

ORIGINAL ARTICLE

European Medicine and Physicians in Safavid Iran

Abstract



Simultaneous with the establishment of the Safavid dynasty, due to the developments in the global and regional relations, the ground was prepared for the expansion of Iran and Europe relations. The main reasons for this were the propagation of Christianity, the presence of the Ottoman government as a common enemy of Iran and Europe, as well as commercial interests. These relations reached their peak during the reign of Shah Abbas I., encouraging various groups of Europeans, such as religious missionaries, businessmen, ambassadors, political delegations, tourists, etc. to come to Iran.

Physicians were seen in all the mentioned groups, especially in religious missionaries. So, owing to their presence, medical knowledge of European was introduced to Iranians. The first acquaintance with medical profession of European was obtained at the same time as the presence of the Portuguese in the Persian Gulf. Syphilis, which was first entered Iran from Europe in the late ninth century and was called smallpox, led European medicine to entering Iran.

The researchers of the present study, based on the reports related to the presence and activity of European physicians in Iran, travelogues and historical and research books, have used a descriptive-analytical method to examine the medical status and European physicians in Safavid Iran.

Key words: Safavid dynasty, European medical, Missionaries, Syphilis, Iran

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Introduction

Persian medicine sciences in the Safavid period, theoretically and practically, was a continuation of the medicine of the previous periods; in other words, the medical knowledge of this era was based on the middle Persian periods¹. However, there were significant changes in the medical sciences of this period distinguishing this medicine from previous ones. The beliefs, interests, and policies of the Safavid Empire, internal and external wars, foreign relations, as well as achievements and manuscripts of physicians of this era played an important role in creating these changes. However, according to the travelogues and handwritings of European tourists who had visited Iran in this period, the Safavid medical situation was in a lower position compared to European's. For example, the travelogue of Olearius, the envoy of the Duke of Holstein, in the time of Shah Safi, the successor of Shah Abbas I, explicitly confirmed the influence of combining the ideas of Paracelsus with Galen's to make the old ideas of Persian medicine more effective. He wrote in a part of his travelogue about how the chemical drugs prescribed by the medicine of the German delegation helped to cure the people of Shamakhi and even Shah Safi. The reputation of this doctor became so widespread that the Shah asked him to stay in Iran and cure Iranian patients with congenital blindness and paralysis (Olearius, 2007, pp. 309-310). Unfortunately, apart from these brief references, there is no information on how the ideas of Paracelsus influenced medical ideas in Safavid Iran. Although some of these sources referred to the medical achievements of Iranians, especially in pharmacy and treatment of some diseases, as superior to those of Europeans, Persian medicine underwent recession and became weakened during the second era of the Safavid Empire, after Shah Abbas I's reign. The reasons for this issue were likely to be as follows: the spread of superstitions and religious prejudices, the lack of life and financial security, an increase in the number of experimental physicians, the involvement of physicians in politics, and the migration of experienced physicians to other countries, especially India. The medical sciences of Safavid have been the subject of several types of research in various aspects. However, the starting point of the acquaintance of Persian medicine with European medicine has not been fully studied². It is important to mention that articles of European physicians in the post-Safavid era, especially in the Qajar era, like other Western sciences, prevailed over traditional Persian medicine and marginalized

1- For the medical situation of Iran in the Safavid era, especially refer to this work: Elgood, Cyril (1978) *Medicine in the Safavid period*, translated by Mohsen Javidan, Tehran: University of Tehran Press; Elgood (2007), *Medical History of Iran and the Lands of the Eastern Caliphate*, translated by Bahr Forghani, Tehran: Amir Kabir; Karimi, Behzad (2016) *Women in Iranian Medical Discourse Based on the Safavid Period*, Tehran: Research Institute of Islamic History; Islamifard, Zahra, (2017) *Analysis of the situation of medical knowledge and pharmacy in the Safavid era*, PhD thesis, Qom: Department of History of Islamic Civilization, University of Islamic Studies.

2- Karimi, Behzad (2016) *Women in Iranian Medical Discourse Based on the Safavid Period*, Tehran: Research Institute of Islamic History; Islamifard, Zahra, (2017) *Analysis of the situation of medical knowledge and pharmacy in the Safavid era*, PhD thesis, Qom: Department of History of Islamic Civilization, University of Islamic Studies.



this ancient intellectual and experimental system. Given this information, it seems necessary to study related resources to understand how Persians started to get acquainted with Western medicine; this will help to analyze the further developments occurred in the field of Persian medical history.

One of the influential variables in this process was the new relations that were under cultivation in the field of the so-called “international relations” at that time. These relations were created in different fields, mainly comprising the following four aspects: religion, politics, economy, and culture. Of course, not all of them had the same effects but were often interwoven. Religious missionaries, for instance, were usually diplomatic representatives, representatives were often businessmen, and many Western travelers were business representatives. Religious developments and reforms that took place in Europe in the 15th century continued in the following centuries. European governments, with the support of the Pope, had a mission to spread Christianity and Catholicism to the eastern regions, including Iran. During the Safavid era and during the reign of Shah Abbas I, when the policy of religious tolerance was significantly applied, the missionaries of European religions increased and people from the Augustinian sect and the Carmelite, etc. entered Iran. The political motives of the Ottoman Empire to gain more power, as well as the aggressive nature of this country, were a serious threat to Iran. Also, the Byzantine Empire and other Western countries formed a concerted military operation against their common enemy. Therefore, the number of Western countries which were sending their political delegations to Iran and back were on the increase. Although these diplomatic efforts by both sides continued for a long time, they were not fruitful because the Ottoman put up barrier to block this relation. Surveys show that the economic incentives for the establishment of a relationship between Iran and the Europeans have been cost-effective. The desire to establish commercial relations has led to the exchange of traders between these countries.

In this era, Isfahan rapidly became an important trading center because of the activities of Shah Abbas I. Cultural motivations created a connection between Iran and Western countries. Tourists, on their way to India, had to pass through Iran. At the same time, some people wished for visiting Iran because this country as a part of the legendary East was somehow unknown to them. The political, economic, religious, and cultural situation in Europe created a motivation for the West to maintain their relationships with Iran; its another important motivation was religion.

Religious and medical matters were inseparable because most of the European physicians who came to Iran in the Safavid era either were religious missionaries or were in close contact with them.

To examine the beginnings of the medical relationship between Europeans and Persians, also to provide an overview of the situations and activities of European physicians in the Safavid dynasty, we have reached a three-dimensional model.

Firstly, we have discussed the medical ideas that paved the way for the arrival of European medicine in Iran. Secondly, under the section “Activists”, based on related sources, we have examined the situation of European physicians; finally, we have examined medical institutions concerning medicine and European physicians.



Ideas

1- A Reflection in the Persian roots of the Idea of Arba'a Mixing as the Basis of European Medicine

European medicine once before, when Islamic civilization reached its peak, had influenced medicine in Iran and the Islamic world. The fundamental theory of the four mixtures, which was invented by famous Greek physicians, like Hippocrates and Galen, after the translations of Hunayn ibn Ishaq (d. 243 AH) and other translators of Greek, gained influence and prestige in the medicine and philosophy of the Islamic world³. It is noteworthy that although Greek medicine was able to enter the intellectual and scientific fields of the Islamic world in the form of early sciences through the translation movement, tracing its roots showed that in ancient times it was the Persian ideas that entered the books of ancient Greece. The confession of Cyril Elgood in the opening pages of the book of the Medical history of Iran and the lands of the Eastern Caliphate verifies this claim. The theory of the four mixtures, comprising the basis of ancient medicine, despite being recorded under the name of Hippocrates and Galen, was an Iranian one that was flourished in the culture of ancient Greece. (Farshad, 1986, p. 671; NirNouri, 2000, pp. 306-307; Azkaei, 2000, pp. 324-325, for more information. Islamifard, 2018, pp. 72-77). Among the ideas of Zoroaster, there was a similarity between the great world, the universe, and the small world, that is, man, which later became the source of many cosmological teachings in the West and East. In the Avestan tradition, man means the world's full-length mirror of the universe, that is, the world. In Bandesh, it is mentioned that similarities have been established between each organ of the human body and the elements of nature (Bahar, 2017, p. 162). Elgood has written in this regard: "If Iran has a role in establishing the quadratic hypothesis, it has played a greater role in creating the theory of the micro cosmos which the quadruple temperament hypothesis is the result" (Elgood, 2007, pp. 37-38). According to historical evidence, it can be concluded that the Greeks were able to advance this idea due to close contact with the Persians. (Islamifard, 2018, pp. 70-77)

2-The influence of Iranian medicine on European medicine in the Islamic Middle Ages

At the beginning and in the middle of Islamic history, we see that numerous manuscripts of Persians and Islamic physicians have been translated into Latin and influenced Western medicine.

3- For the theory of quadruple or quadruple mixtures, refer to the following sources: Elgood (2007), *Medical History of Iran and the Lands of the Eastern Caliphate*, translated by Bahr Forghani, Tehran: Amirkabir; Farshad, Mehdi (1986), *History of Science in Iran*, Volume 3, Tehran: Amir Kabir; Nirnouri, Hamid (2000), *Iran's contribution to world civilization*, Tehran: Ferdows; Azkaei, Parviz (2000), *Our list before the list*, Tehran: Astan Quds Razavi; Shariat Torbeghan, Shams (2011), *Medicine and its education in Iran*, Tehran: Chogan Publications.



One of the most prominent Islamic physicians was Mohammad Ibn Zakaria Rhazes, whose manuscripts were translated into Latin and published several times. His book, *Al-Hawi*, was translated in 678 AH/ 1279 AD and was published five times until 949 AH/ 1542 AD. This book was both a reference of medical knowledge in Europe and one of the most important textbooks. Another important Manuscript was the book *Al-Hussi Al-Mutuldeh fi Al-Koli and Al-Mathana* (bladder stones and kidney diseases). In addition, the book *Al-Jadri Va Al-Hasbah* (smallpox and measles) was translated into Latin and was published several times in Europe.

Avicenna was another influential physician in European medicine. His important medical book, *Canon*, which was considered a pillar of Western medical books for many years, was published several times during the 15-19th century and was among the European's medical textbooks for a long time (Islamifard, 2011, p. 185). Beside the books of Rhazes and Avicenna, the manuscripts of all Muslim physicians were used and adopted by Europeans. Thus, in the Middle Ages, by translating these manuscripts, European medicine made progress (Kavyani Pooya, 2016, p. 348). This trend continued in the Safavid era, but, according to some scholars, Persian medicine did not make much progress since the time of Rhazes. Joseph Labros was one of the first official graduates of Iranian medicine who translated Persian medical texts into European languages. He returned to Paris from Iran in 1680 AD and published the book *Attar (Persica Pacia Pharmaca)* which was a work based on *Teb-e Shafae* (lit. healing medicine) written by the famous *Attar Muzaffaribn Mohammad Hosseini Shafaei* before 963 AH/ 1556 AD (Kavyani Pooya, 2016, p. 348; Islamifard, 2018, p. 148)

Intellectual developments in European medicine coincided with the stagnation of medical science in Iran, which, mainly due to the combining school teachings with some superstitions in the Safavid era, obstructed the development of Persian medicine. (Kavyani Pooya, 2016, p. 349).

Europeans progressed in medicine and took a new approach to pathology and physiology in the diagnosis and treatment of diseases. So, they became more successful than Persians. At this time, Persians could influence European travelers and ambassadors and, like the trend set in the past, reversed the pathway of science from Iran to Europe and used their discoveries and achievements in medicine; unfortunately, this did not happen. Then, there was a thought that adaptation of European science was not a necessity; if, in case, they felt the need to use European science, that was not the medical science, but that related to the military weapons and firearms. This was mainly due to the warlike conditions of post-Safavid Iran. Hence, military weapons and firearms were considered to be of priority. (Kavyani Pooya, 2016, p. 349). Of course, we must not forget that even if Persians felt the need for European sciences and achievements, the Ottoman government was a big barrier between them (Kavyani Pooya, 2016, p. 349). Modern medicine was first introduced to Iran after the arrival of Europeans in the Safavid era. But the European physicians' activities, until the Qajar period, were mainly limited to the court and the kings themselves; therefore, this cannot be described as the arrival of a new medical paradigm in Iran; It was only limited to a very small number of court physicians and they were generally employed for a limited period of time. In addition, owing to the resistance of traditional hakims (physicians), it was difficult for the physicians to reside and work in Iran. In other words, in the beginning, some traditional hakims and physicians not



only did not believe in European medicine but also considered it harmful. (Ganjbakhsh Zamani, 2011, p. 166) The arrival of European medicine in Iran coincided with the presence of the Portuguese in the Persian Gulf. Religious missionaries came to Iran with the Portuguese, helping the poor in the area, providing medical care, treating the needy, and at the same time preaching the religion of Christ. Alexander Beg wrote about Abbasi's views: "Because the Persians became the owners of that property, due to the prevalence of prejudice in religion, which was an inseparable part of the Portuguese sect, they began to seize the religion of people and invited them to their religion." (Torkaman, 1993, p. 320).

3- Syphilis: Western disease, Eastern treatment

Syphilis came from Europe to Iran from the end of the ninth century AH. Then, some great Iranian physicians became acquainted with this disease, and this contributed to the influence of European medicine and their treatment methods in Iran. It is believed that this disease must have been imported from the western world since there has been no trace of syphilis in the historical and medical texts of Iran; they called it "Foreign Smallpox", "Nar Afjine", "Atashak Farang". Researchers of medical history believe that this disease was first appeared in the late 15th century (the 1490s) in Europe and its origin was from the United States. In the sources of traditional Persian medicine, no trace of this disease was seen before the Safavid era (Matin, 2013, p. 77). For the first time, Baha'u'llah Rhazes, a physician of the early Safavid period, mentioned this disease in his book, *Kholasat-ol Tajarob* ("lit. Summary of Experiences) and describes its prevalence in Azerbaijan, the capital of Iran at that time, Fars and Khorasan and its transmission through intercourse is also mentioned. (Smith and Gervase, 2006, p. 19). Of course, he admits that other ways of transmission are also possible. In this report, he refers to Persian Nar (lit. Persian fire), which is the same as anthrax, and its infectious nature. Although he stated similarities between "Persian Nar" and "Atashak", he distinguished the two to some extent:

"And the other is the Armani Daneh (lit. Armenian seed) found in France and transferred from there to Rome and Saudi Arabia; in 904, it was spread in Azerbaijan, then in Iraq and Persia, and infected most people in these countries and the west ... But the Armani Daneh, which was known as smallpox in Khorasan because of its many similarities to smallpox ... but this disease, although being contagious, did not spread rapidly; it emerged from sexual intercourse with a one who has anthrax, mentioned earlier in the interview. Come and get his steam into the body in the bath ... and another type was called Persian Nar, with some blisters appeared on the skin (like smallpox found on the skin) which were itching, burning, painful and swelled; as it feels like the burning of fire; that's why it was called Nar in Persian. This disease originated in Iran so the people of Persia called it Atashk because of its burning feeling (Razi, n.d., pp. 111 and 116)."

Hakim Yousefi Heravi, in his comprehensive book *Al-Fawayed* (Yousefi Medicine), which was written in 917 AH, mentioned this disease as "foreign smallpox" and described the disease in detail in the chapter, entitled "Skin Rash". He talked about foreign smallpox (syphilis): "Farangia means foreign smallpox, the sign of which is the swelling of the limbs in the joints. In smallpox, you would be ill-health, the blood transfusion of three or two months should be observed, and the cause should be excreted as desired"



(Heravi, 2003, p. 69). But an independent important book about this disease belongs to Hakim Emad al-Din Shirazi. Emad al-Din Mahmud ibn-Mas'ud Shirazi who was a physician, known as Emad, and was born in Shiraz in 1515 A.D. (921 A.H.). He lived at the end of Shah Tahmasb's reign and the beginning of Shah Abbas's governments. He wrote a book on syphilis, entitled "Resaleh Atashak" (lit. The Book of fire) in his free time. The story of his journey to India is true but we are not certain whether he wrote the book before or after this journey because in the introduction of "The Way of Eating Ginseng and Its Benefits", he seemed to have spent twenty years in India (Golshani, 2013, p. 170). During his research, he explained in detail the areas of occurrence and symptoms of this disease, as well as its prevention and treatment. He wrote about the reason for naming this disease foreign smallpox as follows: "Because it causes a burning sensation, it has been called Nar; the reason why it is called foreign smallpox is that it is caused by kind of blisters boiling and it first appeared in foreign countries." And because it developed from the Armenian land, it is also called the Armenian Daneh (seed)." Probably this disease and its prevalence in Iran was the result of delegations sent from Europe to the Safavid court (Matin, 2013, p. 78; Ibn-e Masud, n.d., p. 6). Emad al-Din describes the symptoms of the second and third stages of the disease and says that he has seen two female patients, one with a syphilitic sore throat and the other with a restless paralyzed leg. The latter is a clear indication of motor ataxia⁴. Emad al-Din holds that it is a chronic disease and stated, "A person who suffers from this disease, even if treated, may remain ill for even three or four years." (Ibn-e Masud, n.d., p. 6) More than half of the treatise on Atashak (lit. small fire) is dedicated to the treatment of this disease, and in addition to the known treatments, such as sweating, bleeding, and abstinence, mercury, and herbals (*Smilax aspera*) are recommended as a specific treatment. In his opinion, the best ointment and perhaps the best medicine that is unparalleled is mercury; if there are a thousand other medicines, none of them can replace mercury (Ibn-e Masud, n.d., p. 6). Most travelogues have dealt with the disease: Fryer, one of the leading physicians of the British trading company, in this regards writes: "But the most common disease of the day in this country is gonorrhoea (syphilis) and out of ten people, one is afflicted. When someone gets it, it is said that he has caught fire, and when it infects all the blood, it appears like a wound, and then he goes into coma and stays asleep for almost the rest of his life. This situation causes neither the patients be

4- Imbalance, impaired muscle coordination, irregular muscle movements.



able to think of a solution, nor others to find a cure for the disease (Elgood, 2007, p. 453). Jean Chardin also describes the stigma associated with the disease as a shameful and heartbreaking disease and writes:

And the embarrassing and heartbreaking disease of syphilis has spread so widely among the Iranian community that half of the population is affected. This ugly disease is caused by sleeping with prostitutes who are almost all afflicted. Because the disease is transmitted quickly, even little contact of the patients with healthy people can easily afflict all parts of their body with this ominous disease. This is due to the fact that the air is not dry enough. It is often observed that the patient can transmit the disease to the other members of the family via simple relationship. As mentioned before, as, approximately, half of the population in the Iranian society suffered from this disease, no one was ashamed of contracting it anymore, and just as people with high temperature would say that they had a fever, people with syphilis would say that they ha syphilis. Surprisingly, a large number of eight and ten-year-old children also contracted this disease, and if it were not because of Iran's relatively clean air as well as the degree of moisture of the air, no one would escape getting this disease. In the meantime, no one would seek treatment and the afflicted person would suffer from the disease for the rest of his life. It is indeed neither painful nor exhausting, and constant bathing prevents it from taking root, and the dry air prevents the spread of its toxin (body) or the appearance of pimples and acne on the skin but as it penetrates the sick bones, any change of weather, like that common in our country, causes it to flare up (Chardin, 1994, pp. 1129-1133).

Activists

As mentioned earlier, European physicians worked in Iran as members of religious missionaries as well as physicians for East Indian companies. Cyril Elgood, who was a physician at the British Embassy of Iran for ten years, wrote about the goals of the British delegations in Iran: "It is true that the initial purpose of the British delegations coming to Iran was to do business, but they brought doctors with them as well. They also said that the initial purpose of the delegations coming from Italy was to change the religious thought of the Iranians, but many of the members of these delegations also had a great deal of expertise in the medical profession. For example, Rev. Fr. Mathew of St. Joseph's Church was not only a botanist but also a physician, or Alexander of St. Sylvester Church pointed out that as "Iranians knew that he was familiar with the medical care, they not only asked him to go to visit their sick children at home, but also wanted him to treat the elders and celebrities of the city." (Elgood, 1979, p. 108) Thomas Boyce, a physician from the East India Company, in 1668 AD / 1079 AH, and John Fryer, in 1677 AD / 1088 AH, came to the shores of the Persian Gulf and Isfahan. John Fryer first came to Gambron with the Franciscans and then to Isfahan. He was in contact with a priest from the Spanish Carmelite sect, living in Shiraz, who treated the ruler of Shiraz in support of the Carmelites of Shiraz. Engelbert Kaempfer, a German, resided in Isfahan for some time during the reign of Suleiman I, the Safavid as the physician of the Swedish ambassador, and then was employed by the Dutch navy in the Persian Gulf from 1097-1100 AH. During the reign of Shah Sultan Hussein, around 1715 AD / 1127 AH, an English physician, named John Bell, entered Iran with Peter the Great and later published a description of his travels in England. In Iran, from the twelfth century AH onwards, European physi-



cians regularly served the members of East India companies (Mirahmadi, 1985, p. 97; Tavernier, 1958, p. 245)

Regarding Christian missionaries and their relation with physicians, Chardin writes: "Christian missionaries attracted Muslims in various ways; for example, among ordinary people, they called themselves doctors and surgeons and treated people for free. They pretended to be sincere, honest, and eager to help their fellow human beings in order to be accepted and welcomed by Muslims" (Chardin, 1994, p. 217).

Some ordinary people seemed to trust the foreign doctors who practiced medicine at the embassy and hence they would refer to them in case of illness. Olearius writes: "I remember one day an Iranian person suffering from back pain referred to the embassy doctor and asked for some medicine. After he took the medicine, the pain stopped; he started to thank him and told the doctor that he was ready to scarify his life for the doctor." (Olearius, 2007, p. 646). He also wrote: "Polygamy was common not because of their desire for having more children. For instance, while he was in Isfahan, a number of men referred to the embassy doctor and asked him to prescribe some contraceptives to their young women, but the doctor did not have such medicine" (Olearius, 2007, p. 646). As most Christian missionaries had medical information, Iranian parents used to ask them to examine their sick children in hopes of healing. In addition, Muslim parents, in many cases, did not show disagreement with the baptism of their children. It is said that one of the Carmelite missionaries baptized more than 3,000 children (Lockhart, 1986, p. 90). Some prominent figures of that period also summoned foreign doctors: "Fryer ... was summoned to treat the ruler of the city (Shiraz) who was Sayyid, rich and a descendant of the Prophet. Fryer agreed to go to the palace and treat him mainly because of the fact that Carmelite and the Armenian Christians' comfort and well-being was dependent on the ruler's support." (Elgood, 2007, p. 448) Although there is no solid evidence that the Safavid kings hired foreign physicians in their court, Rudi Mate wrote about the influence of Europe on Safavid Iran: "The predicted medical expertise of the Europeans in Iran was highly valued and respected. Apparently, Shah Abbas personally asked Di Joui to bring a European doctor with him on his return to Iran" (Matthee, 2013, p. 22). Cyril Elgood also pointed out that once a foreign surgeon was summoned by Suleiman I, the Safavid: "When Suleiman I, the Safavid, asked a French surgeon to castrate two slave boys who served his harem in return of a large sum of money, the surgeon operated both boys successfully." (Elgood, 2007, p. 332)

It seems that Western medicine was gradually accepted in the Persian society. Moreover, European physicians, who were mostly priests as well, were able to communicate with the people and gain their attention and trust. As evidence shows, European's scientific movement was flourishing at that time and was gaining more and more success. A distinction seems necessary to be made between European physicians who favored traditional medical ideas, owing much to Galen, and European physicians familiar with modern medical thought. As mentioned earlier in this article, Iranians became acquainted with the Paracelsus medical school through the doctors of European delegations in Iran, but this acquaintance was not deep. It was unlikely that before becoming acquainted with the Ottoman medical works written under the influence of Paracelsus, in the seventeenth century, which coincided with the second half of the Safavid rule, Iranian physicians had encountered modern European medicine. (Bachour, 2018, pp. 83-85). From the end of



the Safavid period, the Afshari and Qajar eras till the establishment of Darolfunun, research and innovation in medical sciences decreased, and physicians were only engaged in rewriting and translations. For this reason, after Safavid times, the Persian kings from the time of Nader Shah hired foreign physicians. Nader Shah had two foreign physicians, named Pere Domian and Pere Bazin. This trend continued later. The number of them gradually increased; as an example, in the Qajar era, there was an increase in the entry and employment of European physicians in Iran, and some of them lived in Iran for many years and died there. In this era, modern medicine left many effects like sending students abroad to educate and learn new sciences, establishing the Academy of Arts and the teaching of modern medicine and its spread in Iran, gradually sending traditional medicine to the margins of obscurity. Hence, the experiences of years of efforts of previous generations due to Iran's climate and nutrition was sent to oblivion.

3- The European style hospital

In this section, along with giving information on medical ideas current then and European physicians' activities, we have tried to give a general and chronological picture of medical institutions in the Safavid era. Since the information about European hospitals at this time is mostly found in European sources, such documents are not available for Iranian researchers. Hence, in order to write this section, we have mainly used Cyril Elgood's research in the history of Iranian medicine and that conducted by Willem Floor in the hospital during the Safavid and Qajar eras. In addition, we have also used other historical sources and documents.

1- Hormoz Island Hospital

The first European hospital in Iran was built by the Portuguese on the island of Hormuz and was founded around 914 AH / 1508 AD. This hospital was active until 1031 AH when the Iranians occupied the island, and apparently, they were mostly practiced traditional medicines there. Eusebius writes in his History of the Missions:

In 1609, there was only one house for the Augustinian sect in Hormuz, where twelve people lived. He was also in charge of running the affairs of the Royal Hospital. In addition to the church for these people, there was another small church inside the castle. On the opposite side of the castle, there was the Misericordia Hospital, a Portuguese reminiscence of that era, run by a respected man who provided a dowry for girls in need, visited patients in the hospital, helped children and the elderly, assisted the convicted in prison, buried the dead and prayed for their forgiveness, and paid the debts of the debtors (Elgood, 2007, p. 565). This hospital had more duties and functions to do than treating patients; it could be called a welfare center. It seems that most of the matters related to the Portuguese were handled in this medical center. This hospital was the first European hospital in Iran. Willem Flore believed that the impact of this hospital was very limited because the method of treatment provided by European doctors was not much different from that of the Iranian since Iranian doctors were more aware of the native diseases of the Persian Gulf and Iran than Portuguese monks. And certainly, these monks themselves first learned these diseases from Iranian doctors. Besides, the concept and function of a hospital was not unknown to the Iranians; In fact, before the arrival of the Portuguese, there was a hospital on the island.



It is believed that there were not any differences between a Portuguese hospital and a Persian hospital (called dar-al shafa (lit. the house of cure)); they were places for attaining spiritual peace and receiving care. However, all findings indicate that this Portuguese institution may have not had any effects on the medical status in Iran (Floor, 2015, pp. 10-11).

2- Bandar Abbas Hospital and Geno Hospital⁵

John Freer, an Englishman who came to Bandar Abbas between 1677-1088 AH, in his notes talked about two small hospitals in a village, forty kilometers from Bandar Abbas: "In a small village located 20 miles (forty kilometers) north of Bandar Abbas, which enjoyed having natural springs and abundant water, there were two strong buildings." According to Willem Floor, the hospital that Freer mentioned was not actually a hospital, but a hot water facility that could also be found in many other parts of Iran. Other tourists, including Kaempfer, never mentioned this hospital in their notes at all; they only paid attention to the beneficial qualities of hot springs (Floor, 2015, pp. 11-12). In his next book, "The New Account", Freer noted that these were not Iranian institutions, but one created by a German company and the other by an Indian banker who served the company. And in the vicinity of these hospitals, there were hot springs, the water of which has been used for therapeutic purposes. About eighty years later, when John Parker was working as a physician for the British East India Company in Bandar Abbas, he tested this water on patients and sent some of it to London for analysis, and the test showed that it was of good quality, containing sulfur salt (Elgood, 2007, p. 447)

3- The British Hospital in Bandar Abbas

The British East India Company established a British hospital in Bandar Abbas in 1600 AD / 1009 AH by order of Queen Elizabeth (Falsafi, 1993, p. 235). And from then on, it became the anchor of ships sailing to India. The British East India Company was also allowed to build two mansions for its trading house (Philosophical, 1371, p. 269). According to the notes in the offices of the East India Company in Bandar Abbas, the contractors of the company built a small hospital in this port. Its establishment was likely to be around 1032 AH. This hospital was active for nearly two centuries and was called "Kingdom Hospital" (Falsafi, 1993, p.459). This hospital suffered a terrible condition for a long time after its establishment "the drugs that were sent to this hospital by the company were expired and useless; the reports and com-

5- Geno is a village in the central part of Bandar Abbas, Is in village, which is located 42 km north of the city along the road from Kerman to Bandar Abbas and has sulfur mineral springs. Fasaei Shirazi, Hassan, (1378), Farsnameh Naseri, 2 / 327-328.



plaints of the hospital officials did not have any effects and sometimes the hospital doctor had to buy the necessary medicines at his own expense. In 1734, all hospital staff began to protest against this condition. However, this hospital was in function for two centuries, and not only it did not affect the Iranian hospitals, but it also did not have the minimum facilities required and continued working under this deplorable condition (Kavyani Pooya, 2016, p. 325). Willem Floor believed that the low numbers and low quality of hospitals and clinics in the Safavid period did not have much impact on the health of the Iranian people; the lack of infrastructure and personal and public health in Iran from 1850 to 1229, had more effects than the lack of a hospital. This situation adversely affected people's health status, and this trend continued until the 1950s. However, in European countries, because of discoveries in basic sciences, such as microbiology, they were able to accelerate the growth of Western medicine and fight legendary infectious diseases by improving urban infrastructure and public health. However, the changes in the paradigm of health in Iran were postponed to a century later.

Discussion and Conclusion

We have tried to examine the impact of European medicine on Persian medicine in this article with a three-pronged view including medical ideas, medical activists, and medical institutions. In the section discussing ideas, we remarked that although European medical ideas dominated our traditional medicine from Safavid onwards, the idea of the Hippocratic / Galenian quadruple mix, through translating medical books had already influenced Iran. In this section, we tried to show the Iranian roots of this ancient Greek thought; an issue that has not received much attention so far. In the Safavid era, Iranians became acquainted with the medical sciences of the West after the introduction of syphilis, which was a Western disease. Eastern physicians, however, found treatments for this unknown disease.

In the section on activists, we also tried to briefly examine the European physicians of the Safavid era. In this section, we found that many of their business, political, and missionary delegate had the knowledge of medicine and that Christian missionaries sought to attract public attention and disseminate Christianity through medical and medical-related practice. We also found out that in the Safavid era, unlike later periods such as the Afshari and Qajar periods, the kings did not hire European physicians. This point can be considered as the competency of diagnostic and therapeutic methods and the adequacy of Iranian medicine compared to European medicine.

In the hospital-centered institutions, we tried to show the possible institutionalization of European medicine in Iran. Our study showed that although the Safavid era was not an era of brilliant medical advances, hospitals established by Europeans were merely places for the treatment of Europeans residing in Iran and did not offer special surgeries and advanced European diagnostic and therapeutic methods. Therefore, it can be said that in general, European hospitals during the Safavid period could have an impact neither on the development of medical sciences and nor on the advancement of Iranian hospitals. Europeans with their hospitals more burdened the Safavids and by using drugs prepared by the Safavid physicians, they were more consumers of Iranian medicine than providers of innovative ideas in medical science, such as medical writings or hospital facilities.



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