

# **Medical Care During the Middle Ages**

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### **Summary:**

The present paper is an endeavor to study some issues related to medical care and hospital during the Middle Ages. Promotion of Medical Care and; the contribution of eminent Physicians during the middle ages; Muslim Views on Seeking Medical Treatment; Examination of Patient by Member of Opposite Sex in Islam; and Al-Bimarsitan (Hospital) As a Centre for Medical Care and Education; are among the major themes in this paper.

**Key words: Islamic Medicine, Medical Care, and Bimaristan (Hospital).**

## 1. Promotion of Medical Care

Imam Bukhari (194-256/ 810-870) was aware that medicine of the Prophet (al-tibb al-nabawi) emphasized prevention of disease.<sup>1</sup> Therefore, in many occasions, the Prophet (s.a.w) kept advising his Ummah to ask God to grant her certitude and well being. The Prophet (s.a.w) admitted that, after certitude, no one has ever received a blessing greater than health and well-being. This indicates that Islam honors good health, strength, and well being and considered it as the most prized, precious, and generously gifts from Allah (s.w.t). The Prophet (s.a.w) who was well aware that peoples might waste their times when they are healthy, reminded them by saying: “There are two gifts of which many men are cheated: health and leisure.”<sup>2</sup> This saying became true when we found that peoples would not give full attention to preventive medicine as they would given to diagnosis and treatment of disease.

The Prophet (s.a.w) emphasizes the importance of preventive medicine because of many reasons. First, `Ibadat (worship) cannot be concentrically performed without good health and well-being as Abu al-Darda’ (r.a) had once voiced to the Prophet (s.a.w): “To be healthy and grateful is better than to be ill and endure patiently.” The Prophet (s.a.w) replied him by saying: “Allah (s.w.t) loves healthy people, as you do.” With this in mind, an Arab came and asked God’s Messenger (s.a.w): “What should I ask Allah (s.w.t) upon concluding each of the five daily prayers?”. God’s Messenger (s.a.w) replied: “Pray for good health.” The man further asked: “Then what”? God’s Messenger (s.a.w) reiterated: “Pray for good health.” The man asked again: Then what? God’s Messenger (s.a.w) replied again: “Pray for good health and well being in this world and in the hereafter.”<sup>3</sup>

Secondly, since healthy is the most prized, precious, and generously gifts from Allah (s.w.t), therefore, preventive medicine should be given the same degree of attention, and even more, as diagnosis and treatment of disease, because maintaining good health is something for which Muslims are accountable to Allah (s.w.t). Consequently, it is incumbent upon the grateful servant, to safeguard this blessing and not allow any change to overcome it through ill usage. In the light of this command, al-Harith b. Kaladah, graduate of the medical school of Jundishabur and a contemporary of the Prophet Muhammad (s.a.w), in reply to a question as to what was the essence of medicine, had said: “prevention”.<sup>4</sup> This is in conformity with Arabian tradition: “dirham wiqayah khairun min qintar al-‘ilaj: the guardian, protecting and preserving personal well being was considered better than medical treatment. In other words, a dirham (little amount) of preservation, prevention and precaution are far better than a qintar (big amount) of treatment. Therefore, as Muslim, he should care for his health and always strive to remain in a healthy state.

It would be interesting to mention Ibn Hajar’s view in regard to medical care and preservation of health. When he had studied the verses of the Qur’an relating to fasting and al-ihram, he revealed to us that God had guided believers towards preventive medicine when He gave permission for a patient to break the fasting during the month of Ramadan. Similarly, the permission for Muhrim (the one who is in the state of ihram) to shave his

hair during al-hajj, is also for the purpose of preservation of health.<sup>5</sup> From these two examples, it is not surprising to note that the Islamic law has given instruction not only for spiritual health but it has a large number of rules concerning preservation of physical health. The various rules and sanctions of the Shari`ah concerning, for example, salah, zakah, sawm, hajj, ritual cleanliness, foods, and drinks, sex and work habits and the organization of the environment can be viewed as forms of preventive medicine.

## 2. Eminent Physicians in Medical Care in the Muslim World

### A. Eminent physicians in Baghdad

The first physician who flourished in the early of the first half of eleventh century in Baghdad was Ali Ibn Isa al-Kahhal (d. 400/1010). He was a famous Arabic oculist who flourished at the time when ophthalmology was specially favorite subject in Muslim world. As evidence from available contemporary documents and compilations on ophthalmology, his *Tadhkirah al-Kahhalin* is one of the important treatises in the field of ophthalmology. In this manual, the author discussed in detail 132 eye diseases and 143 drugs described as well as the anatomy and physiology of the eye. Furthermore, he successfully gave the rules related to the preservation of eye. Casey Wood studied its manuscript, which existed in Cairo, and translated part of it into English in 1936. Later on, Max Meyerhof translated chapter four of the treatise into English entitled “*al-Jarah wa al-Subul: Trachoma and its Treatment*” (see Max Mayerhof’s *Studies in Medieval Arabic Medicine*, London: Variorum Reprints, 1984), part II).

The second important and highly reputed Muslim physician-philosopher was Ahmad Ibn Miskawayh (d.421/1030). As a great scholar, he wrote on a wide range of topics, as did so many of his contemporaries. One of these is *Tahdhib al-Akhlaq* in which he for the first time wrote in a systematic manner on the spiritual aspect of health. In this book, he devoted a lot of time discussing on how human might preserve his/her moral health as a way to cultivate physical health.

Other important physician-author in Baghdad of this study period was Abu Said ‘Ubayd Allah ibn Jibrail ibn Bakhtishu` (d. 450/1059). He was the last descendant of the great and illustrious family “Bakhtishu” whom emigrated from Judishabur to Baghdad in 765 C.E by the invitation of Abbasid caliph Mansur for personal service. Among his main works was *al-Rawdah al-Tibbiyyah* edited by P. Paul Sbath. It dealt with the philosophical terms used in medicine. Here the author attempted to give comprehensive principles of the healing arts by providing 50 chapters with each of them providing the medical philosophical explanations.

Possibly the most illustrious physician who was born and practiced the professional in Baghdad was al-Mukhtar ibn Butlan (d. 460/ 1068). During the period under consideration, Ibn Butlan composed many treatises, but the most prominent are *Da’wat al-Atibba’* (Call to Physiician) and *Taqwim al-Sihhah bi al-Asbab al-Sittah*. The latter treatise stressed and elaborated on the six health principles, which is considered as the most essential for health. He also introduced activities, which contribute to good health such as the use of music, dancing and bathing. As regard emotional effects on good health for humans, he discussed five types: anger, joy, shyness, grief (anxiety) and fear.

After careful consideration of the caliber of Arab works, it becomes evident that one of the highly reputed physician-philosopher who was born, lived and practiced in Baghdad was Abu Ali Yahya B. Isa ibn Jazlah (d.

493/1100). As a prominent physician, he was immediately appointed by al-Muqtadi to whom Ibn Jazlah dedicated his important medical manuals *Taqwim al-Abdan fi Tadbir al-Insan* (Tables of Bodies with Regard to Their Constitutions) and *Minhaj al-Bayan fima Yastamiluhu al-Insan*. In the former, the author introduced the way to preserve good health physically and spiritually. He explained that to achieve ultimate goal, man should labor for present life as if he is going to stay forever on this earth, and for life to come, as if it was his last day here. To be able to do so, one must possess good health either by its preservation or restoring it through medicine. In 1973, part of it was translated and studied by Joseph Salvators Graziani under the title “Ibn Jazlah’s Eleventh Century Tabulated Medical Compendium: *Taqwim al-Abdan*” as Ph.D. dissertation. *Minhaj al-Bayan fima Yastamiluhu al-Insan* dealt with simple and compound drugs and diets used in the various diseases. Some drugs, which introduced by the author, were the same as previously used while others seem to have been introduced during his period. These new drugs that Ibn Jazlah prescribed are still in use in Middle East, North Africa, Western Europe and United States.

Among one of the noblest men of all times who spent many years in Baghdad as a student, researcher, and teacher was Abu Hamid al-Ghazali (441-504/1058-1111 C.E). His high reputation became obvious when Fakhr al-Mulk, the wazir of the Seljuqs and the son of Nizam al-Mulk appointed him as professor of Islamic science at Madrasah Nizamiyyah between 484/1091-488/1095. Beside his responsible as a scholar of Islamic science, he also devoted his spare time to study philosophy. As a result, he wrote *Maqasid al-Falasifah* (The Purpose of the Philosophers) completed ca. 486/1094; *Tahafut al-Falasafah*, completed in 487/1095 and *Ihya’ Ulum al-Din*. In the first two former writings, the author, for the first time, destroyed the authority of Aristotle and also sowed the seeds of mechanical philosophy, the metaphysical foundation of modern science.

The last physician of that time to be mentioned here was Ibn Tilmidh (468-560/1076-1165) known as Amin al-Dawlah. He was one of the important Arab physician, who traveled throughout Persia but later returned to settle in Baghdad where, he was appointed as head of physicians of Baghdad. In his capacity as head of Baghdad physicians, he was asked to teach healing art to many students from far and near who after graduation led prominent and successful professional life in their own countries. As reported by many historians, Ibn al-Tilmidh made use of the works of the Greek physicians and also the works of Ibn Sina as the main sources of his teaching. Therefore, we are not surprise to find out his works consisted of ideas of Greek physicians notably Hippocratic corpus and Galen and those of Hunayn, Ibn Sina, al-Razi, etc.

## **B. The Eminent Physicians in Egypt**

A lot can be said of physicians and their contributions in the land of Nile. For the purpose of our survey, Ibn Ridwan (d. 454/1063), Ibn al-`Ayn al-Zarbi (d. 547/1153) as well as Ibn Maymun (d. 600/1204)’s works will be introduced.

Possibly the most illustrious Egyptian Muslim physician- astrologer was Ali Ibn Ridwan (d. 454/1063), who flourished during Fatimid’s caliph.

Beside professional training and practicing in public health, he also served Fatimid's caliph al-Mustansiri (reigned 1035-1094) as his court physician and astrologer. With full dedication to his profession, he authored several medical books and commentaries, which were widely read in Islam as well as in Europe in Latin versions. In his *Daf' Madarr al-Abdan fi Misr* (On the Prevention of Bodily ills in Egypt), he successfully described meteorology, climatology, ecology and environmental health and laws regulating health care in Egypt. In this book, he mentioned diseases, which occur in a particular location (geographical location), dwelling, seasons, winds, waters and air. To do so, he had criticized Ibn Jazzar who claimed that Egypt was a unhealthy place. Ibn Ridwan blamed Ibn Jazzar both for his lack of experience in Egypt and for his misunderstanding of natural theories, particularly of the notion of temperament. Other important work of Ibn Ridwan is *Kitab al-Nafi fi Kifayat Ta'alum Sina'ah al-Tibb* (see, *Kitab al-Kifayah fi al-Tibb*, ed. Salman Ghtayah, Iraq, 1401/ 1981; see article by M.C. Lyons, in *Islamic Quarterly*, 1961, pp. 65-71). In this book, he stated that the acquisition of the art of medicine from the book is more successful than learning it under the direction of teachers.

Ibn al-Ayn al-Zarbi's *al-Kafi fi al-Tibb* is one of important books in public health. The author proposed and discussed on how to preserve human's health. In this regard, he was of the opinion that health can be preserved when one successfully managed the seasons, foods, drinks and others. To achieve this, one needs to live in healthy, unpolluted environment. This is to avoid diseases caused by dead rats, animals, insects and polluted water. He also recommended to use fan and water fountains.

There will be difficult to understand and appreciate Islamic medicine and allied health sciences without a fair and balanced study and evaluation of Ibn Maymun's two important works: *al-Risalah al-Afdaliyah* (A Medical Treatise on the health Care of body and soul); *Fi Tadbir al-Sihhah* (on the Preservation of Health).

### **C. The Eminent Physicians in Spain (al-Andalus)**

The first physician should be mentioned in our survey is Abu Qasim al-Zahrawi (d. 403/1013), the author of *al-Tasrif li man Ajiza `an al-Ta'lif*. The book was considered as important book in surgery. It was translated into Latin by Gerard, Rogerius, Arnold and others. In this book, the author advised that anyone who wished to be a physician, has to consult his *al-Tasrif li man Ajiza `an al-Ta'lif*, especially the last treatise of the book which was devoted to surgery. He illustrated about 200 surgical instruments. These instruments were influenced other Arab physicians as well as European surgery.

Abu Marwan Ibn al-Zuhr served the Murabit dynasty (482-541/1090-1147) in Spain before he went to Morocco to serve in the palace of his patron, Ali Ibn Tashfin (reigned 537-555/1143-1160). In medicine, he wrote several treatises included two works on theriaca (*al-Tiryaq al-Sab`ini*) and on diet (*al-Aghdhiyyah*). During the later period of his life, he became acquaintance with Ibn Rushd, to whom he dedicated his *al-Taysir fi Mudawat al-Tadbir*.



A junior contemporary to the above mentioned physician was Abu al-Walid Ibn Rushd (519-594/1126-1198), who was well known in the history of Islamic thought more than in medical art. In medical art, he wrote al-Kulliyat fi al-Tibb and Rasa'il Ibn Rushd al-Tibbiyyah. The former was divided into seven chapters. Chapter six was among important chapters devoted to preservation of health (hifz al-sihhah).

The previous survey has revealed to us that Islamic medical works, which were written in Arabic language and developed in a remarkable manner during 11-12th Centuries of Christian era, were not necessarily of Muslims contributions but from both Muslims and non-Muslims, Arab and non-Arabs. They are representative of important figures in building of various fields of medical arts throughout Muslim world under encouragement of many Muslim rulers-philanthropists. We may here recall that beside rulers who executed justice and equality among their subjects without discrimination, prejudices and violence among various religious groups and classes, there also exists conducive academic environment, which causes Islamic medicine to reach its towering position. From this conclusion, it leads us to understand that, what is called Islamic medical writings are not necessarily written by Muslims rather they have been contributed by many scholar, regardless their different cultures, backgrounds, beliefs, practices, and values provided. Their writings must be under the framework of Islamic worldview i.e., liberated from magical, mythological, animistic, national-cultural tradition opposed to Islam.

### 3. Seeking Medical Treatment

In any attempt to discuss the medical treatment in Islamic history, we have to answer before anything else a central question namely ““hal al-tadawi afdal min tarkuhu: Is seeking medical treatment better than abandonment? In the middle of third century after hijrah and even after, this issue became one of the serious debates and has been discussed widely in Islamic legal literature. In this regard, there are two different opinions of the Muslims in answering the question. These two opinions are based on the ahadith reported by Imam Bukhari (194-256/ 810-870) in bab ma anzala Allah da’ illa anzala lahu shifa’ (chapter on there is no disease that Allah has created except that He also has created its treatment). The first opinion is in favor with Imam Bukhari’s idea that it is better to seek medical treatment. On the other hand, some Muslims, especially Sufis, believe that tark al-tadawi (leaving of seeking medical treatment) is better as a sign of piousness.

The first school of thought, which represents the opinion of Imam Bukhari, realized the importance of the art of medicine as a means to preserve health and restore it, if one falls into illness, into the normal condition. Following the idea of Imam Bukhari, the majority of the Sunni legal schools accept the use of medicaments because it does not deny the belief of God’s destiny (al-tadawi la yunafi al-tawakkal).<sup>6</sup> For this reason, Ibn Hajar (773–852/1372-1449), the author of Fath al-Bari, advised a patient to seek relief and healing from any physical or mental ailment by means of medical assistance and treatment; and not only by putting one’s trust in God’s power and mercy. This interpretation was essentially a distraction from the ahadith, although in many cases the Prophet (s.a.w) did not provide specific drug for certain treatment. However, we are responsible to find its cure because Allah (s.a.w) mercifully provides cures for all illnesses except death and old age. Imam Bukhari reported the hadith of the Prophet (s.a.w): “for every disease there is a remedy, and when the remedy is made apparent, then the disease is cured by the permission of Allah, the Almighty.” Connecting to this hadith, Imam Bukhari reported that Abu Hurayrah narrated the hadith of the Prophet: “Allah has not created any disease without also creating a medicine or a remedy for it (ma anzala Allah da’ illa anzala lahu shifa’).”<sup>7</sup>

The word al-inzal, (literally means send down), according to Ibn Ahmad al-Ayni, indicates that disease was sent down by Allah (s.w.t) through the angel (inzal al-mala’ikah al-muwakkilin bi mubasharah makhluqat al-ard min al-da’ wa al-dawa’)<sup>8</sup> and not by supernatural powers, a spirit, a ghost, either because the patient has broken a taboo or otherwise offended a spirit, or simply because he has fallen a victim to the ghost of an unreconciled dead or to the malice of a demon. After we have heard that disease was sent down by Allah (s.w.t) through angel but patients at all times, and still have, a strong desire to know the meaning of their being sick. Why am I suffer? Why am I sick? Why am I plagued with a gastric ulcer that will kill him? What have I done to deserve such a fate?. These are questions the physician today may hear all the time and everywhere. For those who read the hadith “Allah has not created any disease without also creating a medicine or a

remedy” ask the question if God is the only one who cures the diseases, so why does God send the disease? The commentators of Sahih Bukhari agreed that God sent down illnesses but they failed to give a detailed explanation why God sent them to people.

They did, however, express some opinions on the matter while discussing various illnesses. In the time while some people believe that an individual is sick as a punishment for having sinned, for having committed an offense against the law of God, especially when a individual is stricken in the organ with which he has sinned. However, Muslims believe that illnesses were not God’s punishment to the believer rather than to scrutinize him, to test him whether he (the patient) satisfies God’s bounty or otherwise. This means that the purpose of sending the disease is to remind the believer that he is a servant who should supplicate humbly to God, the Creator of all Universes. As the servant, he has to prostrate himself in front of Him, and seek refuge in Him. If the believer success in fighting disease, then the disease, in this case, is considered as the means to increase his Iman (faith). Otherwise, it may destroy man’s life in this world and the hereafter. They quoted the hadith of the Prophet who said, "Whatever misfortunes a true believer may have-fatigue, grief, melancholy or worry - are used to redeem his sins."

Although the above evidence seemingly represents Islamic medical teaching, but there were Muslims who doubt about the permissibility of the use of medicaments. It is very regrettable that some of them were of opinions that medical treatment is permissible, but its abandonment is better. They understood that the use of medicine is an act incompatible with tawakkal (belief of God’s destiny). They argued that the preference to use medicine was an expression of one’s distrust in Allah (s.w.t). In their opinion, it was only Allah (s.w.t) who directly caused health and illness, and therefore, He alone cure disease. We are not surprising when we were told that Ahmad b. Hanbal (d. 240/855), for example, was reported to have expressed: medical treatment is permissible, but its abandonment is better and similarly Rabi’ah al-`Adawiyyah, the well-known woman Sufis, does not regard treatment disease as essentially demand of Islam. In one story, when Rabi’ah al-`Adawiyyah was asked to pray to Allah (s.w.t) to ease her suffering, she replied that: Do you not know who has willed my suffering? Is it not Allah? If you know this, then why do you ask me to pray for what contradicts His will.<sup>9</sup>

#### **4. Examination of Patient by Member of Opposite Sex in Islam**

In the middle of third century after hijrah and even after, the debate over examination of patient by member of opposite sex became one of the crucial issues and has been discussed widely in Islamic legal literature as well as in the books of ahadith. In this regard, there are two different opinions of Muslims in answering the question. The first opinion does not allow examination of patient by member of opposite sex. On the other hand, the majority of Muslims are in favor to allow examination of patient by member of opposite sex. This section is an attempt to present their views and arguments.

### **The Opposing View**

Some Muslim scholars oppose permissibility of examination of patient by member of opposite sex. Their strongest argument relies heavily on the verse of the Quran in surah al-Nur, verse no. 31 said: “And say to the believing women that they should lower their gaze and guard their modesty; that they should not display or reveal their adornments except what appear thereof; that they should draw their veils over their bosoms and not display their beauty except to their husbands, their fathers, their husbands’ fathers, their sons, their husbands’ son, their brothers or their brothers’ son, or their sisters’ sons...and that they should not strike their feet in order to draw attention to their hidden ornaments. And o ye Believers! Turn ye all together towards Allah in repentance that ye May be successful.” (al-Nur (24): 31). Based on this verse, some Muslims understood that Islamic law has legislated a man to see and touch a woman only after getting marriage. The foreigners are prohibited from looking at any part of her except her face and most probably her hands.

### **Response to the Opposing View**

There are many religious scholars who are more tolerant on the issue of examination of patient by member of opposite sex. In response to the opposing view, Imam Bukhari entitled one of his collections of ahadith Bab Hal Yudawi al-Rajl al-Mar’ah wa al-Mar’ah al-Rajl (Chapter on may a man treat a woman or a woman treat a man?). By using the word yudawi (medical treatment) and not yukhdimu (to serve), it clearly indicated a permissibility of examination of patient by member of opposite sex and it is a response to Muslims who believed that Islamic law has legislated a man to see and touch a woman only after getting marriage and the foreigners are prohibited from looking at any part of her except her face and most probably her hands.

In the mentioned chapter, Imam Bukhari reported the hadith which was narrated by Rubai bint Mu'adh bin `Afra' who said: “Kunna naghzu ma`a Rasulullah (s.a.w) nasqi al-qawm wa nakhdimuhum, wa naruddu al-qatla wa al-jurha ila al-madinah: We used to go for Military expeditions along with Allah’s Apostle and provide the people with water, serve them and bring the dead and the wounded back to Medina.”<sup>10</sup> We found that Muslim army under the leadership of Prophet (s.a.w) consisted of medical Muslim ladies who had special training in the therapy and nursing. In this regard, Ibn Hajar elucidated that the word nakhdimuhum (serving them), as mentioned in the hadith, gives general meaning, which also includes al-mudawat (treatment of disease).<sup>11</sup> Since the permissibility of medical serving from the opposite sex is dictated by the Prophet (s.a.w) in general sense, thus, Ibn Hajar concluded that its permissibility is applied and included treatments of disease regardless a patient is muhran or non muhran.<sup>12</sup>

In the light of the above evidence, Ahmad b. Hanbal was of the opinion that the permissibility of examination a patient by member of opposite should be included to all patients regardless muhran or not. It is permissible (halal) for a physician to examine a woman, even though, she is not related, whenever it is necessary to do so, and including even her private parts.

Similarly, it is permissible for woman to look at the private parts of a man in case of necessity. All of these arguments clearly show that it is permissible for a man to treat a woman to whom he is not related and to see her private parts in cases of illness. In the same way, if a man dies among women or a woman dies among men, the woman are permitted to wash the dead body of the man, and then that of the woman. This permissible was, strictly speaking, allowed in the darurah. By this concept, the Muslim may help to provide some ideas for protection against diseases and to explore some of the avenues of Islamic law that can be utilized towards health objective.<sup>13</sup> Of course, according to the shari'ah, priority should be given to fighting a harm, which threatens safety of the five essential values (al-darurah al-khamsah): faith, life, intellect, property and lineage. All of these values are the basis to preserve a human's physical and spiritual health. In studying these goals, one will find that two of the essential values, religion and property, are strongly concerned with man's health because there is no keeping of religion, nor of property without being a strong, good and healthy Muslim.<sup>14</sup>

Lastly, Muslims argue that although the service of women as mentioned in the ahadith limited to the serving (yakhdimu) and nursing but in reality, however, as far as Islamic medical treatment is concerned, there is no different between nursing and treatment of disease in the view of Muslim scholars. While talking the practical aspect of this permissibility, we were told that there were indeed quite excellent and outstanding examples of Muslim women in regard to nursing profession in the time of Prophet (s.a.w). Their skills and performances in health care were based on voluntary services and dedications. They practically showed great zeal and benevolence services. All these had been rendered in such professional manners that exhibited at the most skill, genuine faith and the deepest sympathy and tender loving care of hearth and spirit. Their actions were characterized with commendable performances of good deeds. These noble women reflected excellent responsiveness to duty and dedicated services because they indeed rendered unusual example of kindness and unselfish care the sick and the wounded, that had unsurpassed contributions in practical nursing. For example, the Prophet's wife, A'ishah (r.a), had been recognized as having extensive medical knowledge in her time. When she was asked how she had got it, she answered: "I used to listen to people describing cures to each other and I memorized what they said."<sup>15</sup> Similarly, Umayyah bt. Qays Abi al-Salt al-Ghaffariyyah, who had been converted to the Islamic faith and swear loyalty to the Prophet (s.a.w), was among the truly dedicated women in nursing profession in several battles. Surprisingly enough, we were told that she and several women from the same tribe came to Prophet (s.a.w) requested from him to join the battle to take care for the sick, just before the Khaybar battle: "We would like to join the battle to care for sick and wounded and do what we can to help the Islamic cause?." It probably because of this religious spirit and responsibility, Ku'aybah Bt. Sa'd al-Aslamiyyah, a virtuous and devout woman, had decided to devote her life in caring the sick and the wounded. It was said that among those who were treated by her, was Sad B. Mu'adh when struck by an arrow at the

battle of Khandaq. After getting the credit in treating the wounded in the battle of Khandaq, she participated the battle of Khaybar, where she served and practiced unselfishly in helping and caring for the sick and the injured. Such religious spirit encouraged Nusaybah bt. Ka`b Bt. Umar B. Awf al-Ansariyyah known as Umm Umarah to become a nursing in the time of the prophet (s.a.w). As a religious woman with dignity and great faith and dedication, she also showed generous spirit, self-reliance and having good deeds to her credit. She attended and served diligently during the `Aqabah combat. She also joined the battle of `Uhud offering water to the fighters and caring for the sick and the wounded.<sup>16</sup>

### **Justification**

The above analysis has given a clear picture on the validity of the examination of patient by member of opposite sex in the eyes of the Islamic law especially if one finds its advantageous. However, on the occasion that woman patient desires to be examined by a woman doctor, we should satisfy her wish not because it is religiously forbidden to be examined by a man doctor but because we owe it to our patients to respect their personal beliefs and cater for their psychological comfort.

## 5. Al-Bimarsitan (Hospital) As a Centre Of Medical Care and Education

The Persian term “Bimaristan” was used for hospital by both the Arabs and later the Turks. A Persian word, “Bimar” means sick and “stan” means place or house. So, Bimarsitan means the place for the sick. Before the emergence of Islamic civilization, there were places for the sick to stay mainly temples or annexes to temples that were run by priests. However, after the coming of Islam, the noble Muslim rulers founded hospitals to which the rich and poor of all countries came for treatment. It is mentioned in the Encyclopaedia of Islam that the establishment of the first real hospital in Islam depended on the continuing influence of medical school and Bimaristan at Jundishbur.<sup>17</sup>

The development of efficient hospital was one of the most outstanding contributions of medical care during the Islamic civilization. The caliphs and rulers gave further support and incentives for promoting and maintaining the health of the people by establishing hospitals. The first hospital in modern sense of the world, opened in Baghdad during the reign of Harun al-Rashid which was followed at the end of the ninth century by a number of new hospitals. Many others were established by the vizier ‘Ali b. ‘Isa in Baghdad in 301/914 and al-Muqtadiri hospital, built by the caliph al-Muqtadir in 305/918. Another, in Egypt, was established by Prince Ahmad ibn Tulun in 261/877. Nur al-Din b. Zanjī (d.570/1175) built a famous hospital in Damascus.<sup>18</sup> The medical historian, Ibn Abi Usaybi‘ah describes the routine works of this hospital as follows:

All patients were first examined in the external hall. Those who were not seriously ill were given medicines and sent home; those with more serious ailments were admitted to the hospital. They were bathed and given new clothes. Their old cloths were sent for storage. After being discharge, they were given new clothes and a certain amount of money. The well known doctor and traveler ‘Abd al-Latif al-Baghdadi (d.1238), who also taught at Damascus, narrates an amusing story of an intelligent Persian youth who was tempted by the excellent food and service of the Nuri hospital and pretended to be sick. A doctor examined him and at once came to know the real intention of the young man. He admitted him and gave him excellent food for three days, after which he said to him, “Arab hospitality lasts for three days; please go home now.”<sup>19</sup>

Worthy of mentioning here, several kinds of hospitals were established in the time of the Abbasid dynasty. Among them are fixed Hospital, which was located at a particular place, and the mobile hospital, which moved from one place to another place, stopping wherever was necessary.<sup>20</sup> Al-wazir ‘Ali b. ‘Isa, for example, ordered mobile hospitals to be established to look after the health and needs of the countryside people, particularly surrounding the towns where no doctors were available. Sinan b. Thabit (d. 329/941)’s son, Thabit b. Sinan relates:

A note came from the minister (‘Ali b. `Isa) to my father Sinan which said: “I have been thinking of the countryside of Sawad (southern Iraq) and the people who live there. There can be no doubt there must be sick people whom no doctor looks after, because there are no doctors in the countryside.



So go ahead--may Allah prolong your life-- and send doctors accompanied by medicines and liquid medical mixtures (potions). They should go around the Sawad and stay in every part of it for so long a time as is needed and treat the sick therein and then move on to other parts. My father carried out these instructions.<sup>21</sup>

The development of hospitals in Islam arose as a result of Muslims belief of charity and sympathy for the sick and needy, to care for less fortunate was considered a sacred duty. This duty was motivated by the Prophet (s.a.w) who said: "All of you are guardians and are responsible for your wards. The ruler is a guardian and the man is guardian of his family; the woman is a guardian and is responsible for her husband's house and his offspring; and so all of you are guardians and are responsible to your wards."<sup>22</sup> From this hadith, the ruler or head of the state --'ulu al-'amr-- takes all necessary measures which contribute to the idea of government under the rule of law, issues edicts in order to discover the truth and to determine the guilt and maslahah of people. One must realize that while the Pharaohs of Ancient Egypt sought eternity by building pyramids, the rulers of Islam sought the same by building hospitals, mosques, schools, etc. Muslim rulers spent money to build medical institutions, which is considered as an investment for Judgment day. The rulers' involvement in public services, especially building hospitals and establishing charitable funds to run hospitals, played a very significant role. Yusuf al-Qaradawi, in his *Mushkilah al-Faqr wa Kayfa `Alijaha al-Islam*, says that alms-giving (zakah) is an important obligation in Islam as is prayer, fasting, and pilgrimage. The Caliph and the rulers welcomed the opportunity to build adequately equipped hospitals, in order to give an expression of the immense riches and grandeur of their regimes, as well as to fulfill this religious command in the best manner and to help better the health of the sick and to relieve their pain.<sup>23</sup>

So, many hospitals were supported by the revenues of waqf (endowment). According to the medical historians, the establishment of the institution called waqf is one of the main factors for developing hospitals in Islam. The Muslims understood fully the command of Allah when reading the verse "O ye who believe, Bow down, prostrate yourselves, and adore your Lord; and do good (waf'alu al-khayr) that ye may prosper."<sup>24</sup> From this command, Muslims sought to do good deeds and to make provisions in their lifetime for the continuation of such practices in the future. With this purpose in mind, they set aside special estates (awqaf), so that they could be used for humanitarian projects designed to relieve the suffering of the unfortunate members of society.<sup>25</sup> Islamically, the Abbasid caliphates used the property of waqf, donations, zakah and its revenues, to help, maintain and build mosques, schools, as well as, hospitals. So, through waqf and zakah, innumerable funds and estates became available for the building and maintenance of innumerable charitable institutions, including many hospitals.<sup>26</sup>

Upon investigating the administration of waqf in Islam, in one case, during the vizier 'Isa b. 'Ali, son of the 'Ali b. 'Isa, the administrator of the waqf-endowment of the 'Adudi hospital, Abu al-Saqr, did not give

sufficient funds to the hospital. The reason, was that since the endowed, ‘Adud al-Dawlah, was a Shi‘ah, he had willed that a certain part of the funds be spent on the welfare of the Hashimites (the clan of Prophet Muhammad (s.a.w), while the remaining sum to be spent on the hospital. It seems that Abu al-Saqr began spending on the former item at the expense of the latter. According to the Shari‘ah, the individual has the right to say what he pleases especially to combat injustice and to expose the misconduct of rulers who exceed the limits of their authority. Based on this fact, Thabit b. Qurrah (d. 288/ 901), who was the hospital director, complained to the vizier ‘Isa b. ‘Ali who directly wrote to Abu al-Saqr the following letter:

May Allah honor you! You know what has been mentioned (in Thabit b. Qurra’s letter of complaints). It is truly distinguishing. However you may have manipulated matters concerning the increase of money (on the one side) and decrease (on the other) and made them more and less respectively, you must balance it out by taking from the other fund and putting it into the hospital fund. Indeed, the hospital is more deserving of these funds than other items because those who come to the hospital (for treatment) are helpless people and its benefits are very great. Please, let me know why hospital funds have fallen short for these successive months--particularly at this time of winter with such cold weather.<sup>27</sup>

The maintenance of health of people, as well as, to maintain high ethics of members of medical professions, was something attended to by the wazir ‘Ali b. ‘Isa. He asked Sinan b. Thabit to organise staff members of physicians in the Muqtadiri hospital and to check whether physician had to travel from one place of practice to another place of practice carrying drugs to care for the sick, including patients who were imprisoned. This is the letter from the vazier to Sinan b. Thabit:

May Allah prolong your life! I have been thinking about prisoners, who because of their overpopulation and the rugged condition of their residence, must be frequent victims of diseases. But they are unable to pursue their own benefits and see doctors from whom they can seek advice about their health-afflictions. It is therefore behooving that you set apart some doctors to visit them daily; that medicines and medical drinks be carried to them, and that the doctors visit all prisoners and treat the sick.<sup>28</sup>

Attempts were made to permit only qualified physicians to practice in both private and public hospitals.<sup>29</sup> The physicians, according to Shari‘ah, are responsible for the consequences of treatment. Prophet Muhammad (s.a.w) says: “whoever treats people lacking the knowledge of medicine is liable to pay blood money (diyyah).”<sup>30</sup> In this light, the Muslim rulers allowed only qualified physicians to practice medicine. The physicians who graduated from the school of Baghdad with their own license for practice were sent to practice locally or abroad. To ensure the existence of qualified physicians and to elevate the medical service to a high standard, licenses were only given to those physicians who passed the examination. Preserving this rule of control was positively crucial for the efficiency of the profession of physicians, the Abbasid caliphs wanted to make sure of the ability of physicians toward patients.

Ibn al-Qayyim (d.750/ 1350) says that contagion resulting from correctly performing one's duty is not subject to compensation, while any damage resulting from crime, imposture, malpractice, entitled the patient, or in case of his death, his family, to compensation. Such act also proves that the "healer", in this case, cares little about human life, and irresponsibly hastens to indulge in a profession about which he may have hidden motives, or for merely monetary gains. In such a case, he deceives the patient at a time when his morals are very weak, and his desire for recovery is strong.<sup>31</sup>

The practice of medicine was not allowed except after an oral and writing examination. In 337/949, news reached the caliph that a mistake had been made by a Baghdad physician. The patient was given the wrong treatment and immediately died. Caliph al-Muqtadir, therefore, ordered all physicians to take a special examination before practicing their profession in public Bimaristanat or private clinics.<sup>32</sup> The chief physician, Sinan b. Thabit b. Qurrah, was asked to examine all those who practiced the art of healing, as well as, to conduct special examinations for all physicians before granting certificate (ijazah) as official licenses to practice in any hospital and among the public. In this regard, Amin A. Khairallah says:

Physicians were only allowed to practice what they were fit for, and that they had to pass an examination and be licensed to practice a specialty.<sup>33</sup>

As noted earlier, the hospital was not only a place for treating patients, it was used for educating medical students, as an institution for research, an institute for teaching purposes of various medical fields and specializations, namely therapeutic, ophthalmology, surgery, clinical medicine and osteopathy. As being said by Fazlur Rahman:

Medical education in Islam began as a function of large hospitals: all large hospitals, like that founded by 'Adud al-Dawlah in the latter half of the tenth century in Baghdad were teaching hospitals. The account given from Ibn Abi Usaybi'ah, the historian of medicine, detailed his medical education at Nuri hospital in Damascus and also revealed the manner in which teaching and clinical research were conducted.<sup>34</sup>

Furthermore, the hospitals contained libraries, which had most up-to date books, auditoriums for meetings and lectures, and housing for staff and students. With a rich medical library, a hospital served as a focal point and a convenient center for teaching medicine and for training young doctors to practice.<sup>35</sup> Moreover, Hamarneh says:

Schools connected with hospitals such as those that flourished at the 'Adudi hospital in Baghdad, the Nuri in Damascus and the Mansuri in Cairo. In them there were lecture rooms, libraries, pharmacies, and storage and manufacturing rooms for drug preparations--electuaries, syrups, ointments and decoctions--in addition to the storage of medicinal herbs. These schools were ideal for teaching theoretical courses by attending physicians, and the students obtained practical training by visiting patients in regular rounds with their teachers and by sitting at the bedside.<sup>36</sup>

## Conclusion

It is truth to say that the medical care in Islamic tradition during the Middle Ages is mainly rooted in the Qur'an and Ahadith of the Prophet (s.a.w), although the Islamic medical system came into being, especially during the Abbasid period, as a result of the integration by Muslims of several older traditions of medicine, most importantly Greek. This leads to conclude that Islamic medicine is not only referred to what has been practiced in the time of the Prophet but far beyond of what had been practiced in khulafa al-Rashidin, Umayyad, Abbasid, Othman and what has been practiced in modern times and after, with the condition that they do not contradict with the concept of Oneness of Allah (al-Tawhid). While we say that Islamic medicine is primarily concerned with the prevention of illness rather than with cure, however, in situations where one is sick, Islam legalizes medication. The Prophet (s.a.w) clearly commanded the patient to seek the remedy for He Who created illness also created its cure. This teaching implies that every available and useful treatment known to us should be utilized. If a treatment for a certain illness is not yet known to us, it is our duty and even privilege throughout the Muslim world to carry on research, studies and investigations to find out its cure notably from the three natural kingdoms: animals, plants and minerals experimentally and other wise. Thus, looking for remedies and seeking treatment do not contradict taqdir of Allah (s.w.t). In the treatment of the patient, the Shari'ah dictates that whoever treats people lacking the knowledge of medicine is liable to pay blood money (al-diyah). This is because the person who treats people lacking the knowledge of medicine is actually being unjust to himself and to the patient.

## REFERENCES

- 1 The early of Islamic medical source, that was intended as an alternative to the Greek-based medical systems, was known as al-tibb al-nabawi (Prophetic Medicine). The authors of these sources were religious scholars and clerics, although a few were composed by writers trained both as physicians-philosophers and theologians. We cannot expect their writings to be similar to Ibn Sina's and al-Razi's writings because, as religious scholars and clerics, preferred traditional medical methods of healing as practiced by the Prophet (s.a.w) in his days over the medical ideas incorporated from Hellenistic society.
- 2 *Bukhari, Sahih Bukhari*. 8 vols. (Istanbul: Al-Maktabah al-Islamiyyah), trans. Muhammad Muhsin Khan (Lahore: Kazi Publications, 1979), Kitab al-Riqaq, Bab al-Sihhah wa al-faragh wala `aysh illa `Aysh al-akhirah. Henceforth cited as SB.
- 3 Ibn al-Qayyim al-Jawziyyah, *al-Tibb al-Nabawi*. ed. Shu`ayb al-Arna`ut and `Abd al-Qadir al-Arna`ut (Beirut: Mu`assasah al-Risalah, 1985), 216.
- 4 al-Qifti, *Akhbar al-Hukama`*, (Cairo, 1908), 113.
- 5 Ibn Hajar, *Fath al-Bari Sahrh Sahih al-Bukhari*, 13 vols. (Beirut: Dar al-kutub al-`ilmiyyah, 1989), 10: 165-6, henceforth cited as FB.
- 6 Ibn Hajar, *Fath al-Bari*, 167.
- 7 *Sahih Bukhari*, Kitab al-Tibb, Bab Ma anzala Allah da' illa anzala lahu shifa`.
- 8 Al-`Ayni, *Umdah al-Qari*, 21: 229-30.
- 9 Fazlur Rahman, *Health and Medicine in the Islamic Tradition* (New York: Crossroad Publishing Company, 1989; repr., Kuala Lumpur: S. Abdul Majeed & Co, 1993), 49.
- 10 *Sahih Bukhari* (hereafter cited as SB), *Bab Hal Yudawi al-Rajl al-Mar'ah wa al-Mar'ah al-Rajl*.
- 11 Ibn Hajar, *Fath al-Bari Sahrh Sahih al-Bukhari*, 13 vols. (Beirut: Dar al-kutub al-`ilmiyyah, 1989), 10: 167.
- 12 Literally, *darurah* is derived from the root *darr* means: to face adversity. The works of jurists often referred to situations of necessary when one is faced with fighting and preventing a *darar*. Also, *darurah* is defined as a situation, which presents fear of destruction, substantial harm to one of the essential values, faith, intellect, property and lineage, involving oneself or another human being. The fear is perceived either with certainty or with a strong probability, that destruction or injury will occur, immediately or later, if measures are not taken to prevent it. (See, Abd. Wahab Ibrahim Abu Sulayman, *Fiqh al-Darrah wa Tatbiqatuh al-Mu'asarah* (Jeddah: al-Ma`had al-Islami li al-Buhuth wa al-Tadrib, 1414/1993), 65).
- 13 Al-Nasimi, *Tibb al-Nabawi wa `ilm al-hadith*, 2: 285-7; *Encyclopaedia of Islam*, new ed., "Darrah," by Y. Linant De Bellefond; Mohammad Muslehuddin, "Islamic Jurisprudence and the Rule of Necessity and Need," *Islamic Studies* 11, no.1 (March 1973), 37-52.
- 14 In the Holy *Qur'an*, Allah (s.w.t) says: "But if one is compelled by necessity, neither craving (it) nor transgressing, there no sin on him indeed, Allah is forgiving, merciful."( al-Baqarah: 173) "Allah desire ease for you, He desireth not hardship for you." (surah al-Baqarah (2): 185) "He hath chosen you and hath not laid upon you religion any hardship." (al-Hajj: 78), see also, al-Ma'idah (5): 6; al-Nisa'(4): 28, al-An-'am (6): 119, 145; Nahl (16): 115, al-Haj (22):78; Tawbah (9): 91, Taghabun (64): 16).
- 15 Narrated 'A'ishah, the wife of the Prophet, when the health of Allah's Apostle deteriorated and his condition became serious, he asked the permission of all his wives to allow him to be treated in my house, and they allowed him. He came out, supported by two men and his legs were dragging on the ground between Abbas and another man. (The sub-narrator told Ibn 'Abbas who said: Do you know who was the other man whom 'A'ishah did not mention? The sub-narrator said: No. Ibn Abbas said: It was 'Ali.) 'Aishah added: When the Prophet entered my house and his disease became aggravated, he said, "Pour on me seven water skins full of water (the tying ribbons of which had not been untied) so that I may give some advice to the people." So we made him sit in a tub belonging to Hafsah, the wife of the Prophet and started pouring water on him from those water skins till he waved

us to stop. Then he went out to the people and led them in prayer and delivered a speech before them. (*Sahih Bukhari*, Kitab al-Tibb, Bidun Tarjemah).

16 Ibn Hajar, *Fath al-Bari*, 10: 259.

17 *Encyclopaedia of Islam*, new ed., s.v. "Bimaristan" by Bedi N. Sebswvaroglu, 1: 1223; Mukhtar Salim, *al-Tibb al-Islami Bayna al-'Aqidah wa al-Ibda'* (Beirut: Mu'ssasa al-Ma'arif, 1988), 121-5.

18 For details, see Amin A. Khairallah, *Outline*, 59-73; S. K. Hamarneh, "al-Bimaristanat wa 'Usul al-Ta'lim al-Tibbi fiha," *al-Fikr al-'Arabi* 1987, 121-142. The capital of the Islamic empire kept changing from one dynasty to the other. In each capital, an important medical center developed. By the end of the 13th century, there were many medical centers spread throughout the Arab world. For example, in *Damascus*, the first known hospital in Islam was built in 706 A.D. by the Umayyad Caliph, Al-Walid. The most important hospital built in Damascus in the middle ages was named Al-Nuri Hospital, after King Nur Al-Din Zinki, in 1156. This hospital was built during the Crusade Wars to fulfill a need for a well-equipped and well-staffed hospital. It turned out to be not only a first class hospital, but also a first class medical school. The king donated to the hospital a whole library rich in medical books. It is important to understand why books were expensive and limited in number in the middle ages. This was because they were hand-written as printing was not used until the middle of the fifteenth century. The hospital adopted medical records, probably the first in history. From its medical school, many eminent physicians graduated, an example is Ibn Al-Nafis, the scholar who discovered the pulmonary circulation as will be discussed. The hospital served the people for seven centuries and parts of it still exist. in *Jerusalem in 1055 A.D.*, the Crusaders built Saint John Hospital. By the end of the eleventh century, it grew to such an extent to include a hospital, a palace for knights, and a convent for the nursing sisters. The medical activities of the hospital were tremendous because of the large number of daily admissions of patients, pilgrims, and wounded soldiers. After the liberation of Jerusalem by Salah Al-Din in 1187 A.D., the hospital name was changed into Al-Salahani Hospital. He expanded the hospital which continued to serve the people until its destruction by an earthquake in 1458 A.D. **In Iraq and Persia**, in 750 A.D., Baghdad was built to be the capital of the Abbasid dynasty by the Caliph Abu-Gaifar Al-Mansur. In 766 A.D., he assigned the dean of the medical school of Jindi Shapur, Judis Ibn-Bakhtishu', to be the Court-Physician and to establish hospitals proportionate to the glory and prosperity of Baghdad. When Harun Al-Rashid followed (786-809 A.D.), he ordered the grandson of Ibn-Bakhtishu and his Court-Physician, Jibril, to build a special hospital named Baghdad Hospital. This hospital developed into an important medical center. One of its chiefs was Al-Razi, the eminent Internist. In 918 A.D., the Caliph Al-Muqtadir built two hospitals in Baghdad. One was on the east side of the city which he named Al-Sayyidah Hospital, after his mother. The other was on the west side which he named, Al-Muqtadiri Hospital, after himself. Another important hospital was named Al-Adudi Hospital. It was built in 981 A.D. after King Adud Al-Dawlah. It was the most magnificent hospital built in Baghdad before modern time. The Caliph wanted to outdo his predecessors. It was furnished with the best equipment and supplies known at the time. It had interns, residents, and 24 consultants attending its professional activities. Haly Abbas, who wrote the famous book "Liber Regius (Al-Malaki)", was one of the staff. It was destroyed in 1258 when the Mongols, led by Holagu the grandson of Ghingiz Khan, invaded Baghdad. **In Egypt** in 872 A.D., Ahmed Ibn-Tulun built a hospital called Al-Fusta Hospital in the City Al-Fustat which is now in old Cairo. It served the growing Cairo population for six centuries. It was divided into separate wards. On admission, the patients were given special apparel while their clothes, money, and valuables were stored until the time of their discharge. In 1284 A.D., King Al-Mansur Qalawun built an important hospital named Al-Mansuri Hospital. The story behind its construction is interesting. King Al-Mansur Qalawun was an officer in the Arabian army fighting the Crusaders. While in the Holy Land, he fell sick and was admitted to Al-Nuri Hospital. On recovery, he vowed that if he ever became the ruler of Egypt, he would build a great hospital in Cairo even more magnificent than Al-Nuri Hospital for, the sick, poor, and rich alike. At the dedication ceremony, he asked for a cup of wine from the pharmacy. After drinking it he declared that



by taking that portion as a medication, he was signifying that the hospital was serving all people. from the king to the least of his subjects. It was the best hospital built then as reported by the contemporary historians such as Ibn-Battutah and al-Kalkashandi. It had different sections for different diseases. Music therapy was used as a line of treatment for psychiatric patients. It served 4,000 patients daily. The patient's stay in the hospital was free moreover on his discharge, the patient was given food and money for compensation for being out of work during his hospital stay. Al-Mansuri Hospital has served Cairo for seven centuries since it has been built. It is now used for ophthalmology and called Mustashfa Qalawun. Its ancient door is preserved in the Islamic Museum of Cairo. In **al-Andalus (Spain)** in 1366 A.D., Prince Muhammed Ibn-Yusuf Ibn Nasr, built the Granada Hospital in the city of Granada which had expanded to half a million population. The hospital represented the beauty of the Arabic architecture in Spain and served the people until the fall of Granada in 1492 A.D.

19 The English translation is based on Fazlur Rahman, *Health and Medicine*, 68.

20 For details, see Ahmad 'Isa, *Tarikh al-Bimaristanat fi al-Islam* (Beirut: Dar al-Ra'id al-'Arabi, 1981), 8-14; Aydin Sayili, "The Emergence of the Prototype of the Modern Hospital in Medieval Islam," *History and Philosophy of Science*, ed. Hakim Muhammad Said (Karachi: Hamdard Foundation, 1979), 130-140.

21Fazlur Rahman, *Health and Medicine*, 67. Cf. *Encyclopaedia of Islam*, new ed., s.v. "Bimaristan" by D.M. Dunlop, 1: 1224.

22Bukhari, *Sahih Bukhai*, Kitab al-Jum`ah, Bab al-Jum`ah fi al-qura wa al-mudun.

23Al-Qaradawi, *Mushkilah al-Faqr wa Kayfa `Alijaha al-Islam* (Cairo: Maktabah Wahbah, 1966; reprint Cairo: Maktabah Wahbah, 1995), 132-3 (page reference is to the reprint edition); Idem, *Fiqh al-Zakah*, 2 vols. (Beirut: Dar al-Risalah, 1993), 2: 1120-31; Hamarneh, *Health Sciences in Early Islam*, 2: 105-106.

24 Al-Hajj (22) :77

25 Mohammad Zain Bin Haji Othman, "Origin of the Institution of *Waqf*," *Hamdard Medicus* VI, 2 (1987): 3-23; Mohd Zain Bin Haji Othman, *Islamic Law: with special reference to the institution of Waqf* (Kuala Lumpur: Prime Ministry Department, 1982).

26For an introduction to the basic principles of the law of *waqf*, including its analogy to English law of trust and its more recent evolution in the Arab countries, see Henry Cattan, "The Law of *Waqf*," in *Law in the Middle East*, ed. Majid Khadduri and Herbert J. Liebesny (Washington, D.C.: The Middle East Institute, 1955), 203-222; Murat Cizakca, "Towards a Comparative Economic History of the *Waqf* System," *Al-Shajarah* 6 (1997): 63-102.

27 Amin A. Khairallah, *Outline*, 62-63; Fazlur Rahman, *Health and Medicine*, 65.

28 Ibid., 66-7.

29 For a more academic and recent research on medical training, licensing in Islam, see the introduction and bibliography in M.W. Dols, *Medieval Islamic Medicine*, especially 24-42.

30 Ibn Majah, *Sunan Ibn Majah*, kitab al-Tibb, Bab man tatababu walam yu'lam minhu tibt, hadith no 3466. In Islamic legal terminology, *diyyah* is the name for amount of blood money paid to the next of kin of the deceased as a substitute for *qisas* in case of murder, and as the original punishment (*'uqubah a'liyyah*) in the case of *quasi* intentional murder and killing by mistake. See `Abd al-Qadir `Awdah, *al-Tashri` al-Jina'i al-Islami Muqaranan bi al-Qanun al-Wad'i* 2 vols. (Beirut: Mu'assasah al-Risalah, 1994), 2: 261.

31 Ibn al-Qayyim, *al-Tibb*, 139-40; al-Ruhawi, *Adab al-Tabib*, 242-4. Cf. Lawrence I. Conrad, *The Arab-Islamic Medical Tradition*, 133-4.

32 M. W. Dols, *Medieval Islamic Medicine*, 32. In Islamic tradition, after a student learned certain subjects, both on the basis of books and clinical experience with a master, the master, and not the institution, gave him the *ijazah*, the certificate that enabled him to teach or practice precisely those subject. See *Encyclopaedia of Islam*, new ed., s.v. "Idjaza" by G. Vadja, 3: 1020-21.

33 Amin A. Khairallah, *Outline*, 67; Fazlur Rahman, *Health and Medicine*, 82.

34 Fazlur Rahman, *Health and Medicine*, 80.

35 Hamarneh, *Background of Yunani*, 160.

36 Hamarneh, *Background of Yunani*, 180; Cf. *Encyclopaedia of Islam*, new ed., s.v. “tibb” by F. Klein-Frank and Zhu Ming, X: 455.