

CONCLUSION

Human progress and medicine have remained inseparable since time immemorial. Both have remained subject to the environment in which they have flourished and have interacted with nature. Man has tried to not only understand nature but has also endeavoured to manipulate it for his benefit. Nature on its end provided him with means (and medicine) to further his progress. Interactions between man and nature led to the development of cultures and the cultures, as per their interactive experiences, shaped the medical knowledge of a people. Thus the development of medical systems in every culture is marked by an ascendancy of its philosophical traditions and markings. This has led many to label them with religion cultural tags like for example, 'Hindu', 'Buddhist' or 'Islamic' Medicine. It is however interesting to note that the tag 'Christian' is never applied: it is either Western or European Medicine! But then, as our experience tells us, medicine is essentially quite secular and can never be bounded by such communal tags or labels.

In its initial development, the *Ayurvedic* System of Medicine (named after a text, not a religion; it would also be incorrect to call it 'Vedic Medicine' - for there is no such thing!) did emerge as a religio-magical system with more *mantras* than real drugs thrown in. Even at this earliest stage, the poets of the *Rigveda* counted the medicine amongst the practical sciences (*Vartta vidya*) along with agriculture and commerce. From the *Rig Veda* and *Atharva Veda* it is apparent that human

body and its ailments are conceived in terms of propitiation of nature, and it was here that the *mantras* had their importance. Nature, as reflected in the dependence on fauna and flora amidst which they lived, made them dependent on plants and herbs. Thus we see that in the early stages of development of medicinal systems in India there were two distinct schools which developed: the magico-religious and the empirical. And both derived their strength from the *Vedas*, the religio-philosophical texts of the period.

From around sixth Century B.C. the secular traditions of Buddhism and Jainism started gaining roots in India. The period was also marked by a process of urbanization: from Taxila in the Gandhara region to regions spread far east, towns started developing. By third century B.C. we start hearing of the sixteen *mahajanapadas* and ultimately the establishment of the Mauryan Empire. It is in this socio-politico-cultural milieu that new strides were taken by medicine which started to free itself from the few shackles of ritualism which bounded it till then. Thus from the period between 800 B. C. to 200 A. D. the knowledge of medicine became more and more rational. The schools of Atreya and Dhanavantari were established.

The early centuries of the Common Era also saw the compilation of *Charaka Samhita* and the *Susruta Samhita*, although they are alleged to have been composed much earlier. These two texts were to emerge not only as the main source of the medical knowledge but also as texts reflecting the Buddhist secular traditions. These texts have no place for *mantras* and rituals. Instead they stress on

practical aspects of medicine. The *Vaidya* according the Charaka is considered *dwija* (twice born, like a Brahmin) not due to his birth but as ‘on completing his studentship, a spirit, be it divine or heroic, enters firmly into him because of his knowledge (*Vidya*)’. *Vidya*, according to the ancient texts was considered as an instrument of teaching, manual or compendium of rules and acquisition of knowledge.

Charaka also present an ‘Oath of Initiation’ for the physicians which too demonstrates the professions’ secular mornings. Emphasis was on practical treatment and ethics of behaviour. Susruta on his part emphasized the practical and surgical knowledge to a large extent. *Susruta Samhita* thus describes ophthalmic couching, cutting for stone, removal of arrows and splinters, suturing and the examination of dead human bodies for the study of anatomy.

The *Ayurvedic* system of medicine as gleaned from these texts, was humour based. These humours were *vayu* (wind), *pitta* (bile) and *slesman* or *kapha* (phlegm).

In the emerging social milieu *quacks* and Pretenders had also assumed the role of healers and thus we have passages in *Charaka Samhita* which try to identify them by their traits and acts. According to Charaka their basic aim was monetary gain. Some other Sanskrit texts of this period also contain sharply satirical passages regarding these charlatans.

Astanga Hridaya of Vagabhata was compiled around seventh Century and relies heavily on the earlier *Charaka Samhita* and the *Susruta Samhita*. It was this

text which became one of the first to be translated into Persian after the introduction of a new system of medicine known as *Unani tibb* in India sometime around tenth Century A.D.

The *Unani* system of medicine has been in some modern works erroneously labelled as ‘Islamic Medicine’. It was ‘Islamic’ only to the extent that it was primarily practiced in areas and regions covered by ‘Islamic civilization’ and it made its appearance in India with the coming of the Muslims. But then it was a pre-Islamic system based on Galenic principles of early centuries of the Common Era which were developed by the Greeks and the Ionians (hence the name *Unani*: Ionian being known as *Yunan* amongst Arabic-speaking people). It was basically the Greek System of medicine learnt by the Arabs when they came in contact with Greek literature during the course of the crusades.

The Greco-Arab Galenic system of medicine then slowly made its way to India sometime between 10th to 12th centuries. Initial contact of the system with the Indians was however at the time when contacts between the Pala and the Pratihara rulers developed with the Abbaside court at Damascus. Indian merchants and scholars are said to have been at Damascus from 8th century onwards. It was probably a result of this that *Ayurvedic* texts like *Charaka Samhita* and *Susruta Samhita* were translated into Arabic in or around 9th century. By 10th century the Arabs had occupied Sind and Subuktigin and Mahmud of Ghazni were knocking at the doors of India. Probably the Ghaznavides not only brought Alberuni but also the practitioners of the Greco-Arab medicine. We do hear of Muslim settlements

flourishing in not only Punjab but also in places like Ajmer and Badayun after the Ghaznavides left India. We have evidence, thus, of the first centre of Unani System setup in 1160's at Lahore.

With the Ghurid conquest, the Turkish ruling class established itself in North India and thus from 1206 onwards, the Greco-Arab system appears to have been formally introduced. In the early decades of the Turkish rule, when Ilbari Turks ruled from Delhi (Aibek, Iltutmish, Balban) this system might have remained confined to the ruling foreign elite. However, with the Khalji revolution which supplanted the rule of the pure Turks with the rule of the more inclusive Turkish ruling class, a shift in the position of Greco-Arab system of medicine might have also occurred. Under Alauddin Khalji, the ruling classes filtered into rural areas as well and thus would have taken their men of medicine and their system along with them. It was at this juncture that the first *Unani* medical text was written in India. *Majmu'a-i-Ziya'i* composed in early 14th century contained a separate and significant chapter devoted to *Ayurvedic* Medicine. The writing of this book reveals that by this time interactions between the two systems had started in serious earnest. It also indicates the growing influence of the *Ayurvedic* system on the *Unani*. By the last decades of the same century the third important book of *Ayurvedic* system, the *Astanga Hridaya* was also rendered in Persian. It is interesting to note that this work was translated not at the court at Delhi but in the regional court of the Gujarat Sultanate. From a passage contained in this work we are also informed that Sultan Mahmud Shah of Gujarat had established a separate

Bureau of Translation which had accomplished this job. It is quite probable that many more translations were commissioned during this period. It is thus not surprising that we find in our Tables IV and V, 21 medicinal works in Persian (up from 4 in the previous century), 33 in Arabic (up from 14), and 31 in Sanskrit (down from 38). Out of these there were three Persian texts which were translations of earlier works during the span of the fourteenth century. Naturally, as has been pointed out earlier, the figures of Tables IV and V are not definite or exact: they are however symptomatic of the real situation as it might have existed in the past: more the availability, more the chance of survival, less the availability, less survival in present collections.

The literature also throws interesting light on the introduction and percolation of new diseases and their treatments over the centuries. Thus we find that the dreaded venereal diseases like syphilis were introduced in India by the Portuguese, who also by mid-sixteenth century imported its remedy, the *chobchini*, the china root. As a result was written, for example *Bhavaprakasha* by Bhava Misra with a whole chapter devoted to this disease and its treatment.

By the end of the sixteenth century, the interaction of the *Ayurvedic* and the *Unani tibb* appear to have grown manifold. When Firishta wrote his famous *Ikhtiyarat-i Qasimi*, also known as *Dastur al Atibba*, it was a detailed exposition of *Ayurvedic* system, its treatments and its drugs. During the same century one also finds *Dravyaguna* of Gopala dealing with *Ayurvedic* materia-medica and dietics translated in to Persian as *Tibb-i Gopalshahi*. For the 16th century we have

at least six survivals of translated works in Persian. In the subsequent two centuries the number of translated works in Persian increased to 10 each – the highest over the centuries. During Aurangzeb’s reign Mirza Abul Fath Chishti translated an *Ayurvedic* work into Persian and named it *Mirat-ul Hukama-i Aurangshahi*. In Sanskrit and Arabic, however we do not encounter any translated works in the corresponding centuries. It thus appears that from 12th century onwards Persian not only emerged as the language of the physicians in India but the *Unani* practitioners remained more receptive and open to ideas flowing their way from other traditions.

Further, as has been argued in Chapter III, in the face of the empirical data available and reconstructed by us, it is hard to agree with some modern authors like Seema Alavi. According to Alavi, Arabic emerged as the language used by scribes and families to store medical knowledge away from the reach of common masses, who instead, were well versed in Persian. The Eighteenth Century was also marked according to her by more ‘austere medical texts’ which were rooted in scriptures and the person of the Prophet. A look at the medical texts surviving in Persian over the centuries, even the 16th and 17th (the centuries of ‘Aristocratic Physician’ of Alavi) reveal however that there was no paucity of hard-core austere medical treaties in Persian as well. To give an example, the *Ma’dinus Shifa-i Sikandar Shahi* (1512 AD) deals with not only medicine but also Quranic verses to be recited for the cure of various diseases. During the late Seventeenth Century were written *Ainul Hayat* (a work on plague by Anul Haq Sirhindi) and *Tibb-i*

Qazi Arif, a general work on medicine containing prescriptions for diseases that are specially indigenous to India. Chapter III gives many more examples of such works which can be labeled as ‘austere medical texts’ written in Persian and composed before the Eighteenth Century in India. Further, from Eighteenth Century, we encounter 133 works in Persian, 18 in Arabic and 118 in Sanskrit. In the previous Seventeenth Century, the numbers encountered are 102, 29 and 122 respectively. While in the subsequent Nineteenth Century, the numbers stood at 124, 13 and 47 respectively. Thus there were more medical works in Arabic during the Seventeenth Century as compared to the Eighteenth and Nineteenth centuries. Much larger number of books were written, compiled or procured in Persian as compared to Arabic over these centuries. Further, if we look at the figure of ‘specialized works’, we find the figures 11, 15 and 10 over seventeenth to nineteenth centuries for Arabic. During the same period in Persian we have 68, 98 and 100 works respectively. As far as medical commentaries are concerned, in Arabic during the three considered centuries we have 17, 2 and 2 works as compared to 2, 3 and nil in Persian. While no anthologies or compendiums are written in Arabic, there are 5 in the seventeenth and 8 during the eighteenth century. Similarly, while there are no translated works in Arabic, the numbers school at 6, 10 and 10 for Persian. These figures simply force us to conclude that one has to doubt the veracity of Seema Alavi’s contentions. Her opinions are just ‘academic’ but not based on facts. Our evidence is to the contrary: Persian was not only the language of the elite but also of the professionals and academics

including the men of medicine. We have also seen that some Arabic works of the earlier centuries were also translated into Persian which remained entrenched as the language of the learned.

From these chapters it also emerges that both the indigenous systems, the *Ayurvedic* and the *Unani tibb* emphasized the necessity of humour balance for the well being of the patient. Both the systems were based on a 'holistic' approach to health and considered man in his totality within a wide ecological spectrum. Both also, contrary to general view, possessed knowledge of internal organs and practiced surgical operations, albeit in a restricted way as compared to the more modern 'European system'. There were also a number of similarities in the practice of both the systems: they were based, in the main, on medical texts written centuries earlier which provided only the general principles and left the individual treatment to the physician-in-charge. The training of students was also similar in the two systems. Both relied on personalized education. However we do hear of larger institutions of training in the *Unani tibb* in India: but this may be due to a larger availability of source material. Further, there was much interaction between the two systems. We have seen how the *Unani* physicians were being made available with *Ayurvedic* works to learn from. On the other hand *Unani* was also leaving its impact on the *Ayurvedic*: for instance, pulse examination began to

play a much greater role within *Ayurvedic* system after the arrival of the *Unani* Medicine.¹

Western or European system of medicine was introduced in India with the arrival of the Portuguese who also opened their hospitals in the territories which they held under their political jurisdiction. This system of medicine, for all practical purposes, was in the initial stages very similar to the indigenous systems, specially the *Unani tibb*. The western system was based on the same classical Greek texts which had come to Europe via the Middle East and the *Unani tibb*: thus both were based on humoral theory. In fact, the *Unani* till the Seventeenth Century had an edge over the former. Thus if we look at the European books of medicine, and, say, the *Qanun fi al-tibb* of Ibn Sina, the latter appears more scientific and reveals a better knowledge of not only human anatomy but also the nervous system. The *Ayurvedic* medicine with its pharmacopeia based on *Charaka Samhita*, *Susruta Samhita* and *Astanga Hridaya* with its knowledge of herbs, drugs and human anatomy was also comparatively quite developed as compared to the system brought in India by the Europeans.

Thus it is not surprising that the early men of medicine to come to India are found copying this knowledge for the benefit of their compatriots. We have the Portuguese Garcia da Orta who lived at Goa between 1538 and 1568. His

¹ For this point see N. P. Rai, S.K. Tiwari, S.D. Upadhyaya & C.N. Chaturvedi, "The Origin and Development of Pulse Examination in Medieval India", *Studies in History of Medicine*, Vol.3, No.2, 1979, pp.110-24.

celebrated work, the *Colloquies* is a work on materia medica of India and introduces many 'new' drugs to the European knowledge. He not only made an extensive study of the Indian plants and drugs but also compared the methods of treatment in the three systems, the *Ayurvedic*, *Unani* and the European. He appears enamoured by the Indian knowledge of drugs, certain treatments (like for example that of cholera) but appears disappointed by the Indian knowledge of anatomy.

By late Sixteenth Century the Dutch, the English and the French also made their appearance. Throughout this period India remained the favoured market from where the bulk of drugs were supplied to European consumers. The attitude of the Mughal physicians also reflects this ascendancy of the indigenous systems, except in the field of surgery. In the field of surgery, there appears to have been a preferential treatment given to European men of medicine. European physicians were recruited by the nobles in their establishments, but not before they had passed tests imposed on them to prove their knowledge. Some of them also opened private clinics in the general market. However, it is also clear that most of the European men of medicine who came to India probably failed to establish successful professional business and instead resorted to trade and commerce to make both ends meet. Probably this reflected not only their 'love of money' but also the absence of a general demand for their medical services. We do have the testimony of some of them that 'European medicine' was not very effective in curing 'Indian diseases'.

By late seventeenth century a change became perceptible, and the initial respect enjoyed by the indigenous systems amongst the European physicians began to diminish. This was probably due to the new ideas and knowledge being acquired by European practitioners. It was the time when William Harvey's theory of circulation of blood, for example, was gaining ground, and medical education in Europe was being expanded through new scientific discoveries and their teaching in universities like those at Leiden and Edinburgh. By Eighteenth Century the European or Western medicine was emerging as a system based on reason and observation and not on old traditions and superstitions. By nineteenth Century much gulf had been created between the western medicine and the two indigenous systems due to the major advances made in bacteriology, anatomy, surgery, pathology, nosology and diagnosis.

This change is reflected in the education system of the indigenous systems and the hospitals established by their practitioners as compared to those of educational institutions and hospitals established by the Europeans in India.

The history of formal education of physicians in India appears to be quite old. We have references to Buddhist *Sanghas* acting as medical teaching schools with *Viharas* offering facilities for treatment of the inmates. The system of 'in house' teaching appears to have further developed after the Turkish conquest of India. We hear of the state establishing some 'medical colleges' at least from the reign of Firuz Shah Tughluq when certain *madrasas* were attached to certain *darush shifas* or hospitals where the *tabibs* were not only taught through books but

could be imparted ‘practical education’ by being exposed to the patients of the hospitals.

Such medical education further proliferated during the Mughal period. However we also hear of ‘foreign *madrastas*’ located in Iran and Iraq in places like Lahijan, Shiraz and Gilan from where *hakims* were imported to India.

The European ‘hospitals’ were introduced in India with the Portuguese. By late 17th century, at least in the coastal regions of Gujarat and Goa, these European hospitals started proliferating. By the 18th and 19th centuries these European hospitals appear to have been popular destinations not only treating Indian patients but also imparting education to budding physicians. From this period onwards ‘specialized hospitals’ like those dedicated to the treatment of mental illness or venereal diseases came to be established. However, the popularity of these European institutions did not sound the death knell of Indian *shifakhanas* or *Vaidya-salas*. Although lacking in official patronage, they continued in places like Delhi, Lucknow and Hyderabad: however the encounter of different cultures led to a constant progress in the Indian medical systems. By 19th century the European System emerged as much an Indian system as the *Ayurvedic* and *Unani* systems.