council of India. (22) That the college shall be under the management of a European Superintendent who shall devote the whole of his time to the interests of the institution and who shall not be permitted to enter into private practice, or to hold any situation that can in any way withdraw his attention from his duties at the institution. (23) That the Superintendent shall be permitted to draw a staff allowance of Rs.1200 per month in addition to his regimental pay and allowances. (24) That the superintendent shall be aided in his duties by a European assistant who shall draw a staff salary of Rs.6000 per month in addition to his regimental pay and allowances. (25) That the European assistant shall devote the whole of his time to his duties at the institution, and that he shall not be permitted to enter practice, or to

hold any situation that can withdraw his attention from the interests of the institution. (26) That the European assistant shall exercise no control over the management of the institution, excepting by permission of the superintendent, but that he shall confine himself to the duty of assisting the superintendent in the work of educating the pupils. (27) That the whole management of the institution, the charge of the pupils, the mode of teaching, and all the arrangements, shall be entrusted to the judgment and guidance of the superintendent under the control of the Education Committee. (28) That the superintendent shall make half-yearly reports on the state of the institution to the education committee, by whom these reports shall be forwarded with their sentiments to the Government of India. (29) That the division of duties of the superintendent and of the assistant shall be made at the discretion of the former, subject to the control of the Education Committee. (30) That the Superintendent with the aid of his assistant shall be expected to instruct the pupils in Anatomy, Surgery, Medicine and Pharmacy, and to qualify them for medical charges, either civil or military. (31) That the pupils shall visit to witness the practice, the General Hospital, the Native Hospital, the Hon'ble Company's dispensary, the dispensaries for the poor, and the Eye Infantry. (32) That the superintendent shall be supplied, under the direction and management of the Education Committee, with a certain monthly allowance of stationary for the use of the institution. (33) That the formation of a plan of medical education and the rules and discipline of the institution shall be entrusted to the Education Committee. (34) That in addition to the pupils in the foundation, the benefits of this college shall be open to all classes of native youths between the age of fourteen and twenty, without exception to creed or caste, provided they possess respectable connections and conduct, and can read and write English and Bengali or English and Hindustani, and that all thus qualified shall, at the discretion of the Education Committee, be permitted to attend the instruction at the college, subject to its discipline and regulations. (35) That the superintendent shall draw a pay bill for the establishment of

the institution, which shall be counter-signed by the Secretary of the Education Committee, and shall annex to it a nominal roll of the youths on the foundation and voucher for the payment of the house-rent, both signed by the secretary of the Education Committee.<sup>78</sup>

Assistant Surgeon M.J. Bramley was nominated to the post of superintendent of the new medical college at Calcutta which came to effect from February 1, 1835. An old house and its premises situated near the Hindu School were converted for the use of this. The books and apparatus of the abolished Native Medical Institution were handed over to the college. Pandit Madhsudan Gupta who was a *vaidya*-teacher at the former institution was transferred with two assistants from the Sanskrit College. Assistant Surgeon H.H. Goodeve was appointed as Assistant to the superintendent on a salary of Rs.600 per month. The official designation of the superintendent was transformed into Principal through the General Order No.10 from 5<sup>th</sup> August 1835. Shortly afterwards, a third professor of Chemistry and Materia Medica was added to the staff and Assistant Surgeon William B.O. Shaughnessy was appointed to the post.<sup>79</sup>

On 20<sup>th</sup> February 1835, the Medical College came into being. At that time there was no library, no museum, no hospital, and no 'philosophical' apparatus. Even, anatomical models were being obtained from England including two skeletons which were procured from Messrs Bathgate & Co. of

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<sup>78</sup> *Rules and Regulations of the Bengal Medical College, 1844*, p. 2.

<sup>79</sup> K. C. Sarabdhikari, "The Early Days of the First Medical College in India", *Indian Journal of Medical Education*, Vol.1, 1962, p. 293.

Calcutta at a cost of Rs.1500. Mr. Evans was appointed as curator when museum was established.<sup>80</sup>

Against the study of anatomy of dissection the teachers of the college had to face the strong national prejudices. This prejudices were so deep-rooted among the larger section of the community that their contemporaries laughed at the attempt to introduce it with scorn 'as a vain chimera', while the best of their friends assisted them 'with a very modified degree of encouragement, uncertain of the propriety of committing themselves to approve of what appeared, at best a very doubtful experiment'. To overcome this prejudice the parts of the human body were first introduced in illustrations at the daily instruction and these gradually replaced the sheep's brain, goat's liver, wooden models and tin representations, which formerly served the purpose of teaching anatomy. It took six months to institute the required course of anatomical lectures. When Dr. Goodeve first placed an entire dead body on the lecture table, it created much interest and excitement among the pupils. Gradually, they became accustomed to it.<sup>81</sup>

On 10<sup>th</sup> January 1836, Madhusudan Gupta, accompanied by four pupils, namely Uma Charan Sett, Dwaraka Nath Gupta, Raj Kristo Dev and one other whose name is not recorded is said to have gone with Dr. Goodeve to an out-house of the college building. Madhusudan dissected a body which had been

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<sup>80</sup> Ibid.

<sup>81</sup> O. P. Jaggi, *Medicine in India*, op. cit., p.47.

procured for a lecture-demonstration. Slowly the other students also became bold in dissection of the human body.<sup>82</sup>

Dr. Goodeve while delivering his introductory lecture in 1838 remarked:

‘In less than two years from the foundation of the college the practical anatomy has completely become a part of the necessary studies of Hindu medical students as amongst their brethren in Europe and America. The practice of dissection has since advanced so rapidly amongst us that the magnificent rooms, recently erected, in which upwards of 500 bodies were dissected and operated upon in the course of the last year, have already become too small for our purpose; we have been compelled to construct an adjoining shed for the convenience of the class, now amounting to upwards of 250 youths of all nations, colors, religions and castes, co-mingling together in this good work as freely and amicably as the more homogeneous frequenters of an European School’.<sup>83</sup>

The first final-year examination was held from 30<sup>th</sup> October onwards in 1838 after three and a half years’ study. Each candidate had joined three courses of anatomy and physiology in which two of actual dissections, three of chemistry, one of natural philosophy, two of material-medica, two of general and medical botany, two of the practice of physics, two of the principles and practice of surgery and one of operative surgery. The examiners thought that his amount of instruction was sufficient to embrace all the essential branches of a complete medical education with the exception of midwifery. For the teaching of this subject there was no provision at that time.<sup>84</sup>

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<sup>82</sup> Anil Kumar, *Medicine and Raj*, op. cit., pp.24-25.

<sup>83</sup> D.G. Crawford, *History of Indian Medical Services*, op. cit., vol.2, p.434; See also Anil Kumar, *Medicine and Raj*, op. cit., p. 25; S. L. Bhatia, *A History of Medicine*, p.184.

<sup>84</sup> D.G. Crawford, *History of Indian Medical Services*, op. cit., vol.2, p.278.

The examination was followed by the approval of the results by the government very soon and accordingly a meeting was held in the college theatre presided over by Sir Edward Ryan, the then Chief Justice and President of the General Committee of Public Instruction for the purpose of conferring letters of qualifications on these young men. At the meeting there were large numbers of European and Indian gentlemen present. Prizes presented by Dwaraka Nath Tagore were also awarded to the successful students at the conclusion of the economy. Uma Charan Sett stood first and was honored for his distinguished career with a gold watch presented by H.E. Lord Auckland. These four students were without delay appointed as Sub-Assistant Surgeons to the hospitals at Dacca, Murshidabad, Patna and Chittagong at the salary Rs.100 per month.<sup>85</sup>

Further, in 1845, the course of teaching at the medical college was extended from four to five years. The medical college started a diploma in medicine and surgery until the Calcutta University was founded in 1857. It also granted the degrees of M.D. and L.M.S. (Licentiate in Medicine and Surgery). The degree of M.B. was subsequently added. For many years the Calcutta University granted two qualifications to the Medical College students at the end of an under-graduate course of five years, viz., L.M.S. and M.B. At that

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<sup>85</sup> D.G. Crawford, "The Centenary of the Calcutta Medical College", *Bengal Past and Present*, Vol. 109, part. I and II, No. 208-209, 1990, pp. 137-8.

time the students aimed at obtaining both the qualifications, but the majority only succeeded in obtaining the license.<sup>86</sup>

By 1860, the Calcutta Medical College was well-equipped with an Anatomy Department, a Museum, a Laboratory and a large Hospital in which every form of disease, medical and surgical, could be seen and studied. According to the *Indian Medical Gazette*, 'few European Schools of Medicine present so many and so favorable opportunities of study to the student.'<sup>87</sup>

A disgusting feature of this time was the low percentage of the students for the passing of examination.<sup>88</sup> One of the evident reasons of not securing high percentage by the students was the poor knowledge of English. The students failed to grasp the subject and to express themselves in English. Furthermore, the knowledge of physical and biological sciences was not essential for entrance to the college. That was one of the major reasons for the students not being able to pick up medical subjects which were based on the fundamental knowledge of physical and biological sciences.<sup>89</sup>

## **ii. (a) MEDICAL SCHOOL AND COLLEGE AT MADRAS**

During the governorship of Sir Frederick Adam a medical school was also established at Madras by the General Order of 13<sup>th</sup> February, 1835 and the classes commenced in July 1835. The propose behind the establishment of the school was to train subordinates for the medical services in the army. The first

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<sup>86</sup> *Indian Medical Gazette*, 1866, I, p.187; cf.O.P. Jaggi, *Medicine in India*, op. cit., p.48.

<sup>87</sup> *Ibid.*

<sup>88</sup> *Indian Medical Gazette*, no.7, 1872, p. 140.

<sup>89</sup> *Ibid.*, no 4, p.121.

batch of eleven 'locals' and ten 'Eurasians' were admitted for a four-year course at this institution, and after qualifying, the Eurasians were employed as 'apothecaries' and the locals were designated as the 'dressers' in the army. In 1838, the school was thrown open to the civilians but the prejudices against western medicine were so high that no civilian came forward to register for eight years. When some of the civilians joined at last then it was decided to conduct three different courses. First for physicians who were extend over a period of five years, the second for apothecaries for a period of over four years, and a third for training the dressers for over three years.<sup>90</sup>

The General Order No. 92 of 23 April 1847 allowed stipendiary civil students to take admission for a course of five years to qualify for the grade of civil sub-assistant surgeon. Thus, the Madras Medical School leveled with those of Calcutta and Bombay, although its name was not changed to Medical College until first October 1850. The first batch of these civil students qualified in 1852 to receive a diploma from the college for the first time.<sup>91</sup>

The course of teaching given at Madras was recognized by the Royal College of Surgeons of London in 1855-56. In 1863, the Madras University which had been constituted under the Act of XXVII of 1857 claimed the exclusive right to give medical degree and diplomas, and the power of granting

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<sup>90</sup> N.K. Keswani, "The History of Medical Education," edited by C.D.O. Malley, UCLA, University of California Press, 1970, p.329.

<sup>91</sup> *Indian Medical Gazette*, no. 21, op. Cit., p.350.

diplomas was withdrawn from the Medical College, except as regards the students already under instruction.<sup>92</sup>

Female students were also admitted for instruction through General Order No. 6 of 11 January 1875. This was really remarkable when we take into consideration that not only in India but even in other parts of the world medical training for women was more or less frowned upon. In the same year the degree L.M.S. course was underway.

After half a century of the existence of this institution, Madras Medical College had trained 1523 Indians and Europeans for the subordinate medical service by 1885 and out of these, 24 became graduates of the college. In that year the institution had a staff of fourteen professors and lecturers and four assistants. In that year the number of students based on religious ground were as follows: Europeans and Eurasian Christian 82, Native Christian 40, Brahmins 33, Lower Caste Hindus 49, Mohammedans 8 and Parsees 3.<sup>93</sup>

## **ii. (b) MEDICAL EDUCATION IN BOMBAY**

For the purpose of diffusing medical knowledge among the natives in their language the Medical Board at Bombay gave his opinion in 1824 in which mentions that the appropriateness of employment of native vaccinators as superintendents of native schools.<sup>94</sup> In November 1825, the Board proposed

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<sup>92</sup> E.W.C. Bradfield, "Medical Education in India", in Bradfield (ed.), *An Indian Medical Review*, Delhi, 1938, p. 70, n. 80.

<sup>93</sup> *Indian Medical Gazette*, no. 21, 1886, p.350

<sup>94</sup> *Fisher's Memoir* cited in A. N. Basu, (ed.), *Indian Education in Parliamentary Papers*, op. cit., p.137.

another plan of ‘an institution to be formed at the presidency for the instruction of natives in medicine, and to be called a school for Native Doctors’. The proposal of the Board was published in the General orders of 1<sup>st</sup> January 1826 which mentioned that the school said to be the as similar as Calcutta Native School of doctors.<sup>95</sup> John McLennan was appointed as a superintendent at the salary of Rs. 500 per mensem for the translation of the medical treatise in to Marathi and Gujarati languages with the support of three *moonshis* at Rs. 40 per month to assist in reading and translating in the different languages. The numbers of students fixed at 20 and the allowance given to them as similar to Calcutta Medical School.<sup>96</sup> After the six year of brief existence the school was abolished by Lord Clares, Governor of Bombay in 1832 on the recommendation of Medical Board.<sup>97</sup>

Likewise, Calcutta and Madras the governor of Bombay, Sir Robert Grant also decided to establish a Medical Institution in the city for the natives of the province in 1835.

Experienced European medical officers in the districts of the presidency were consulted about the working condition of the native medical practitioners – especially whether any prejudice existed against the Western system of medicine. There were two opinions on this. Some anticipated great resistance to the introduction of the Western medicine on account of the local prejudices,

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<sup>95</sup> Ibid.

<sup>96</sup> Ibid.

<sup>97</sup> NAI, Home, Pub. 18 July 1838, No. 18 K.W.; cf. Anil Kumar, *Medicine and Raj*, op. cit., p.40.

and some others 'questioned the aptitudes of the youth of India to attain the necessary acquirements'. Others believed that 'it was vain to talk of prejudices on the part of the people of this country against the European system of medicine'. They said 'as a general principle, man in a state of suffering will court relief and accept it readily from whatever hand it comes and under whatever name it may be presented to him. The system which best cures disease and alleviates suffering, it matters not what its name may be, must be the most acceptable to people of all castes and creeds of all countries. So long as such a healing art is taught in this place, there can be no question of the ultimate success and usefulness of such a medical school.'<sup>98</sup>

This controversy went on for about two years. The success of the Calcutta and Madras Medical Colleges had by now exposed the fallacy of the imagined difficulties and adverse opinions expressed by some. Consequently, Sir Robert Grant drew up a plan for starting a medical institution. The key motive behind his plan was to give to the people of western India a practical scientific exercise of the art.<sup>99</sup>

This plan was forwarded to the Governor-General of India in the middle of 1838 for sanction. It received due sanction by Lord Auckland. Unfortunately, Sir Grant died on 9 July 1838 when this news was about to reach in Bombay. A fund was started for the public commemoration of Sir

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<sup>98</sup> D. M. Telang, "A Note on the Origin and Early Days of the Grant Medical College", *Indian Journal of History of Medicine*, 2, 1957, p.292.

<sup>99</sup> *Report, Board of Education, 1847-48*, Bombay, 1948; cf. Anil Kumar, *Medicine and Raj*, op. cit., p.40.

Robert Grant on condition that with its aid a medical college was to establish as he planned ably and so zealously advocated. Foundation stone of the building for the purpose was laid by Lord Bishop of Calcutta on 30 March 1843. The building was completed in October 1845 and the college formally opened by the then Governor, Sir George Arthur on 3<sup>rd</sup> November 1845.<sup>100</sup>

The students were admitted to the college without consideration of caste and creed. The candidates' age for the admission were fixed between 16 and 20. In addition to knowledge of English grammar, their vernacular, and arithmetic as far as the Rules of Proportion they were supposed to possess a thorough knowledge of English so as to be able to read and write it with accuracy and fluency. Each candidate was also requested to submit a certificate of good conduct from the head-master of the school in which he had studied and also one expressly testimonial that he possessed necessary qualifications and was capable to the college.<sup>101</sup>

The syllabus of study which was prepared by the college authorities in 1846 was formally sanctioned by the Education Board and publicly notified in the Government Gazette. According to this notification in the first three years Chemistry, Anatomy, the institutes of Medicine (including the principles of physiology, pathology, and therapeutics), Materia Medica, Pharmacy and elements of Botany were to be taught. Surgery, practice of medicine, midwifery

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<sup>100</sup> cf. O. P. Jaggi, *Medicine in India*, op. cit., p.51.

<sup>101</sup> Ibid.

and medical jurisprudence were the course for the fourth and fifth years.<sup>102</sup> On the affiliation of the college to the Bombay University in 1860, the college entrance examination was abolished and from 1861, the matriculation was made the basic qualification for admission.<sup>103</sup>

For the clinical instruction of medical students admitted to the newly established Grant Medical College, originally the idea of Sir Robert Grant was to employ the then existing Native General Hospital of Bombay for the purpose. This idea was soon abandoned when Jamsetji Jejeebhoy, a business magnate of Bombay was touched by the tragic plight of the sick. He offered to pay a sum of Rs.100, 000 into the Government Treasury through Sir Herbert Compton in order to facilitate the establishment of a large hospital with about 300 beds in the city of Bombay for the relief of the native poor sick of all denominations. His generous offer conveyed to the Bombay government via a letter dated 13 April 1838 was gratefully accepted. The government agreed to Jamestji's term of contributing an equal amount to the Hospital Fund and to grant interest at the rate of 6 per cent on both contributions.<sup>104</sup>

It was decided to build new hospital, to be designated as the Jamsetji Jejeebhoy Hospital in close proximity to the medical college and with an accommodation for 300 sick individuals. The foundation stone of the J.J. Hospital, containing a silver plate inscribed with the following caption over it was laid by the Right Worshipful Provincial Grand Master, Dr. James Burns,

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<sup>102</sup> Ibid.

<sup>103</sup> Ibid. See also Anil Kumar, *Medicine and Raj*, op. cit., p.43.

<sup>104</sup> cf. O. P. Jaggi, *Medicine in India*, op. cit., p.51.

on 3 January 1843 with full Masonic honors in the presence of Sir George Arthur Bart, the Governor of Bombay and Jamsetji Jejeebhoy who was specially escorted to the site for the ceremony, all the way from his residence by the Governor.<sup>105</sup>

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<sup>105</sup> Ibid.