

Evolution of the Infirmary During the Medieval; Social, Economic and Religious Status

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ABSTRACT

The infirmary as we know it nowadays does not exist during the Middle Ages, but the various precursors of the modern hospital evolved as a result of interactions between East and West. There is hardly any research that describes the influence of the Medieval social, economic and religious status in the West and East on the infirmary. The present work aims on the development of the infirmary at Medieval time or Middle age with a short insight to previous evolution.

The research was conducted in different stages. Textbooks and lectures from the Department of History and Methodology of Science of the University of Athens (UoA) and other relevant departments of Greek universities were consulted. In order to collect relevant information, the keywords “infirmary”, “medical theory”, “antiquity”, “medieval”, “hospital”, “West” and “Asklepion” were searched on Google, PubMed and Wikipedia.

The infirmaries in the East were not simple buildings but rather a complex of clinical, teaching/education and praying areas. These institutions formed a model to the later European infirmaries. Many of the physicians of the East were ahead of their times. It is obvious that during the Middle Ages religion is a keystone for the function of the infirmary. Both in the East as in the West Christianity and Islam provide the ethical base and funding for the function and the development of new hospitals.

Despite the conflict between these two worlds, their societies interacted and influenced medicine and the infirmary as an institution. It is the result of a long process of development of the relations between people, societies or even religions and the way humanity perceive its nature and the future.

Key Words: Medieval; Infirmary; Evolution

Introduction

Whilst the history of evolutionary base and theory of the modern infirmary goes back to ancient Greece, the medieval time was a key period in the history of infirmary evolution. The modern infirmary is the evolutionary product of a process consisting in the dialectic interface between the different societies, economies and possibly religions of the eastern Islamic and the western Christian world.

The hospital is described as the most advanced type of infirmary comprised of a block of buildings and the surrounding environment in urban structure. Hospitals have a particular architectural morphology and functionality, and are built using specialized methods, specifications and materials. In a hospital there are the main spaces for treatment called the wards, as well as theatres, laboratories, and the areas for ancillary

use, that is, galleys and warehouses. From the point of view of function and purpose the modern hospital is a place where medicine is practiced in order to cure patients based on approved methods.

The present work aims on the development of the infirmary at Medieval time or Middle age with a short insight to previous evolution. The term ‘infirmary’ has a broad meaning in medicine and it refers to a place for medical practice including a geographic position, topography and morphology of the ground, and also equipment, furnishing, tools, type of construction materials and other elements that can influence therapy, diagnosis or prevention of illness (1). The idea of the interaction between the infirmary, society and religion is quite recent. Furthermore, there is hardly any research that describes the influence of the Medieval social, economic and religious status in the West and East on the infirmary (1).

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Material and Method

Our search produced only one similar article focusing on the interaction between medical theory and the formation of the infirmary both in the ancient and the middle ages. The research was conducted in different stages. Textbooks and lectures from the Department of History and Methodology of Science of the University of Athens (UoA) and other relevant departments of Greek universities were consulted. In order to collect relevant information, the keywords “infirmary”, “medical theory”, “antiquity”, “medieval”, “hospital”, “West”, “Asklepieion”, “Islamic science” were searched on Google, PubMed and Wikipedia.

Results

Prior to Medieval Time: The most famous ancient type of infirmary is that of Epidaurus, which was built around 320 BC in ancient Greece. In the “Asklepieion” healing procedures were mystic and priesthood was hereditary (2).

The treatment approach was different to today’s practice and during the night the priest-doctor with his assistants, who were accompanied by a dog or a snake, visited the patient and cured the disease. It is known that Hippocrates formulated a lot of his medical theories based on concepts from the “Asklepieion” (2). He developed a more scientific and professional approach in medicine by adopting the theory of humorism. This was based on the four humors (black bile, yellow bile, phlegm, and blood) and the four temperaments (wet, dry, cold and hot). Medicine developed a more rational, scientific and professional status with Hippocrates (fourth fifth century BC) adopting the theory of humorism, which was based on the four humors (black bile, yellow bile, phlegm, and blood) and the four temperaments (wet, dry, cold and hot), and through which he attributed illnesses to natural causes (3). The goal was to restore the balance of the humors by applying the principle of treating with the opposite. Therapy was personalized and considered to be the nature’s work. The role of the doctor and infirmary was to provide an appropriate environment for the patient. Considering the nature of popular therapies and the briefly formulated suggestions and recommendations about the organization of the infirmary in a book by Hippocrates entitled “On the Workshop of a Doctor” (4), it can be deduced that the ancient Greek social status and religious

belief decisively contributed to the formation of the infirmary as a place dedicated specifically to therapy.

The Middle Ages: Islamic medicine contributed decisively to the development of the infirmary (5,6). The infirmaries in the East were not simple buildings but rather a complex of clinical, teaching/education and praying areas. These institutions formed a model to the later European infirmaries. They had separate sections or wards for male and female patients. They were funded by religious trusts, states or independently however, provided free service to the patients and also free drugs. They even provided some money, for example, 5 pieces of gold to the patients until they could go back to work on discharge (7). During hospital stay, the patients had special clothing and for the first time, patients’ records were kept (7).

For the Islamic world the Medieval time was a golden period and the hospitals were considered great achievements (8,9). Hospitals in this era required licensing from physicians in order to employ them. Islamic medicine was influenced by the works of Greek and Roman physicians. Hippocrates, Dioscorides, Soranus, Celsus and Galen had a lasting impact on Islamic medicine (10).

Despite the social, economic and religious contrast the two worlds of West and East are not isolated. They interact, influence and frequently complement each other. Physicians and scientists from different origins (including India, Egypt, Greece and the Middle East) and cultures were invited to the Islamic world (7). Conquering Jundishapur, Persian City by Arab Muslims in 638, contributed a lot to the birth of Islamic Medicine (11,12). There were many accomplishments in this era such as training of physicians in basic sciences, establishment of a curriculum for clinical training in internal medicine and surgery, and licensing of physicians (7,5). The important hospitals were placed in Damascus (was built in 706 AD), Baghdad, Jundishapur, Cairo, Tunisia, Jerusalem, Morocco and Granada at the time (7).

Many of the physicians of the East were ahead of their times. Their influence goes beyond the Islamic society and in fact had influence on the Western world. As a result of these interactions, the infirmary evolved as institution. The well-known physicians of the Islamic world were Avicenna, Al-Razi (Rhazes), al-Baytar, Ibn Rushd and many others (13). Al-Kindi wrote the *De Gradibus*, used mathematical scale to quantify the strength of drugs and also determined the most critical days of illnesses in advance. Al-Razi

(Rhazes) (850-923), described measles and smallpox (10). One of the famous stories about his criteria to choose localization of a hospital was to hang pieces of meat in different locations around the city and pick the spot where the meat rotted the least. It was a good example of observation and his theory was that the patients would be less likely to suffer from illness and putrefaction of the flesh in that spot.

At that time, it was generally a moral imperative to treat all the ill people regardless of their financial status. The hospitals were largely secular institutions, many of them open to all, male and female, civilian and military, adult and child, rich and poor, Muslims and non-Muslims. They tended to be large and urban structures (9).

Medical facilities traditionally closed each night, but later during the 10th century laws were established to keep hospitals open 24 hours a day. Patients from the lower social and economic class had the right to be treated for their illnesses even if unable to pay. Eventually, some charities/foundations, called waqfs, were formed to support hospitals and free medical care for all citizens (8). One example was Al Mansur Qalawun, an Egypt governor in 13th century, who established a foundation for Qalawun Hospital that would contain a mosque and a chapel, separate wards for different diseases, a library for doctors and a pharmacy (8).

Discussion

Particularly, in the areas where the East met the West, the infirmary rapidly evolved. In Andalusia (Spain) many health institutions served as hospitals and public baths around 900AC (14). Important figures of the Islamic medicine authored advanced medical information and helped to register a new course for medical theory and practice. Interestingly, Andalusia's most famous philosophers were also physicians. Among them were Ibn Tufail, Ibn Rushd and the Jewish philosopher, Maimonides. Al-Zahrawi's book and Ibn Sina's "Canon of Medicine" were very popular in the medical community the following years in both the East and West. Furthermore, the works of al-Ghafiqi and al-Baytar in pharmacology had significant contribution (15). In public health the "baths" were important places of therapy where locals and visitors would stop, purify, and cleanse. In some places like Ronda, they were entry points to the city (14).

During the Anatolian Seljuk time hospitals called "Dar al-shifa", "Dar al-sihha" or "Bimâristan"

were opened in every city. "Gevher Nesibe Medical Madrasa and Hospita"l (Mâristan) in Kayseri was the first medical building of Seljuks in Anatolia (1205-1206) as an example of a complex with a hospital (Shifâiye) and a medical madrasa (Giyasiye). There were female doctors and nurses and to highlight even wounded crusaders preferred Muslim doctors as they were very knowledgeable (16).

Meanwhile in the Islamic world at the time of Ottoman Empire, the approach to treat the mentally ill patients differed comparing to the West, where patients were detained in abandoned towers, fortresses or monasteries (17), the mentally ill patient was kept in small shelters (Bimarhane) but as part of incorporated complexes (Külliyè). Psychiatric illnesses were treated as a group with music therapy and with different music modes for different illnesses (18,19).

During the same era, there were important factors contributing new changes in the West. These included Christian charities, monasteries and Cathedral institutions, the dominant theory of the spiritual nature of illness, epidemic diseases and establishment of medical schools and universities.

Christian charity had a great influence on the first infirmaries, which were organized in special buildings with doctors and nurses. There was care for the companions, for the patients as well as use of animals for carrying patients. Saint Basil the great has been attributed with the foundation of the first Christian infirmary. This was a city-lie complex with different buildings and classes for patients and lodging for doctors and nurses, which was called "Basilias" (20). Justinian also built several infirmaries in Constantinople, today's Istanbul (21). Christianity was central to medieval infirmaries in Europe, therefore Christian morality was dominant and monasteries took over medical care and the goal was to provide food and shelter (22). Every Christian is bound to charity and as part their duty they need to help the diseased. Later, this evolved into typical infirmaries (23).

At the areas of conflict between East and West, there were close interactions between the two worlds. This produced the most and the hospital as an institution evolved. St. John's hospital in Jerusalem was taken over by the members of a religious community after the Christian conquest of Jerusalem in 1099. This community called hospitallers reorganized that hospital on the base of the Byzantine prototype. It also served as a model for the modern Western hospital as a construct specialized to the treatment of diseases

(24). The hospitallers also built several other hospitals in Italy and South France.

It is obvious that during the Middle Ages, religion was a keystone for the function of the infirmary. Both in the East as in the West Christianity and Islam provided the ethical base and funding for the function and the development of new hospitals. Moreover, in the West medical theory was dissociated from the naturalistic models of Hippocrates and Galen. Diseases were believed to have spiritual causes and could be cured only through God's will, a concept similar to evangelical descriptions of Jesus Christ's miraculous cures. Healing could therefore be achieved only through invocation of God's help and chrism, prayer and imposition of the hands took the place of medicine.

On the other hand, in the west, medical practice is progressively dissociated from Church and priests. In fact, a circular of the Tour Synod of 1163 deprived clergymen of practicing surgery (22). During that period, some procedures such as teeth extraction, exsanguinations and surgery in general were practiced by barber-surgeons. Barber shops were transformed to infirmaries. Public baths were popular places for therapy and society gradually took over treatment of illness from church (23).

Meanwhile, epidemics appeared and big part of urban population was lost. These showed the inadequacy of the Western medicine and brought harsh measures. The places affected by the plague started isolation to control the diseases. For example in 1377, in Ragusa (known as Dubrovnik in modern day Croatia), this was applied as 30 days at a nearby island, and then extended to 40 days (quaranta, hence the term quarantine). In 1397 the isolation or quarantine was a modern way of controlling disease in the existence of epidemics; although it could seem barbaric in some circumstances (i.e. leaving the residents locked in and left to die in Milan) this measure limited mortality from the plague in Europe (24). There were as many as 200 institutions in England and Scotland treating this disease (plague) when it was epidemic and even more in France (23). Also, specialized institutions were available for Hansen's disease (Leper Colonies) (23).

In the twelfth century AD universities were established with four faculties: medicine, law, arts and theology in Bologna (1180), Paris (1200), Oxford (1200) and other cities (25). These universities were in fact unions of professors and their main characteristic, as opposed to monasteries and cathedral schools, was the recognition and awarding of degrees (26).

Recognition of university degrees in Western world started as early as 1224 in Salerno. There was a medical school, which was founded in the eleventh century by four professors (a Latin, a Greek, an Arab and a Jewish master). Students' degrees needed approval by the professors and they had to attend anatomy lectures (Galenic anatomy) and perform dissections of human and animal cadavers as in modern universities (23).

The first pharmacies were founded in Italy towards the end of the 13th century and they were influenced from the Al-Qairawan hospital and mosque in Tunisia (27), which was built under the Aghlabid rule in 830. Pharmacies were initially part of monasteries, but gradually formed a separate society and even performed some medical procedures as well as following advice of the local doctor. In this way the pharmacy became a new type of infirmary (23).

Psychiatric patients were restricted to home under the care of their families initially but later they were detained in abandoned towers, fortresses or monasteries Bedlam refers to a mental institution from mid-15th century, insane and elderly people were kept in St Mary of Bethlehem (17).

In conclusion, the infirmary as we know it nowadays does not exist during the Middle Ages, but the various precursors of the modern hospital evolved as a result of interactions between East and West. Despite the conflict between these two worlds, their societies interacted and influenced medicine and the infirmary as an institution. One could say that the hospital was the evolutionary product of interactions between the Christianity and the Islamic worlds in medieval times. These institutions were influenced by and at the same time influenced medicine and the society.

Soon in Renaissance the infirmary and medical theory would start on a rapid course of evolution and acquire their modern characteristics. Considering all the above it is evident that the modern infirmary is more than a place for treatment of diseases. It is the result of a long process of development of the relations between people, societies or even religions and the way humanity perceives its nature and the future.

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