A Forensic Autopsy Case Belonging To The Nineteenth Century In Turkey

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Summary

Although Turkish medicine had sovereignty all over the world starting from the Middle Ages to the seventeenth century, it was remained behind the developments in medicine in parallel with the regression of Ottoman Empire. Related with this situation, anatomy, which is one of the most important fields of the medicine, has also prevented the development of other fields related to anatomy. The development of autopsy in Ottoman period which describes the procedures made in order to determine especially the medical causes of deaths has remained behind when compared to the studies performed in west. The studies started after the permission taken in order to study on cadavers has led to developments in anatomy and its education in parallel with pathological anatomy as well as in forensic medicine which provides collaboration of medicine and law. In this study, the importance of autopsy, except in anatomic studies, in determination of death cause is considered and a forensic autopsy case was investigated from Ottoman period in 19th century.

Keywords. Autopsy; History of forensic medicine; Ottoman archives; Turkey.

Autopsy in old Greek has a meaning of "to see for oneself". Autopsy was defined as "understanding and explanation of an observation made by an individual" by *Albrecht von Haller* in 1756 (1). Autopsy can be defined as a series of scientific procedures applied on a corpse to reveal pathological and judicial events, to determine the relationship between clinical signs and anamnesis and to find the encountered causes of change(s) (2). *Şerefeddin Mağmumi*, on the other hand, defined autopsy as surgical procedures applied on a human corpse and also determined the requirement for the application of this procedure within 24 hours after death (3). The main aim of autopsy is to find answers for the questions how and why the patient has died.

Throughout the history, determination of cause of death was as important as finding the disease and its factors, and scientific researches have been carried out on this area in parallel with the developments in medicine. The forensic medicine had a slower development when compared to other medical fields. Because, scientific investigation of the death requires autopsy, involving opening and cutting of body, which is precluded by the religious and conservative social rules (4).

The investigation of death leans on old Egypt civilization. It's known that the monks were informing about the cause of death and whether the death was natural or unnatural and the judges were searching for medical evidences even if the medical problems showed accuracy in the subjects handled by law. Furthermore, in old Egypt in 17th century B.C., knife wounds were distinguished and broken skull was described in another person who had no external trauma symptoms. In addition to this, they had information about poisons (5).

The belief of dead being holy in old Greeks prevented the opening of human bodies (5). For this reason, animals were used in anatomy studies. *Hippocrates* (460–377 BC) investigated the effects of wounds in deaths. Following the studies of Hippocrates in medicine, scientists such as *Aristoteles* (384–322 BC), *Praxagoras* (340 –? BC), *Herophilos* (375–280 BC) and *Erasistratus* (330–250 BC) studied on human corpses and investigated their differences from animal anatomies (6).

In the time of *Numa Pompilius* lived in BC 600 in Rome, an important rule was placed in the law which included "immediately opening the abdomen of the women died during birth to save the baby and also banned burying the pregnant bodies before doing this procedure". In the law of *Lex Aquilla* accepted in 572 BC, murderous states of wounds were mentioned. First recorded autopsy was made by *Antistius*, a Roman physician, to the body of Julius Caesar who was murdered by his senators in 44 BC. In his report, he showed 23 knife wounds as the cause of death and determined the knife stroke made between the first and second rib bones as the actual murderous stroke (7,8).

Because of prohibition of touching dead and knowing this as a sin in Christian Religion of Middle Ages Europe, the anatomy and surgery were not developed for a long time. The foundation of medical schools, the developments in medicine and confronting with the situations learned in the surgical applications of animals were not matched with the ones shown in books helped to end these prohibitions (6).

The committees were assembled naming "**Coroner System**" in 925 in England and have taken responsibility for identifying causes of deaths (7).

In the rules of Jerusalem (1100), inspection and preparation of reports were obligated in murder cases to find what was done to the person, to localize the wounds and what kind of tools were used (7).

Sung Tzhu (1186–1249) mentioned the methods related with the searching of difficult deaths in his book named *"Hsi Yuan Chi Lu (The Washing Away of Unjust Imputations, or Wrongs)"* in 1247 (9). However, the corpses were only visually inspected and inner inspection was not made. The people inspected these corpses were also scorned (7).

Hugo de Lucca took an oath as a forensic medicine expert in 1249 in Italy (5). The first autopsy in west was made in Norway in 1111 (4) while first forensic autopsy documented in detail was made by *Bartolomea de Variagiana* in Bolonia (Italy) in 1302. Four physicians helped in performing this autopsy and reported that the reason for this death was poisoning. Another recorded autopsy was performed on Papa V. Alexander in 1410 in order to understand possible poisoning by his successor.

Bodies of executed people were used as anatomy materials used in medical education in Europe. At the beginning of the fourteenth century in France, sworn physicians and surgeons prepared death reports based on external inspection and superficial incision of wounds of bodies, but the autopsy was not taken into consideration. The authority of making autopsy was given to Montpelier Faculty at the end of that century (5).

In Germany, *"Constitutio Criminalis Carolina"* which came in force in 1532 required opening of corpses when imported medical evidences were submitted to the court. Therefore, forensic autopsy applications were started to develop. This progress had a strong effect and supported the development of forensic medicine as a separate branch (4).

The continuous obstruction of anatomy studies has prevented performing autopsies and so the development of sciences such as forensic medicine and pathology. Andreas Vesalius (1514–1564) separated human and animal anatomies from each other. After separation of pathological anatomy from anatomy by *Giovanni Battista Morgagni* (1682 – 1771) in his book **"Causes of Illnesses and their Locations"** allowed rapid developments in these fields.

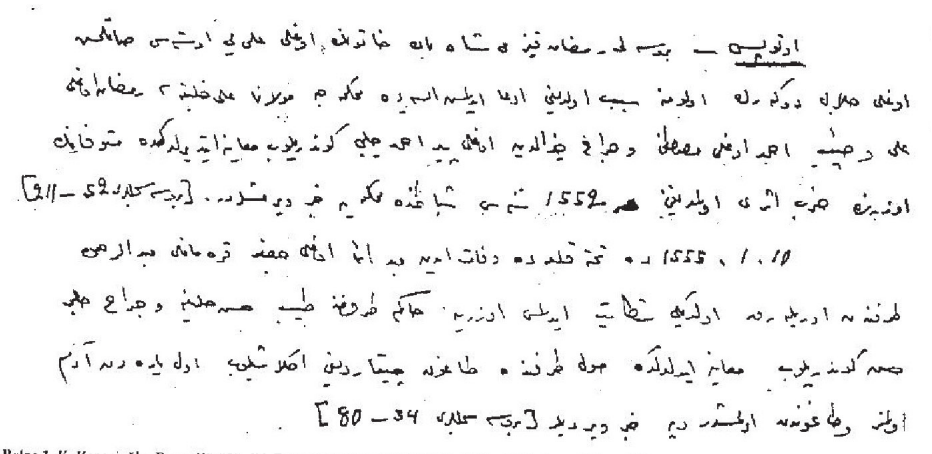
Autopsy in Turks

It can be seen that the historical development of autopsy in Turks did not lean on ancient times and it had very slow development especially due to conservative social rules in first periods within historical progression. Beginning from the 15th century, physicians trained in Darusshifas which were accepted as medical schools of that time were required to have broad knowledge of anatomy (7). After 1453, civil servants played an important role as expression an opinion in forensic cases and burying death and murdered bodies. Also, physicians started to be invited in law courts. In an example related with this and experienced in Bursa in 1552, the person named Ali was claimed to be killed by his workman Celal by beating. By order of the court, Mevlana Ali Halife, Ali, Physician Mustafa and Pir Ahmet Çelebi investigated the body, and they reported to the court that there was no stroke on the corpse. In another example experienced in Bursa related with this, Cafer was found dead in Tahtakale Quarter in 1555 and Abdurrahman from

Karaman was accused for this murder. When Physician Hasan Halife and Physician Çelebi Hasan inspected this dead person, they did not observe any vital signs of wounds and reported that this person had pestilence signs on his left side and the reason for his death was pestilence (Figure 1). As it can be understood from these samples, the documents presented to the court as a report by the physicians in judicial cases were not as a detailed autopsy and just like shortly informing the reason of death.

School of Medicine was built in 1806 near Tersane-i Amire Hospital in order to train physician and surgeon. *Mustafa Behçet Efendi*, who was the chief of physicians, provided to be in regulatory decision to have anatomy lectures on cadaver but this school was closed after a short time (10). Until the foundation of modern School of Medicine (Mekteb-i Tıbbiye-i Şahane (Royal School of Medicine), 1839), normal anatomy studies were performed on models. After the foundation of this school, studies about the requirement of cadavers for education were approved by the Sheikh ullslam of that period. There was no prohibition about opening of the body in Quran even it was informed in the books of famous Turkish physicians such as *İbn Sina* (Avicenna) (980 – 1037), *Şerefeddin Sabuncuoğlu* (1386 – 1470), *Emir Çelebi* (? – 1638), *Şemseddin İtaki* and *Şanizade Ataullah* (1771–1826) that dissections were required for anatomy studies. However, conservative social rules and religion scholars of that period were not favorable to the applications in this area affected the area of medicine (4,11-13). *Emir Çelebi* in 1624 suggested physicians not only to read but also to do anatomy studies on dead people in war or on animals (14). Sultan Abdülhamit II published an imperial edict which gave permission for dissection and autopsy with the support Abdullah who was the chief of physicians and with the insistences of *Dr. C. A. Bernard* first time in 1841. The cadavers required for anatomy lectures were supplied from dead slaves and from deaths in Çürüklük Graveyard if there were no slaves (15). Following this period, the first autopsy was performed by *Dr. C. A. Bernard* on a corpse of Serbian worker who died from a pole fell on his head and medical students also observed this application. The forensic medicine lecture was first given by *Dr. C. A. Bernard* (1808-1844) in the period of Mahmud II. (7). In the situation of judicial events or in suspicious deaths, the "Criminal law", dated 25 June 1879, required physicians to perform autopsy for external inspection of corpses for bullet or poisoning (16). Zabıta Tababet-i Adliyesi was established in order to carry on forensic medicine services in the same year. In this manner, the determination of death causes was started to be accepted and applied as the duty of physicians. On the other hand, the autopsy applications were done only by licensed physicians (7).

The first autopsy record in our country was found in the book of *Hayrullah Efendi* (1820-1869) named as "*Makalatı – Tıbbiye*" (1843). In this book, the autopsies made after the autopsy permission were described including the first one performed by *Dr. C. A.*



Belge 1. K. Kepecioğlu, Bursa Kütüğü, IV, Bursa Yazma ve Eski Basma Eserler Kütüphanesi, Genel Kit., nu.4522 : 49.

Figure 1. K. Kepecioğlu, Bursa Register, IV, Bursa Library of Written and Old Presses Books, General Book, No.4522, p. 49.

Bernard. The first book of autopsy technique was written by *Hamdi Suat Aknar* (1873–1936) in 1930 titled "*Fethimeyt (Autopsia)*" which was one of the Ottoman terms in that period was given to the book. After that, *Schwartz* published a book titled "*Autopsy Technique*" in 1949. The dissection in autopsy was emphasized in both of these books (17,18).

The Case

The important medical documents at the Turkish Prime Ministry Archives might clarify the political, economical and social structure of that period. For example, a forensic autopsy report included the results of external and internal inspections made by 5 physicians and one chief pharmacist in order to determine the death cause of Tüfekçi Hasan who was a palace fellow (Figure 2).

Due to the probability of poisoning, in addition, this document also included reports of chemical analyses made by Charles Bonkowski, who was the chemist of the palace (Figure 3).

In order to determine the death cause of Tüfekçi Hasan who was found death in his bed, the physicians went to the Hasan's house. After 5 hours of his death, physicians started to examine by external inspection of corpse and then examined his organs by opening his thorax and abdomen, respectively. Finally the skull was opened and inspected.

External Findings: The corpse which was appeared as well nourished had normal corpse hardness. There was no indication of decaying. The lipid and muscle tissues had nor appearance, but there was no bleeding when they were cut. There was a vein cut on the left neck and so dried blood was observed on the skin.

Chest: When the chest was opened, the lungs did not go flat. There was no liquid in pouches of pleura. The right lung was fully stacked on the pleura with its surface, but the stack parts separated with a light stretching. Both of the lungs were crackling and when they were cut, blood mixed with air was gushing out. In the inclined parts, on the other hand, the-

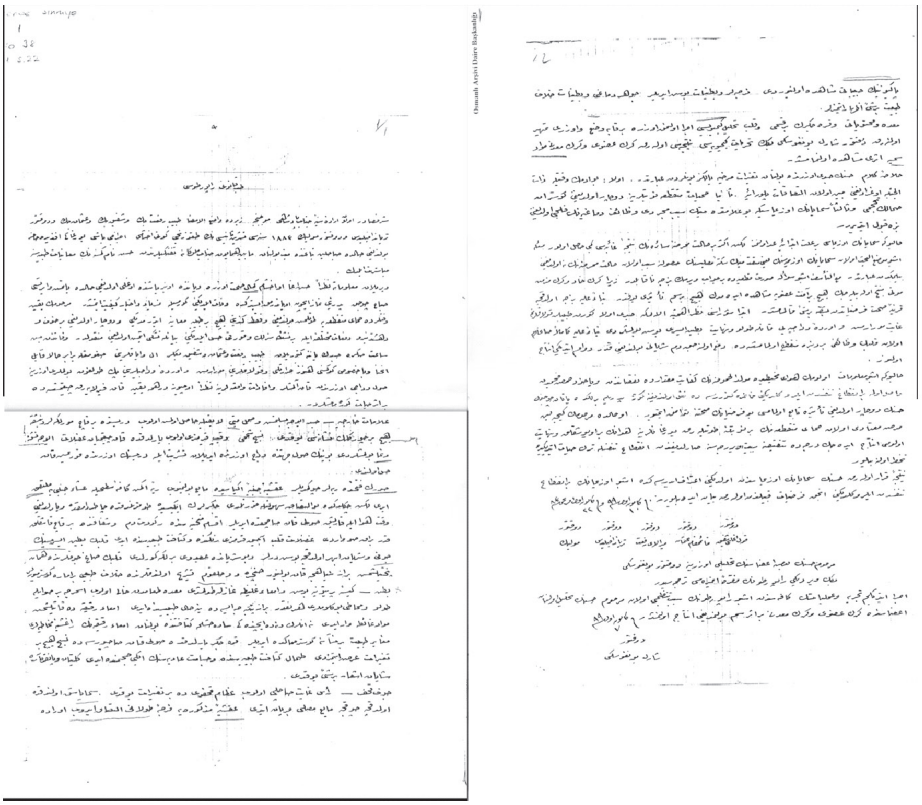


Figure 2. The Turkish Republic Ottoman Archives of Prime Ministry, Y.PRK.SH. 1/38, 22.12.1883. (The Autopsy Report of Tufekci Hasan performed by 5 physicians)

re was a slight blood assembly. The pericardium was including several spoonful of transparent liquid. The muscles of heart appeared in vivid red color and normal. The left ventricle and aorta was almost empty, but a little plaque was determined in aorta. There was almost clotted and in little amount blackish blood in right cavity of heart. The larynx and pharynx were checked in great detail but there was no abnormal observation.

Abdomen: Peritoneum was empty. It was strained (tense) due to gas in intestine. There was no nutrition in abdomen but there was grey content. Mucous was in light pink color throughout its layers and the rest of it was normal. Solid feces were found in bowel and there was no abnormal appearance on mucous. The mucous of intestines was also normal in which a substance like slurry was found. Liquid blood was gushing out of the liver when it was cut but there was no abnormality observed in liver. Spleen was in normal hardness and was twice bigger than it should be. There was no significant change neither in kidneys and nor in pancreas.

Skull: There were no distortions in haired-skin and skull. When the membrane of brain was opened, transparent liquid in abundant amount was flowed; the brain membrane was stack throughout the sinuses lengthwise and here Pacchioni granulation was observed. The sinuses were blue-colored. There wasn't any abnormal situation in brain substance and brain ventricles.

Chemical Analysis: The organs, including abdomen (317 g) and its contents, heart (425 g) and a part of liver (489 g), were put in a glass jar, stamped and sent to Charles Bonkowski, the chemist of the palace. Based on chemical analyses, no chemical poisonous substance either mineral or organic was determined (Figure 3).

Conclusion: These following diseases related anomalies were found in the Hasan's corpse: 1. Signs that he had previous history of pleurisy; 2. the observed spleen enlargement showed that he had intermittent fever attacks and 3. Edema in brain membranes made them think about his death because his brain functions were paralyzed. Edema in brain membrane could not be primary cause of death but it was thought that it was sign of another disease. Normally; then a question about which illness caused an edema in brain membrane came into mind. The definite reason for his death could not be given according to these findings. While, the growing of spleen showed that the person had fever attacks and so the beating of heart until the end of blood in artery made to consider that the person was chocked due to carbon monoxide and inadequate. Consequently, it was decided that Tüfekçi Hasan died because of brain edema and this death was due to choking. When physicians saw the corpse at the first time, the ears were extremely turned purple, the veins of neck were full with blood and finally the ventricle was fully empty. These findings suggested that the heart did not stop suddenly but it continued on beating until the blood in artery came to

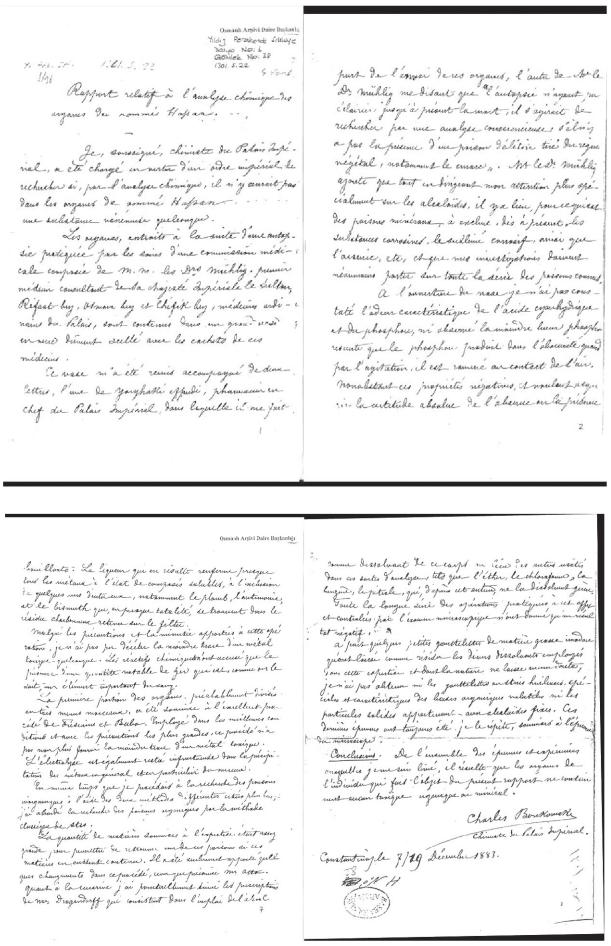


Figure 3. The Turkish Republic Ottoman Archives of Prime Ministry, Y.PRK.SH. 1/38, 22.12.1883. (The Chemical Analysis Report of Tufekci Hasan's organs performed by Dr. Charles Bonkowski)

an end. This situation can be explained this following scheme: due to his intermittent fever attacks, he wrapped him self with his blanked so that insufficient respiration made him sleepy and caused him die.

As a result, it was considered that Hasan died because of edema in his brain membrane and this edema was occurred due to choking.

Conclusion

Gaining a scientific quality of the researches made on human corpse is belonging to the study of close history. Determination of death and its causes has valuable contributions to history of humanity from the point of both science and education. Nowadays, determination of death cause which requires a basic duty and responsibility has juridical value with the reports that physicians should prepare. The autopsy reports are legal documents that include all information from the identification of the person to explanation of the reason for death. An autopsy report first starts with external inspection and follows, mouth-throat-neck inspection, chest inspection, abdomen inspection and finally head inspection. After the addition of personal health information, the cause of death is conveyed with the obtained data. At the end of the report, the names and signatures of the physicians are given who performed the autopsy. From the point of legality, it is important that autopsy reports have to be informative and well organized.

In an autopsy document belonging to Ottoman period in the 19th century, the procedure applied to the death person was given clearly and in detail. The report was prepared in a certain formation as it is prepared today. After determination of making autopsy as a compulsive duty of physicians according to especially the law in 1879, performing the procedures in such a regular and standardized way is a good sample of Ottoman period for following the developments in medicine very closely.

REFERENCES

1. Hartmann WH: An Autopsy: A Historical Vignette. Annals of Diagnostic Pathology 1999; 3(3): 192–194.
2. O'Grady G: Death of the Teaching Autopsy. BMJ 2003; 327: 802–804.
3. Şerefeddin Magmumi: Kamus-u Tıbbi (Medical Dictionary). Cairo: Ottoman Press, 1910: 139.
4. Maskar Ü: An Etude on Autopsy Issue in Moslems and Ottomans. Ist Medical Faculty Journal 1986; 39(2): 286–301.
5. Wecht CH: The History of Legal Medicine. J Am Acad Psychiatry Law 2005; 33(2): 245–251.
6. Akıncı S: History of Studies on Human Corpses. Ist Medical Faculty Journal 1959; 22(2): 753–768.
7. Gök Ş: History of Forensic Medicine in Turkey. In: Soysal Z, Gök Ş, eds. Forensic Medicine Vol 1: Istanbul, 1999: 5,7,9,11,23,29.
8. In Smith W ed. Dictionary of Greek and Roman Biography and Mythology Vol 1: Boston: Little Brown and Company, 1867: 209.
9. Gwei – Djen L, Needham J: A History of Forensic Medicine in China. Medical History 1988; 32: 357 – 400.
10. Altıntaş A: Medical Education in the Ottomans (Tıbhâne-i Âmire Period). In: Ak B, Ataç A eds. Symposium on Health Care in the Ottomans: Ankara, 2000: 89–115.
11. Sarı N: Ottoman Medicine and Physicians, In: Ak B, Ataç A eds. Symposium on Health Care in the Ottomans: Ankara, 2000: 21-89.
12. Şehsuvaroğlu B, Erdemir DA, Güreşsever CG: History of Turkish Medicine. Bursa: Taş Press, 1984: 211–21.
13. Erdemir DA: Medical Deontology and History of Medicine. Bursa: Güneş&Nobel Press, 1996: 310.
14. Akdeniz (Sarı) N: Physician and Deontology in the Ottomans. İstanbul, 1977: 76.
15. Kahya E: Medical Education and Turkish Physicians in 19th Century in the Ottoman Empire. Ankara: Atatürk Cultural Center, 1997: 17.
16. Özen C: History and Development of Forensic Medicine in Turkey. Ist Medical Faculty Journal 1981; 44(2): 361 – 63.
17. Akıncı S: Autopsy and Dissection in the Medicine of Ottoman Empire, Ist Medical Faculty Journal 1962; 25(1): 111 – 112.
18. Celbiş O, Aydın NE, Soysal Z, Mızrak B: Current Legal Status in Forensic Autopsy Procedures in Turkey. Journal of Inonu University Medical Faculty 2004; 11(1): 53–56.