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How Medical Science Transfer To Europe

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Abstract

Medicine, as it stands today, did not develop overnight. It is the culmination of efforts of millions of people throughout the history of mankind. The Science of medicine started thousands of years ago and has been handed over from one generation to another and from one country to the other depending upon the capacities of the bearers of this sacred responsibility, it developed mans fold and never died away because of daily need. Now a day's Islam is considered as the backward religion (as Islam has nothing to do with science or Medical science) but the fact is this that the main torch bearers of this sacred responsibility (Medical Science) are Muslims they have developed this Science more than any other civilization or religion. So this article attempts to highlight the fact that Europe's Renaissance owes its dept to the inventions and discoveries of Muslim Scholars.

Keywords:- Medicine, Science, Europe, Renaissance, Muslim, Scholars

Introduction

Medicine, as it stands today, did not develop overnight. It is the culmination of efforts of millions of people throughout the history of mankind. The Science of medicine started thousands of years ago and has been handed over from one generation to another and from one country to the other depending upon the capacities of the bearers of this sacred responsibility, it developed mans fold and never died away because of daily need. The period between ancient civilizations (the Egyptians, Greek, Roman, Persian, Indian and Chinese) and the Renaissance era in Europe, has been called as 'the dark ages' in the West. However, during this period, the Science wasnot hosted by west, but by the people of another religious and cultural denomination known to the world as the Muslims. The nomenclature 'the dark ages' reflects the civilization in Europe between the 7th and 13th century C.E., but by no means it expresses a state of affairs in the Arab world or the Islamic empire at that time when science was as brighter as mid day sun. That era, unjustifiably has been commonly neglected and over passed as if nothing happened.[i]

Islam from its very beginning highlighted the significance of seeking knowledge. The very first Revelation points towards seeking knowledge (Qu'ran 96:1-5). Both the Qur'ān and *Ḥadīth* stimulates for seeking Knowledge. As the Qur'ān says "*O You who believe! When you are told to make room in the assemblies, (spread out and) make room: (amply) room will Allah provide for you. And when you are told to rise up, rise up, Allah will raise up, to (suitable) ranks (and degrees) those of you who believe and who have been granted (mystic) knowledge. AndAllah is well acquainted with all of you do.*"[ii]The Qur'āninvites the man towards the contemplation over the signs of Allah in the universe like the sky and earth for the logical comprehension and fortification of one's belief in the Creator and for this, Almighty of course has bestowed man with necessary faculties. Similarly, it is said, "*He grants wisdom to whome he pleases; and he to whome wisdom is granted receives indeed a benefit overflowing; but none will grasp the Message but men of understanding*."[iii]and"*He gave you hearing and sight and intelligence and affections: that you may give thanks (to Allah)*".[iv]

Qur'ān seeks to purge the human mind of all sorts o f superstitions, delusions and prejudices that kills its vitality "*But they have no knowledge therein: they follow nothing but conjecture and conjecture avails nothing against truth*."[v]

Humanity is guided by the Prophets from time to time. The Prophet Muḥammadﷺ did not spare any occasions to get his followers educated. For instance, he gave the assignment of educating at least ten Muslim children each, to some of the captives of the battle of *Badr*. Thus, teaching the Muslim students was fixed as their ransom.[vi] A community that was almost illiterate and ignorant became, with the onset of Revelation, the torch bearers of knowledge and learning, culture and civilization and spread out to every nook and corner of the then known world, under the dynamic leadership of the beloved Prophet Muḥammad ﷺ, who declared the acquisition of knowledge compulsory for every Muslim.

A number of Muslim scholars and intellectuals carried out extraordinary research endeavors in almost all the sciences of antiquity along with their own religious sciences either independently or under the patronage of the rulers. Throughout the medieval period of Islam particularly between 8th to 11th centuries or even more the scientific learning by the Muslims reached its zenith. This period witnessed the large scale translation, commentary and abridgment of the ancient works of diverse fields of knowledge including the field of medicine.

The Muslim physicians were primarily inspired by the scientific and medicinal notions embedded within the Qur'ān and the sayings of the Prophet Muḥammad ﷺ. Several companions are said to have successfully treated certain diseases by following the medical advice of the beloved Prophet Muhammad ﷺ. Accordingly some traditions, among the three generally accepted methods of healing including honey, cupping and cauterization, He ﷺ generally discouraged the use of cauterization unless it suited the ailment. The Messangerﷺ also advices his *Ummah* that " *there is no disease that Allah has created, except that he also has created its treatment*."[vii]

The belief that there is a cure for every disease encouraged early Muslims to engage in biomedical research and seek out a cure for every disease known to them. Many early authors of Islamic medicine, however were usually clergies rather than Physicians, and were known to have advocated the traditional medical practices of the beloved Prophet Muhammad'sﷺ time, such as those mentioned in the Qur'ān and *Ḥadīth*.

Inspired by the Qur'ān and *Sunnah*, Muslims nurtured the culture of the knowledge of various sciences with particular focus on medicine, chemistry, mathematics, astronomy, geometry, geology, geography, mineralogy, philosophy and architecture. In the field of medicine they excelled in all branches including surgery, pharmacy and nursing by establishing hospitals and opening colleges for doctors' training. The history of science traces its origin back to Mesopotamian and Egyptian[viii] process of scientific inquest that grew during the three millennia before Christ. The ancestors of Hellenic or Greek investigations produced Hellenistic and Harranian and, in part, Persian science. All these impacts shaped the later scientific venture of Islamic civilization.[ix]

It was during the Abbasid era (750-1258) when the rational and scientific approach dominated almost all the fields of learning and Muslim scholars and intellectuals made significant contributions to the diverse fields of knowledge. Establishment of highest learning centers like *Baytal-Ḥikmah*(House of Wisdom) and the "translation movement" of this era supplemented the research endeavors of the medieval scholars of Islam. A number of ancient works were translated from other languages like Greek into Arabic. In addition, summaries, abridgements and commentaries on these works spread profusely during this period. This period marked the "Golden Era of Islam". Muslim scholars translated all available medical literature into Arabic. During the ancient era, Aristotle and Hippocrates took medical profession to its pinnacle.[x] They authored a large number of books and during the medieval era these were translated into Arabic. The medical science of the ancient Greeks revolutionized the initial idea of the study of medicine in the early Arab scholars of the East. The Muslim conquest of Egypt and Persia paved the way for Muslims to gain control over both Alexandria and Jundishapur (modern Shahabad, Iran), the early centers of science and medicine . The translation work for the Muslims was launched during the Umayyad period. Caliph Amīr Muʿāwiyah (602-680) was first to appoint Ibn Athal, a Christian physician, as the district magistrate of Hams.[xi] There he translated several medical books into Arabic for the Caliph . Prince Khālid bin Yazīd studied chemistry with Miryanis , a Christian from Ruhban. Astafan translated books from Coptic to Arabic for Prince Khalid . Maserjawayis, a Jewish physician , was directed by the Caliph Marwān ibn Ḥakam to render Bishop Aaron's books on pharmacopoeia from Syriac into Arabic and Caliph 'Umar ibn 'Abdul 'Azīz ordered multiple copies of the book . IbnAbjar, a physician professor from Alexandria , embraced Islam at the hands of 'Umar ibnʿAbdul 'Azīz, who on becoming caliph appointed him as the chief physician at his court.[xii]

The Muslim contact with Jundishapur began by a coincidence due to the sickness of Caliph al -Manṣūr, who sought medical assistance for his ailment of dyspepsia in 148/765. After his successful treatment caliph al -Manṣūr became a zealous patron of the study of medicine and invited scholars to translate medical books into Arabic, which led to the Islamic reawakening. The vast translation movement that started at the end of the 8th century left an indelible mark on the history of mankind From the very beginning of this advancement the Muslims took keen interest in grasping knowledge in sciences, medicine and philosophy. The Muslim scholars' interest in the study of medicine was based largely on the writings of Hippocrates (460- 370 B.C.), Aristotle (284-322 B.C.), Dioscorides (c.40-90 C.E.), Galen (131-201C.E.), Oribasius (320- 403 C.E.) and Paul of Aegina (c.625- c.690 C.E.). The great educational movement marked the Golden Epoch of Islamic civilization which reached its pinnacle during the 10th century.[xiii] The Abbasid caliphs were profoundly involved in obtaining original Greek classical tomes by providing funds and using diplomacy. Selected Indian and Persian books were considered to be equally important. Initially, the books of medicine, mathematics and astronomy received translators' attention. Later, Muslim scholars directly translated Greek books into Arabic, and not from Syric. By the end of the 9th century most important titles had been translated into Arabic. It clearly shows that all available early books were transferred into Arabic. The Muslim scholars did not imitate blindly the texts of their Greek pioneers, but they examined critically, collated, corrected and enriched significantly the major texts of Greek medicine. With this goal, Muslim scholars paid serious attention and devoted their energy to serving humanity. They enriched their knowledge by absorbing the accomplishments of early Greece as well as enhanced their intellectual scope from Syric, Persian and Indian sources. In medicine the Arab physicians were careful observers, and their clinical records added much to what they learned from the Greeks. They invented some new instruments in all branches of Medical Science.[xiv] The vigor and enthusiasm for scientific learning that reached its zenith during the middle of the Abbasid reign inspired the scholars and scientists of Muslim Spain as well. The scientific progress of the Arab world was gradually bequeathed to Muslim Spain, where a number of eminent scholars, intellectuals and scientists emerged and contributed diversely and significantly to different fields of science including medicine.

Spain, being the south-western part of Europe, has served the purpose of a bridge between the Afro-Asian countries and the rest of Europe. With the establishment of Muslim rule in 711 C.E., a large scale migration began from the eastern Muslim world as well as from North Africa towards Spain. This helped in transmitting a large number of scientific and religious works form these areas to Spain. *Rasā'il-iIkhwānal-Ṣafā* (*The Treatise of the Brethren of Purity*) issuch first transmitted work, which was introduced in Spain by Al- Majriti (d.1007 C.E.). Generally the transmitted works were the original writings and contributions of the eastern Muslim scholars that included the translation of various Greek scientific works into Arabic along with the commentaries and summaries of such early works. Following their coreligionists of the east, the scholars of the Muslim Spain worked in about all the branches of learning including Qur'an, *Tafsīr*, *Ḥadīth Fiqh*, Historiography, Astronomy, Astrology, Music, Mathematics, Surgery, Gardening, Geography, Medicine and others. In the fields of art and architecture, they were not far behind from the East. Besides the munificent behavior and patronage of the rulers, all this was supplemented with the advanced fields of agriculture and industry that made Spain second important seat of learning after Baghdad and perhaps equal to Iran.[xv]

In the reign of 'Abdal Raḥmān al-Nāṣir, (r. 912 to 61 C.E.) and his son Al-Ḥakam II, (r.961 to 976 C.E.), the Umayyad dynasty marked the zenith of its development (both politically and intellectually) in Andalusia, which reflected the golden era of this dynasty. This dynasty established sovereignty over a large portion of Iberian Peninsula. After having achieved the military and naval strength, education and scholarship were encouraged and patronized and many eminent Physicians began to appear on the scene, adding by means of their professional efforts and writings. The capital of Spain, Cordova, contained 600 *Masājid*, each with its free attached school, 17 universities and 70 public libraries. There was hardly a boy or girl above 12 who could not read and write and it became the most beautiful cultural city in Europe. At that time it was unrivalled in Europe, and in medical achievements it was comparable with Constantinople.[xvi]

Muslim Spain wrote one of the brightest chapters in the intellectual history of medieval Europe, between middle of the eighth and beginning of the thirteenth century C.E. the Arabic-speaking people were the main bearers of the torch of culture and civilization throughout the world.

Moreover, Arabic served as the medium through which ancient science and philosophy were recovered, supplemented and transmitted in such a way as to make possible the renaissance of Western Europe. In all this, Arab Spain had a large share.[xvii] Education and scientific learning in Muslim Spain reached its zenith with the availability of schools and libraries that were famous throughout the world. The universities of Granada (*Gharnāṭa*) Valensia (*Blansia*) Cordova (*Qurṭuba*), Seville (*Ishbilia*) and Toledo (*Talitala*) acted as the great centers of learning. Science and learning were cultivated and taught as never had been before. Jews and Muslims in anenvironment, made their country illustrious for all times by the production of their students. The schools of Cordova, Toledo, Seville and Saragossa attained a celebrity which subsequently attracted to them students from all parts of the world.[xviii] People would travel, from around the world, just to study in Spain, the true, magnificent and unrivaled center of learning. So while it can be held that some of Europe was in the 'dark ages', another part of Europe (Spain, which was ruled over by the Muslims) was really enlightened or highly developed. The treasure of scientific knowledge gradually passed to the other part of Europe via Spain that triggered the commencement of Renaissance in Europe. Thus, Renaissance was not just a rebirth from nothing, but it owes its debt to the Muslim Spain, from where all the scientific knowledge was transferred to Europe. Spain is the scene through which almost all the works, may they be of the Arabic, the Greek or the Hindus, were transmitted to Europe.[xix]

It is an unfortunate fact that after the downfall of Muslim rule in Spain a large number of libraries, personal collections, and works of Muslim Scholars were burnt, buried, thrown into rivers and sea or destroyed in one or other ways by the Christians who fought against Muslims in the name of "*Reconquesta*". However, the spared material though scanty yields some information regarding the best achievements of the Muslim Scholars of Spain.[xx] Nearly all the above mentioned works along with those of others which could not be mentioned here were transmitted to Europe and were translated into different languages viz- Spanish, Latin, Hebrew and others. The translations include the works of Spanish Muslims, Eastern Muslims, the summaries and the commentaries of the works of early Muslim scholars. With the help of these translations and subsequent developments, they prepared the ground for the *Renaissance* of the Christian West. Mentioning the transmission of Science to Europe, Hitti relates:

"In the first century of Muslims domination in Spain, Eastern culture flowed from a higher level into Andalusia. But in the eleventh and following centuries the course was reversed, as illustrated by ibn Zuhr and al-Bahili. Indeed the current became strong enough in the twelfth century to over flow into Europe. In the transmission of Arab Medicine to Europe, North western Afarica and Spain, in particular Toledo, where Gerard of Cremona and Michael Scot worked, played the leading part."[xxi]

The Christian Scholars educated their fellows by prescribing the Muslim works in their Syllabi; some of them were assumed as the basis of their education and were taught even till 17th century. So it is realistic that these transmissions done by the Christian Scholars of Europe made their continents educationally rich. They established educational institutions in all parts of Europe and educate its people and also the people of the other parts of world especially of America and Australia where they ruled for centuries. The agriculture, industrial and other revolutions that initially commenced in Europe and the idea of democracy given by European scholars was of course due to the development in the field of education and learning. So, it may not be a slip up to say that once a nation or civilization is educated, its supremacy and progress in all walks of life is sure.[xxii]

Conclusion

From the current work it is quite clear that during the medieval Abbasid reign and the era of the Muslim Spain, the Muslim Scholars and the Scientists were highly dedicated to the diverse fields of scientific knowledge notwithstanding their unyielding interest in their own religious sciences like Quran Hadith and Fiqh. Religion in no way hindered their scientific progress rather the scientific notions of Quran and Hadith supplemented this vigor and as a result they wielded an unprecedented command on scientific learning and Muslim's became the torch bearers of the Scientific progress and the enlighten in Europe is because of the Muslim's and especially via Muslim Spain.

Notes and References

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[ii]*Al-Qur'ān*, 58:11.

[iii]*Al-Qur'ān*, 2:269.

[iv]*Al-Qur'ān*, 16:78.

[v]*Al-Qur'ān*, 53:28

[vi]SaifurRahman al-Mubarakpuri, *ArRaheeqal-Makhtum, (The sealed Necter*), p.15.

[vii]Muhammad Ibn Ismail Bukhari, *Al-Jaami' al-Sahih al-mukhtasar min umuriRasoolillahiwaSunanihiwaa yyaamihi*, (tr. Dr. Muhsin Khan), Chicago, Kazi Publications, 1976. Book of medicine, chapter there is no disease that Allah has created except that also has created its treatment.

[viii] Syed and Khan, *Op.cit*, Vol.7. p. 4.

[ix]*Ibid*.

[x]ArshadAslam," The Contribution Of Muslims To Science During The Middle Abbasid Period (750-945 C.E.), *Revelation and Science*, Malaysia, Kulliyah of Science, international Islamic University Malayasia, vol1, no. 1,pp. 39-56, 2011.

[xi]*Ibid.*

[xii]*Ibid.*

[xiii]*Ibid*.

[xiv]*Ibid*.

[xv]Khan, "Muslim Spain and the Renaissance of Christian Europe,"*Bulletin of the Institute of Islamic studies*, A.M.U., (India) 1996, pp. 101-110, p. 101f.

[xvi] M.N. Istamboli, *op.cit.* p.81.

[xvii]Hitti, *op.cit.*.p.557.

[xviii] Khan, *Thesis*, *op.cit*., p.8

[xix]Nadavi, *op.cit*., p. 745f.

[xx] Khan, *Muslim Spain and the Renaissance of Christian Europe*, *op.cit*., p.106f.

[xxi]Hitti, *op.cit*., p. 578.

[xxii] Khan, *op.cit*..p.107ff.