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Review/Deleme

The Start of Conducting Dissection in Ottoman Empire:

Osmanlı Devletinde Disseksiyonun Uygulanmaya Başlanması:

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Abstract

Ottoman scientists began to adopt European practices from the Seventeenth century and this orientation gained momentum in the Nineteenth century, which many innovations also in Europe. During the reign of Selim III, the old madrasah model was abandoned and modern medical schools and Tersane-i Amire Tabiphanesi was opened especially to meet the physician and surgeon need of the army. In this paper, we tried to examine when and how dissection, which has a major role in medical teaching and is difficult to be adopted in society, was applied for the first time.

Key words: Medical History, Anatomy, Islam

Özet

On yedinci yüzyıldan itibaren Osmanlıda ilim adamları yüzlerini Avrupa'ya çevirmiş ve 19. yüzyıldan itibaren bu yönelme ivme kazanmıştır. 19. yüzyıl Avrupa'da pek çok yeniliğin meydana geldiği bir yüzyıldır. Tıp alanında öncelikle ordunun hekim ve cerrah ihtiyacını karşılamak üzere eski medrese modelinden vazgeçilerek modern bir tıbbiye açılmasına II. Mahmut döneminde karar verilmiş ve uygulanmıştır. Biz bu makalemizde tıp eğitiminde önemli bir yere sahip olan ve toplumda kabullenilmesi zor bir uygulama olan disseksiyonun ilk kez ne zaman ve nasıl uygulandığını incelemeye çalıştık.

Anahtar kelimeler: Sağlık tarihi, Anatomi, İslam

Anatomy education and dissection are the two indispensable components of modern medicine. These two components were refused both in western and eastern world due to traditional and religious rules. The reform process which gained momentous in the Eighteenth century also brought progress in the field of medicine. In the Nineteenth century, anatomy education was modernized by the contributions of European specialists and physicians. However, cadaver supply, which is the most important element of anatomy education, continued to be problematic due to traditional and conservative opposition.¹

Islamic medicine is the most well-known, the most recognized motif of Islam civilization. Muslims showed the most success in the field of medicine. Islamic Medicine emerged by the combination of Hippocrates and Galen traditions of Greek medicine and the theory and practices of Persians and Indians. As a result, Islamic Medicine has a synthesizing character. All works of ancient Greece were translated into Arabic in 750-950 periods in the Islamic World.² The madrasahs, which are considered as the universities in Islamic Civilization, had a mentor-apprentice education system. In addition to the madrasahs, which were the primary centers of teaching and education from the foundation of the state,

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Darişşifas –hospitals- also fulfilled important functions. During the reigns of Selim III and Mahmud II, the developments in Europe were also reflected in the Ottomans and could influence classical medicine works.³

In Islamic teaching, Holy Quran and the Sunnah of the Prophet Muhammad are two primary sources to learn whether something or a behavior is good and auspicial. If these two sources do not contain specific information on a subject, there are hadiths of the Prophet, which can be partly related with the subject. Prophet Muhammad -s.a.w.- has hadiths on the holiness of human body. He said '*Breaking the bones of a deceased person equals to breaking the bones of a living man in terms of sin and aggression.*' As clearly stated in this hadith, damaging human body, even when the person is dead, is deemed as sinful in Islamic belief.^{4,5} Based on this hadith and other similar ones, some scholars rejected dissection in Islam.

Human bodies could not be studied on due to Salafi interpretations and traditions. The fatwas also given by Sheikh al-Islam stating that these types of studies are not permissible were influential.

A fatwa of Sheikh al-Islam Mevlana Alaaddin Aliyul ARABÎ in 1496 is as follows: '*Opening a grave is one of the biggest sins. It is must be a belief of witchcraft, it had found a false reputation in Anatolia. This is not a rule of Islam religion. Detecting such lies damages the religion of those who believe it. Maybe this person is doomed to die without faith unless he/she repents and turns his/her face to God.*'

On the other hand, well-known fiqh books such as Fetevai Bezzaziye and Reddül Muhtar

allowed cutting the abdomen of a dead person who swallowed precious materials of another person such as pearl and gold with the purpose of removing the swallowed material. Interior organs of Ottoman sultans Murad I and Suleiman the Magnificent were buried in the placed they died and their bodies were taken to the capital city.⁶

Hadith number one in Sahihi Buhari hadith book reads '*The reward of deeds depends upon the intentions and every person will get the reward according to what he has intended.*'⁷ According to this hadith, what matters in a deed is the intention. If the deed is performed to damage the dead, then this means a big sin. As mentioned in the hadith above, in Islam, any deed that is done on a dead person is deemed to be done to a living person. In this case, a procedure that is made without the intention of damaging the dead for a different purpose like autopsy to identify the cause of death cannot be considered as sinful.

Islamic jurist Hayrettin Karaman states as follows: As is known, autopsy is a procedure on the body to perform certain examinations for the benefit of the dead, his/her relatives or for the benefit of humanity. Autopsy makes it possible to understand the cause of death, to unravel murders and to deal with contagious diseases. The people who perform the autopsy and those who permit this have no feeling or aim to insult the dead, to humiliate or undervalue the dead or to violate his/her immunity. Therefore, autopsy has benefits and does not contradict with the instructions of Islam about the soul and the body. A prominent scholar in Egypt, Reşit Rıza, also reported in 1907 that autopsy is permissible for the same purposes. A fatwa issued in Saudi

Arabia considered interventions on the dead with the purpose of examining the cause of death and to prevent contagious diseases as permissible, however stated that the exhibition in anatomy course is not permissible.^{8,9}

Dissection in Ottoman Empire

Bedii Şehsuvaroğlu, who is one of the authors of Turkish Medicine History, divides Turkish Pathologic Anatomy training into four periods, including Madrasah Period, during which a scholastic education was dominant, Şanizade Period, Tıbhane and Cerrahhane-i Amire Period and the period from Mekteb-i Tıbbiyyi Şahane to the present day.

Madrasah period:

Seventeenth and Nineteenth centuries gain prominence for the modernization of Ottoman Medicine. Ottoman physicians adopted European practices in the Seventeenth century. Westernization movements that started in this period continued until the early Twentieth century. Ottoman physicians began to get acquainted with western physicians and got to know western medicine. In Seventeenth century, well-known physicians like Şemseddin İtaki from Şirvan and Chief Physician Emir Çelebi Derviş Siyahi gained prominence and produced works on medicine. In his work titled *Enmüzeci Tıb*, Emir Çelebi strongly recommended the physicians to learn anatomy and to perform dissection¹⁰

Curricula of madrasahs included anatomy lessons and the people who will be surgeons had to prove that they had taken anatomy lessons. There is a document on this subject in Prime Ministry Ottoman Archives. This document is a decision for surgeon Ebubekir for sertıbbı written by Mehmed Efendi. It is

declared in the document that Ebubekir Efendi took anatomy lessons in the madrasah and thus he deserved to work as the chief surgeon in the army.¹¹ Apart from ten characteristics of a physician he transferred from Hippocrates, Emir Çelebi emphasized the importance of learning the science of teşrih –anatomy-, which is an important condition for the practice of medicine at the end of the section. He states that what can be learnt from the book would be insufficient and recommends practicing dissection on the humans who died in the war or on animals that are similar to humans such as monkeys and pigs.¹²

Şemseddin İtaki

We have to mention Şemseddin İtaki due to his contributions to the science of anatomy. We have limited information on his life. He lived in the Sixteenth and Seventeenth century but his date of birth or date of death is unknown. It is estimated that he was born in 1570s. The work of Şemseddin İtaki titled *Risale-i Teşrih-i Ebdan and Tercüman-ı Kibale-i Feylesofan* is of great importance in terms of the history of medicine. Although in his book titled *Science in Ottoman Turks* Adnan Adıvar claimed that the book was in fact a translation of *Teşrih-i Ebdan* of Ahmed bin Mansur in the Fifteenth century, the studies on the book have shown that the book was not a translated version due to the differences in methods of explaining certain subjects. This work has a similar classification with the classification of subjects in the Islamic World in terms of its content. In other words, it starts with body fluids, continues with the bones, nerves, muscles and veins, brain, internal organs and sensory organs. The pictures in the book of İtaki can be divided into three categories. The first ones are the figures

with slanted eyes and round faces with reverse head which resembled early anatomic pictures. These pictures are similar to those in the work of Ahmed bin Mansur titled *Teşrih-i Ebdan*. The second group of pictures is similar to those in the factory of Vesalius. The third group contains European origin pictures which are not found in the work of Vesalius¹³. There are more than thirty schematic pictures in his work. The work of Şemsettin Itaki is not a translation or adaptation. He studied Hippocrates, Galen, Dimoclis, Ibn-i Sina and *Teşrihi Mansur*; he has substantial knowledge on medicine. The work also contains more than thirty pictures collected from other works. Another value of the book is that anatomy terms are presented in Turkish.¹⁴

A scholar on Islamic medicine, Ibn-i Nefs, is the first scientist who discovered small blood circulation.¹⁵ While Itaki provided information on the heart in his book, Ibn-i Nefs also mentions about small blood circulation. Ibn-i Nefs stated that the heart has two chambers. He also reported that the blood coming from the liver matures in the right void for some time; then moves to the lungs and mixes with air, some of the blood serves as a food to the lungs and then moves to the left heart after mixing with air.

Şanizade Mehmet Ataullah Efendi Period

Şanizade Mehmet Ataullah Efendi -Istanbul 1771- Tire 1826- is one of the most prominent scientists who lived in the late periods of Ottoman Empire. He spoke Arabic, Farsi, French and Latin.¹⁶ Şanizade Mehmet Ataullah Efendi wrote the modern anatomy book which was the first link between the ancient medicine and the new medicine among Ottoman physicians. He received classical

madrasah education and was also taught modern western medicine by European physicians. His work titled *Hamse-i Şanizade* contains a section on anatomy titled *Mir'atül-Ebdan fi teşrihü'l Azaü'l İnsan*. This section contains information about blood circulation that is consistent with today's information.¹⁷ *Mir'atül-Ebdan* is the first modern anatomy book.¹⁸

Şanizade Ataullah Efendi was also a historian. The shifts in ontological and epistemological background with the influence of social sciences changed history and historical studies in terms of foundations and extensions. The vision of a different world was adopted in the western world until the end of 1700s; however, the current modern vision was adopted after the 1700s. This existential break was not limited to the non-western societies, it also a break of the west from its own history. This transformation continues to influence the circle of scientists even today.¹⁹ Şanizade was just an apparent example who experienced this break. He received both classical eastern training and western style training and attempted to bring the western style to our country.

Müntehab fi't-Tıbb which was written by Abdulvehhab bin Yusuf included a separate section on anatomy in addition to various other disciplines of medicine written in Anatolian Turkish period. The classification of organs and names of organs in *Müntehab fi't-Tıbb* shows variations from other medical books of the time and also from medical books of our time. In this book, the subjects follow the principle of relativity. The subjects start with body fluids and explain four elements and anatomy subjects in a photographic order.

Organ classifications in the book differ from current medical books in that it lacks a classification such as skeletal system or respiratory system. Unlike the medical books of the present time and medical books of that time, *Müntehab fi't-Tıbb* book makes a categorization based on phylogenetic system, dividing into two as types and parts. In this classification, the book uses the terms type or kind while explaining an organ that shows similar characteristics and uses the term part while explaining the general organs from the same type. In *Müntehab fi't-Tıbb* contained a wider variety of Turkish organ names than other medical books of the time written in Turkish. Despite the developments in medicine and Turkish language, it contains almost as many Turkish organ names as today's Turkish language.²⁰ This is a substantial contribution of Abdulvehhab bin Yusuf to Turkish language.

Madrasah period was the period that began in 1205 with the establishment of Kayseri Darüşşifa until 1816. In this period, anatomy knowledge that was transferred from ancient Indian and Egyptian medicine to ancient Greek medicine and then to Islamic medicine and contained in *Kanun-fit-tıbb* of Ibn-i Sina were taught in lessons. *Teşrih-i Ebdan* book of Şemseddin İtaki from Şirvan which was written in madrasah period, is an important work in terms of the history of medicine. In Şanizade Period on the other hand 1816-1827, European medical works of Şanizade Ataullah Efendi were translated into Turkish. Believing that dissection could not be performed in the empire due to religious bigotry, recommended some books. This period is called as Şanizade Period.

Tıbhane and Cerrahhane-i Amire Period

Tıbhane and Cerrahhane-i Amire [medical and surgeons school] Period started in 1827 with the establishment of Tıbhane and Cerrahhane-i Amire and ended in 1839 with further modernization of medical training by the establishment of Mekteb-i Tıbbiyyi Şahane.[medical school] Anatomy training was somewhat scholastic in that period. The training was given on skeletons and on plans and models supplied from Europe.

The Period from Mektebi Tıbbiyyi Şahane to the Present Day:

The fourth period covers the time from Mektebi Tıbbiyyi Şahane to the present day. Dissection began to be applied on humans after Dr. Charles Ambroise Bernard came to Ottoman Empire.²¹

Tıbhane-i Amire was established on 14 March 1827 with the purpose of meeting physician and surgeon needs of the army during the time when Mustafa Behçet Efendi served as the chief physician. Students who were familiar with foreign languages would be taught anatomy and rules of medicine in a foreign language from the diagrams of the books under the supervision of a French-speaking teacher. Medical school was later named Mektebi Tıbbiyyi Şahane and lecturer Bernard was transferred from Austria as course manager and lecturer. In this period, during which lecturers who were educated in Europe worked, education language was French and faculty of medicine gained a modern identity with dissection, botanical garden, monthly journal of medicine and laboratory.²²

In 1800-1840 period, Ottoman State was under Austrian influence. In this period, interactions

between the two countries enhanced and Austrian physicians began to work in Ottoman State. Many procedures which might be termed as reforms were conducted in this period. Dr. Neuner and Dr. Charles Ambroisse Bernard and later Dr. Philipp Spitzer 1813-1895 brought many innovations to the country apart from their works as physicians.²³

With the start of westernization movement in Seventeenth century, a Tibhane [medical School] offering modern medicine education was planned to be opened during the reign of Sultan Selim III. However, refraining from the reaction of scholars due to the prohibition on dissection, Selim III did not dare to open the medical school. Mustafa Behçet Efendi, who was the chief physician of the time at the age of twenty-one, made attempts for the medical school, however could not achieve a success. Dissection began to be widely used in the western world after Renaissance. However, it could only be applied in Ottoman State in the 19th century. Chief physician Mustafa Behçet Efendi made great efforts to improve medical training during the reign of Mahmud II. He offered Mahmud II to establish a new medical school and the offer was approved by the sultan. It was claimed that in that period the physicians believed the necessity of dissection, however they were unable to perform dissection as they abstained from reactions. Chief physician Mustafa Behçet Efendi is one of the first physicians who mentioned the necessity of dissection in medical training in Ottoman State²⁴.

The first record on autopsy in Ottoman State is mentioned in the book of Hayrullah Efendi titled *Makalatı - Tibbiye*. It is reported in this

book that the first autopsy in Ottoman period was conducted by Austrian Hospital physician Dr Bernard in 1843 on a worker who died as a result of the fall of a pole on his head and that the autopsy was watched by medical students. As Islam purports that human body is created by God and has a holy character, the decree of Sultan Abdulmecid 1839-1861 as a caliph in 1841 only permitted autopsy on the bodies of Christians. Therefore, firstly Dr Bernard and later Dr Spitzer performed autopsy on Christian citizens in Austrian Hospital in Istanbul. In addition, the bodies of slaves, whether women or men, who died in slave market were sent to the school. After some non-Muslim women agreed to give the bodies of their dead children to the school, the school had the opportunity to study on cadavers from both genders and all age groups.²⁵ On the other hand, there are documents stating that the physicians made partial autopsy on the bodies of the people who died in hospitals before 1843.²⁶

Professor Dr Hamdi Suat Aknar received his pathologic anatomy PhD degree in 1904 in Leipzig, Germany under the supervision of Professor Marchand and turned back to Turkey. Professor Aknar, who learned German school, is one of the recognized scientists in the country who founded and encouraged modern pathologic anatomy in Turkey.²⁷ He contributed to the development of pathologic anatomy in the period of Turkish Republic.

Conclusion

In conclusion, dissection was first reacted for traditional and religious reasons in our culture like in other cultures as it was considered as an unfamiliar procedure. However, dissection began to be applied in our culture with the

contributions of prescient statesmen and religious functionaries.

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