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Original Article

A Minute Search about the Angles of Seyyed Ismail Jurjani's Life and His Comprehensive Medical Work, Zakhireye Khwarazmshahi

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ABSTRACT

Four scholarly physicians and great scientists and influential in the medicine of the Islamic territory emerged after the fall of the Sasanian kingdom and the Arabs domination over Iran and the propagation of the Arabic language in Iran, who were very respected and cherished from the viewpoint of medicine and national etiquette and other fields of science. These four people, who are the architects of quadruplet pillars of Islamic medicine, are Ibn Raban Tabari, Muhammad Ibn Zakariya Razi, Ali Ibn Abbas Majosi Ahwazi and Sheikh al-Raees Abu Ali Sina in the order of date of birth, who generally was writing in Tazi language. Seyyed Ismail Jurjani, Heravi, Akhvini, Aburihan Biruni and Farabi came into being after these first- class stars of the Islamic world that all of them were Persian writers, but Seyyed Ismail Jurjani was at the head of all these dignitaries, who in fact he has been the beginning of this movement and the modern era of Iranian medicine. Seyyed Ismail Jurjani was born in Jurjan in 531 AH and died AH in Merv in 531. The importance of this great physician is that He has written all medical and other works in Persian language. Also, he has authored the most reliable and detailed of a medical book after Abu Ali Sina's "Law in Medicine" called "Zakhireye Khwarazmshahi". This medical work has always been considered one of the medicine pillars since authoring to after that. This honorable work includes all medical topics until the author's lifetime and is remarkable in terms of including the number of Persian words and terms which is used in medicine and pharmacy. Other medical books of Seyyed Ismail Jurjani which has been written in Farsi and they have always been used and Iranian physicians have referred to them in recent centuries, are the Agharaz, Yadgar and Khafi Alaei books. In fact, Seyyed Ismail Jurjani is the one who has revived medicine and other sciences with his ballads, according to al-Bayhaghi. In addition to that, "Modernization of Iranian Medicine" also begins with the appearance of medical works in the Persian language of Seyyed Ismail Jurjani.

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Introduction

The Iran and Arab wars lasted for 10 years, from 633 to 643 AH, which the Qadisiyah, Jalula, Nahavand and Wajroud wars were the most important of them. During these wars that occurred during the reign of third Yazd Gird, the Muslim Arabs conquered the Iranians and this king himself was killed by a Asibani in a village called Zariq as a result of the betrayal of his soldiers in 31 A.H and the era of Sasanian dominion and the independence of Iran and its territorial integrity and language ended (1). From the date of 21 AH (conquest of Nahavand known as Fatah al-Futuh) to 248 AH (the declaration year of the independent Emirate of Yaqub Laith Safari) the rulers and governors of the provinces of each region of Iran regions were appointed by order of caliphs about 227 years (2). Until after the apparition of Jurjani (born in 433 - died in 531 AH), all medical works of Iran country except for a handful were in Tazi language. Jurjani founded the modern era of Iranian medical by authoring his precious medical works in the Persian language. He could to collect and add all the medical information of his time by authoring of Zakhireye khwarazmshahi, Khafi Alaei, Aghraz and Yadgar books in Farsi to be the basis and principle of medical teachings in Persian language for Taliban and lovers of medical knowledge and later authors. It should be known that a number of books such as Ibn Sina's medical, "al-Ibniyyah" and "Hedaya al-Mutalamin" books had been authored in Persian language before the apparition of Seyyed Ismail Jarjani, but a physician who has wrote all his works in Persian language and with a unique composition and is one of the most precious of texts, is Jurjani (3).

Moreover, almost all Iranian authors and many authors of the medical books of the Indian subcontinent have taken help from Jurjani's works. For example, Tohfa Hakim Momin or Tohfa al-Mominin which Muhammad Momin has written between 1078 and 1105 A.H that's mean about 574 lunar years after the death of Seyyed Ismail Jurjani, is a summary of parts of the Jurjani' Zakhireye khwarazmshahi. What is certain is that Mohammad Momin Delami Tankabani has made a valuable effort about the authoring of the aforesaid book which is worthy

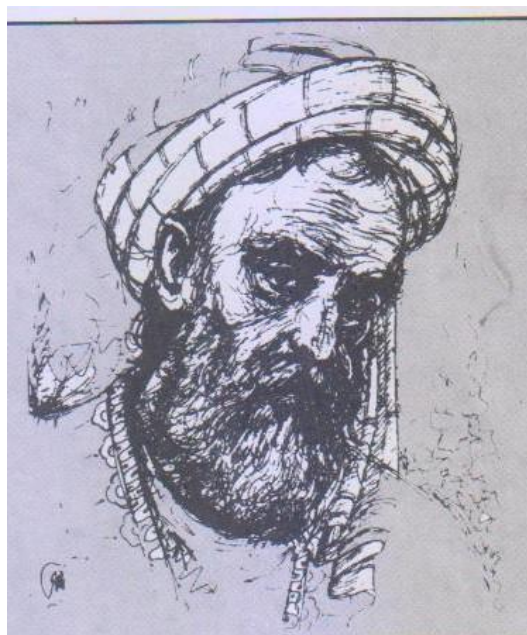
of praise and sanctification. Jurjani's scientific authority rose so high because of the writing of his great and effective medical works that became head-physician of government and even became Qutbuddin's and Atsez's personal physician. It is said that he has also been the headship of a medical center and hospital in Kharazmi. Jurjani traveled to Merv from the end of his life because of the promotion (1) of scientific knowledge and the using the Seljuks's great library and entered the court of the Seljuk Sultan Sanjar and passed away at the age of 95 and was buried there. Another point that is necessary to be mentioned in this introduction is about the birthplace of Seyyed Ismail Jarjani. "Gorgan" and Gurganj have been considered as the same in many sources. However, Gurgān has located in the north of Iran and was called Estrabad until the beginning of the Pahlavi reign. But the old Ur Ganch or Jurjan or Gerganj which the Tazians called it Jurjaniyeh and the Iranians called it Gurganj and the Mongolian and Turks called it Ur Ganch, was considered the most important city and the capital of Khwarezm on the left bank of the Amu sea. Gurganj gained a new importance as the capital of the Khwarazmshahs in the 12th century AD and because the mentioned dynasty promoted to the status of the greatest royal family in Islamic world, its capital also achieved a high status. Yaqut Hamvi, who saw Gurganj more than the devastating Mongol attack at the end of 1219 AD (616 AH), says that this city is the city's biggest and richest that he has seen (4).

Jurjani is the greatest physician of the 6th century and the one who revived medical science and other sciences with his ballads, according to al-Bayhaghi. Sometime of this professor's life passed in Khorasan and sometime of his life passed in Khwarazm in the service of Qutbuddin Muhammad and his son, Atsez Khwarazmshah. Seyyed Ismail was a professor in various sciences. He learned the hadith science from Imam Abul Qasim Qashiri (Abdul Karim Ibn Hawazen Ibn Abdul Malik, one of the Sufi elders, born in 376 - died in Nishabur, 465 AH) and learned medical knowledge from Ibn Abi Sadiq (2).

When Ibn Abi Sadiq was a student of Ibn Sina, who in turn he had acquired great reputation as a physician and writer, but the popularity of this

Iranian physician was mostly in anatomy and some of his anatomical writings have remained. Ibn Abi Sadiq's most famous of medical work has been his interpretation on Jalinus's of Organs Benefits book, which has been ended in 459 AH (1066 AD) and has been studied and used as a textbook on anatomy for years after his passing (5). When Ibn Abi Sadiq Neyshaburi had reached to senescence, a young man from Jurjan/Gorgan went to him, who intended to learn Ibn Sina's teachings from him. This young student was Ismail Ibn Muhammad Ibn Mahmoud Ibn Ahmad al-Husseini (picture 1). Since Jurjani is almost unknown in the West and his works have not reached to the owners of the medical sciences, he does not have a Latin name like Razi (Rhazes), Ibn Sina (Avicenna) and Ali Ibn Abbas Majosi Ahwazi (Haly Abbas). Iranians themselves call him Jurjani or Seyyed Ismail or sometimes they call Zain al-Din. Hence, Jurjani has mostly been used in this article. There is no exact information about Jurjani's date of birth, but because he has been a student of Ibn Abi Sadiq and this physician and scientist has passed between the years of 459 AH and 470 AH/1066-1077 AD, it can be guessed that Jurjani has been born around in the middle of the 11th century AD (fourth decade AD). Most of the writings and compilations even what was performed by Iranian, Christian and Jewish authors were in the Arabic language until the beginning of Jurjani's life period. Of course, there were also considerable exceptions. Iranian people's thoughts regarding issues related to Arabs especially the Arabic language underwent changes and transformations due to the reduction of the political power of the Abbasi caliphs on the one hand and increasing the political power of the Iran's local governments on the other hand, at the

end of the fifth lunar century (around the beginning of the twelfth century AD). Jurjani was the first physician from the upper classes who removed the common constraints and authored all his works in his own language. Even though Jurjani has had a large and extensive role in the progress of Iranian medicine, little knowledge is available about his personal life. Unlike other famous physicians who there are many narratives and stories about their lives, but there is no story about his life. Only Ibn Abi Asiba has wrote a few lines about him and says that Jurjani has served in the court of Sultan Alaaddin Khwarazmshah which is not true because Sultan Alaaddin was the fifth sultan from the Anushtkin family and it is determined from other evidences that Jurjani has been the first sultan of this court physician dynasty at the time of Qutb al-Din. Perhaps Atsez, the son of Qutb al-Din, has served in the court of Alaa al-Dawlah. Jurjani has not traveled a lot in youth, unlike most of the popular physicians of that time, but he had the opportunity to study in Iraq, Ajam and Fars, as well as in his city. Therefore, he was not a completely unknown person when he entered the Khwarazmshah court in 504 AH (1110 AD). The date of Jurjani's passing has been written in Marv in 531 AH/1136 AD to 535 AH/1140 AD (6). Samaani also says that Jurjani's passing place is Marv and has quoted from Mahmoud Ibn Muhammad Ibn Abbas, the author of the Khwarazmi book, that he has seen Jurjani in 531 AD in Sarakhs (east of Mashhad city) when he was in his old age. Haji Khalifa has also pointed out three different dates of 530, 531 and 535 AH years around the time of Jurjani's death, which if we accept the date of his birth around 434 AH, it is believed that he has lived a long life (7).



Picture 1: Seyyed Ismail Jurjani, a great physician and propagator of the Persian language instead of the Tazi language

1. Jurjani, the Ensign of the Discovery of Complete Blood Circulation before Ruhavi

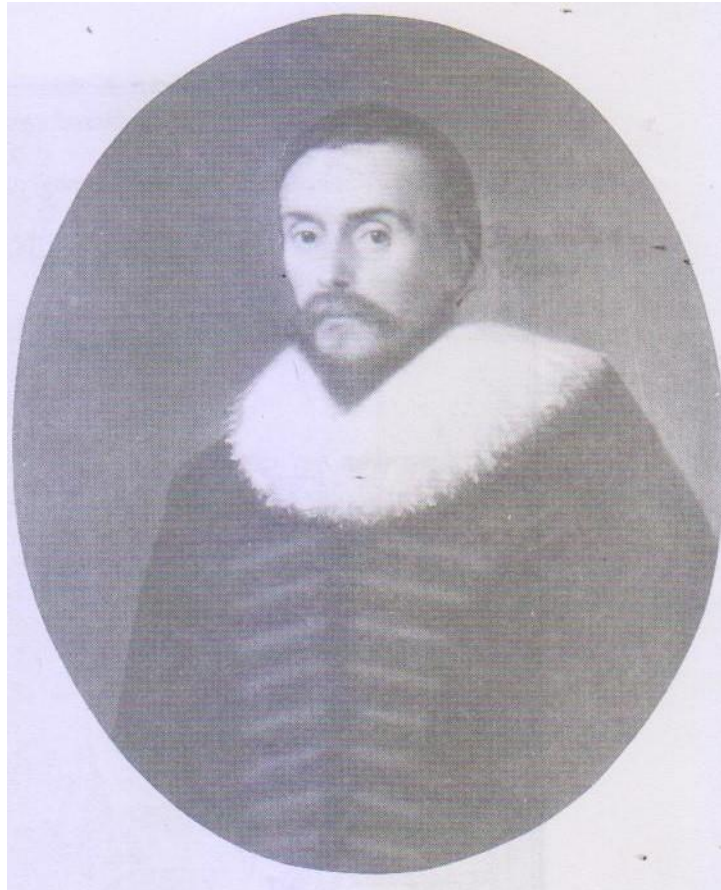
Jurjani disagreed with those who claimed that there is a tidal of blood in the arterial branches. According to his belief and contrary to what some claimed, the contraction of the heart and arteries, which have been completely sensible under the finger, was unrelated to the flow of blood inside them, but it was related to a blacksmithing process like the heart that draws air from the lungs during cardiac expansion and it distributes it in the body during cardiac contraction. This hypothesis, which considered the basic function of arteries to flow air in various parts of the body, prevented the discovery of the blood from great flow. Considering that they believed that arteries and veins are related to each other at some certain points, understanding this issue is difficult that how they were unaware of the discovery of the blood great flow. Ali Ibn Abbas Majosi Ahwazi, a comprehensive Iranian physician writes: During the cardiac expansion phase, because these pulsating vessels (arteries) have located near the heart, attract purified air and blood from the heart to themselves using the vacuum, because these vessels are emptied of air and blood during the contraction period, but returned air and blood fill them during the expansion period.

Vessels that are located close to the skin take air from outer space, while those that have located between the heart and the skin can draw the cleanest blood from the non- pulse vessels (veins) towards themselves. This is because there are holes in non-pulse vessels which make them relevant with pulsating vessels. This point is proven from here that when an artery is interrupted, all the blood of the veins is also vacated (6).

Mikhail Sertos discovered the microcirculation or pulmonary circulation of blood a little more than five centuries after Ali Ibn Abbas and a century before William Harvey, Servetos performed comprehensive studies and researches about the pores between the heart wall who believed in its existence at the time of Jalinus and proved that there are not such pores. He also explained his theories about the blood circulation between the heart and lung completely correct and clear and said so: "The vital essence or arterial blood has flowed from the lung; it brings air, heat, water and fire with it to the left ventricle. The vital essence has been made as a result of air mixing with the blood that reaches the lung from the right ventricle and is sent to the left ventricle. There is not a connection between the two cardiac chambers through the ventricles walls; however, the blood somehow reaches the lung from the

pumped heart. The lungs make the blood bright and fresh, there. Then the blood is poured through the arteries into the veins, it is entered into the left ventricle from there to reach all the body arteries” (8), so that it is observed that only the name of oxygen does not exist in the last sentences. Then William Harvey (picture 2), an English physician

and anatomist, arose in the 17th century and has completed the studies and researches of Jurjani, Ali Ibn Abbas Majosi of Ahwazi and Mikael Serutos of Spain and introduced the theory of complete blood circulation to the medical world (9).



Picture 2: William Harvey (1578 AD/986 AH; 1657 AD/1068 AH), a British physician and researcher that medical thoughts of Ali Abbas Majosi Ahwazi, Ibn Sina, Seyyed Ismail Jurjani and Mikhail Sertos found out the structure and function of the heart and did a great service to humanity by discovering the complete blood circulation.

2. Jurjani, a Great Propagator of the Persian Language in Medical Writing

Persian prose has just begun in the early fifth century and with all advances which had it was still at the beginning. Then, when it reached the second half of the fifth century, its maturity period began and it acquired maturity and perfection stage in the sixth century and the early seventh century. In this period of almost two hundred years, great authors have appeared in the Persian language and created various and diverse works. The writing of treatises and books in Persian

language was propagated on various scientific subjects and less subject of judicial, verbal, mystical, scientific and literary issues remained in which a book or books have been written. This caused the abundance of Persian prose works in this period. Unfortunately, many of them were destroyed by the Mongols' campaign, but again, what has reached us from the aforementioned works is remarkable. Not only the abundance of Persian prose works and their diversity in this period is noteworthy, but the evolution of style in them is also important and noteworthy issues. The

simple prose style was perfected in this period, too and also the elaborate artificial prose became common and also completed the steps and excellent grades and as a result, various vast fields appeared to test the taste and art of authors. One of the most important issues that attracts attention in the prose history of this period is that Iranians turned to writing Persian works much more, as a result of separation from the central government of the Islamic territory. While Most of the authors were not negligent to write books in the Arabic language, turned to writing books in Persian language in different fields; Even some of them, such as Seyyed Ismail Jurjani, arranged their most basic books on scientific and medical issues in Persian language. Furthermore, most of the histories that Iranians authored during this period are in the Persian language. Almost all the works of treatise writers, letter writers teachers and secretaries which all of whom were fluent in the Arabic language, were written in Persian beautifully. The Seljuk government, whose teachers and occupiers were always educated in Khorasan and Iraq, themselves became a great tool for propagating the Persian language, as letters, charters and decrees were written less in the Tazi language (10).

3. More Research

- Introducing Seyyed Ismail Jurjani:

Name: Hakim Abulfazail Seyyed Ismail Gorgani al-Jurjani al-Muttatabb.

Original name: al-Amir al-Sayyid al-Imam Zain al-Din Ismail Ibn al-Hasan Ibn Muhammad Ibn Mahmud Ibn Ahmad al-Husseini.

Known as Zain al-Din or Sharaf al-Din and Makni Abol-Fath or Abul Fazl or Abu Ibrahim.

His different nicknames: Zain al-Din, Sharaf al-Din, Abu Ibrahim, Abol-Fath, Abol-Fazayl, al-Amir al-Sidalam, Alavi Hosseini, Sepahani Gorgani and Tabib Alavi.

Birthplace: Jurjanieh and, according to a very weak narration, Isfahan.

Year of death: 531 AH or 535 AH.

Residence: Gerganj, Qom, Ray, Fars, Khwarezm and Merv.

Religion: Shia religion.

- Jurjanieh is a city that has been the center of Khwarezm and it has been considered a big city, according to Yaqut Hamavi.

- Khwarezm (Khiva), a city in Central Asia (11).

- Some have written Gurgan as the birthplace of Jurjani, while his birthplace should be Gurganag (=Garganj = Arganj is the Arabicized of Jurjanijeh). Gurganj has been a city in the Dar al-Mulk of Khwarazm and the center of the Khwarazmshah government, which has been known as Urganj and flourished a lot in the Sultan Muhammad Khwarazmshah government and has been conquered in the Mongol sedition and was massacred and ruined (12).

- Jurjani probably learned the Medical basics in Gurganj, because terms of his mother tongue are very visible, which is Khwarazmi language in the Zakhireye khwarazmshahi.

- Some researchers have considered Jurjani as one of the students of Ibn Abi Sadiq Nishaburi, while he only has quoted him and it is clear from his statements that he was not known Ibn Abi Sadiq (13).

- Trip to Qom: Jurjani has mentioned his trip to Qom and meeting the Koshair Gilani' children, the astrologer of Gilani in the fourth century AH and also trip to Merv in the Zakhireye khwarazmshahi, but as far as has been mentioned in the sources, he has spent the rest of his life in the Khwarezm and Merv cities and he has been in charge of the Baha'u-Dawlah pharmacy in Khwarazm for some time.

4. The Works of Seyyed Ismail Jurjani

Jurjani's works have been mentioned in reliable sources and cultures as follows: Khafi Alaei, al-Tabb al-Maluki, Zakhireye khwarazmshahi, Agharaz, Yadgar, al-Tazkarah al-Ashrafiyyeh fi al-Sinaa al-Taiba, fi al-Tahlil book, al-Manbah book and Zubda al-Tabb book (11). Dr. Zabihullah Safa quoted by al-Bayhaghi, the books that he has attributed to Seyyed Ismail Jurjani as follows: Khfi Alaei, al-Tabb al-Maluki, Zakhire, Agharaz, Yadgar, A Book on Rebuttal to Philosophers, Tadbir Yum and Laila, Will. Among these books, a copy of the Zakhire books and a translation that was made by the author into

Arabic, Araz, Yadgar, Yadgar, Khafi Alaei, Zubda al-Tabb are available.

5. Agharaz

Al-Agharaz book or al-Agharaz al-Tabiyyah and al-Mabahis al-Alaeiyah (picture 3) have been authored in two books according to Khafi Alaei and it is a summary of the Zakhireye Khwarazmshahi. Seyyed Ismail Jurjani has summarized this book at the request of Majd al-Din Abu Muhammad Sahib Ibn Muhammad al-Bukhari, the minister of Atsez of Khwarazmshah from the Zakhireye Khwarazmshahi (2). Although Seyyed Ismail Jurjani has not been considered among the founders of the four pillars of Islamic medicine, he completely founded the composition in Persian language by creation of the Zakhireye Khwarazmshahi, Aghraz, Khafi Alaei and Yadgar that all four works are in Persian, because almost all the books were written in Tazi language before him and compositions in Persian language were very rare (14). The founders of Islamic medicine, who are all Iranian as follows: Ibn Raban Tabari, Muhammad Ibn Zikriya Razi, Ali Ibn Abbas Majosi Ahwazi and Sheikh al-Raees Abu Ali Sina.

Agharaz has been composed between 522 and 531 AH. This book has been famous like the Zakhireye Khwarazmshahi during Jurjani's lifetime, as Nizami Arouzi Samarkandi writes in the Four Articles book (authorship around 550 AH) in the fourth article of this work about nineteen years after the death of Seyyed Ismail, which is about medical knowledge and the physician guidance. He writes: "... he read Mushfaq from the middle of the books of Zakhire Thabit Qara or Mansouri Muhammad Ibn Zakariya Razi or Hadaya of Abu Bakr Akhvini or Kefaya of Ahmad Faraj or Agharaz of Seyyed Ismail Jurjani to full investigation of a master..." It is evident from the above statement that Iranian physicians after almost five centuries which have been generally medical books in Tazi language, they have freed themselves from the constraint of the Arabic language by the ancestor help and have found intellectual and literary independence and they could to do this affair in the best way possible which is a perfect and unique example of Persian medicine professors, Seyyed Ismail, who could to bring to the emergence platform the

Modernization of Iranian medicine in the best way (3). The Agharaz book is more concise than Zakhireye Khwarazmshahi and is more detailed than Khafi Alaei. There are copies of this book in Iran and world libraries. The beginning of the Agharaz from written manuscript in 789 AH which is kept in the central library of Tehran University and has been published by Iran Culture Foundation (No. 30 Science in Iran) in 1345 SH as follows:

"In the name of God, the Most Gracious, the Most Merciful, but after that, praise be to God Almighty and prayers and peace be upon Messenger of God, Muhammad al-Mustafa and all his family".

It should be known that whoever will seek a means for kingdom assembly or will receive a service and a gift, no means or service and no gift is like a scientific gift, especially because a king, as God and God's son, the king of the righteous world, Wali Nemat Karim al-Tarfin Nasra al-Din, Alaa al-Dawlah, Fakhr al-Salatin, Abu al-Muzaffar, Atsez Ibn Khwarazmshah, Hossam, Amirul-Mominin Nasrallah, Lieute... The Servant of the supplicant of Ismail Ibn al-Hasan al-Husseini al-Jurjani Baghsoor, whenever he dares and performs a scientific service within knowledge, fault and service and presents it to the supreme assembly and offers such a service to angels of God.

Baghbo said according to the decree of honor and merit, but who presents scientific service to the royal assembly, it is correct to perform that service from his fund and take it from his fund and the fund is the servant of medical science and he had been made a little secret more than this and now according to the decree and order of the supreme assembly, Laazal Alia and the embassy of Imam Ajl Majd al-Din Abu Muhammad Sahib Ibn Muhammad al-Bukhari, in the continuation of the days of God and according to the discussion and inspection of that God who is eternal and according to the wish and request of this ambassador, this service was performed and any author who has wrote a book more than me, they have mentioned the place and honor of that book in the sermon of his book and has mentioned its benefits and the order that he has given and the

occupation in which the science issues have been expressed, they have been narrated and explained all of them.

If the servant of the supplicant is also in this place to mention this book to his honor, place and rank, there is no problem, following the predecessors as it has been their rule and because of its small size and in a great meaning and in a concise way and with many benefits and explanations of detailed problems, no point in its position and the scientific benefits of this book are not excluded; rather has discussed the problems and positions of the possessions and has performed with the purpose of research and has discovered it, any scholar who knew about this science and the secrets and details of this craft, if he studies slowly, he knows that every point has been given and for this reason, this book was called “al-Aghraz al-Tabiyyah and al-Mabahis al-Alaiyyah” and servant's claim is that nowadays, there is no summary such thing as perfection about the medical science and the correctness of this claim was determined by studying and appeared by comparison. Almighty God blessed the collection of this book for god of Wali Nemat and for his government and province and provided the blessings of God and the success of his friend with his blessing and grace and the foundation of this book was divided into five parts and each part is a book as be remembered and the list or speeches and parts and chapters of each part is that we will remember by God's grace and well known. The sermon of the book introduction is used that say that first, Seyyed Ismail Jurjani has

authored the book for Atsez, the son of Khwarazmshah; Second, he has considered the book as a scientific service for the king, which he has donated from his capital and fund; third, he has performed the service of authoring the book according to the recommendation of Majad al-Din Abu Muhammad Sahib Ibn Muhammad al-Bukhari; fourth, he has mentioned a brief description about his authored book; fifth, he has composed the Agharaz book after Khafi Alaei (3). As Jurjani has mentioned in the introduction of the book, Agharaz book includes the following five books and includes general medicine course, pathology, health, diseases of the body from head to toe, pharmacy, pharmacology and the preparation of medicinal citrus:

The first book: It is about the medicine limit and its subject and remembering its scientific and practical part and mention of the pillars and temperaments that are in fifteen discourses.

The second book: It is about maintaining health and is in sixteen chapters.

The third book: It is about the treatment of diseases and their causes and symptoms from head to toe that are in twenty-six discourses.

The fourth book: It is about medicinal singular spice, its nature, effects, harms, benefits and properties that are in three booklets.

The fifth book: It is about Qarabadin and the mixing the medicines and their mixture and wines and liquors and digestives and spices and potions and pills and what remained is in the verse and three chapters (3).



Picture 3: The first page of al-Aghraz al-Tabiyyah, manuscript in 789 AH (1387 AD).

5-1. More Research about Agharaz

- Mohammad Ibn Alau al-Din Sabzevari (father of Ghiyas al-Din, one of the famous physicians of Isfahan) has authored a book which is called the Copy of Laws of Healing (Zabda or Yakhhlase). This book that has been finished in 871 AH (1466 AD), most of its contents are based on book Aghraz of Seyyed Ismail Jurjani (15).

Jurjani, who knows his medical work, Zakhireye Khwarazmshahi, more than all the introduction of al-Aghraz Tabiyyah that's mean a summary of the Zakhireye says: "Each author who has wrote a book has mentioned the benchmark and honor of that book in his book sermon and he has described its benefits and he has arranged and the possession that he has done about science issues everyone has told and has described, if the servant of the supplicant is also in this place to mention the benchmark and honor and adornment of that book, there is no problem, as following the predecessors has been their rule and that's why it is small size and in a big meaning and in a concise way and with a multitude of benefits and description of problems, expanded, no point has

been omitted from the Agharaz 15 in its position and the scientific benefits of this book. Rather, he has taken possessions in difficulties and discussion positions. He has performed with the purpose of research and has discovered.

Any scholar person who knew about science and the secrets and details of this craft, he knows that every point has been given when he studies and for this reason, this book was called al-Aghraz al-Tabiyyah and al-Mabahis al-Alaiyyah.

And servant claim is that nowadays, there is no summary such thing as perfection about medical science and the correctness of this claim was determined by studying and appeared by comparison".

- The medical textbooks that were most common among all the books, the chapters of Boghrat, Hanin's "Problems" and Razi's "Madakhel" books were appropriate books for the first year of education. Abu Sahl Saeed Ibn Abdulaziz Neishaburi (al-Nili) has written a commentary for these three books, which were studied by most students. The Courses of the second year of

medical education were Zakhire of Thabit Ibn Qara, al-Mansouri Razi and Agharaz of Seyyed Ismail Jurjani. Hadaya, Jovini work or Kefayeh, Ahmad Ibn Faraj work were added to these books. This comprehensive and difficult list was enough and even more than needed for many medical science students (6).

- The Agharaz manuscript has been written in 789 AH (142 lunar years after Jurjani's death), which has been photo-printed by Iran Culture Foundation in 1345 SH.

6. Khafi Alaei

The Khafi Alaei book or al-Khafiya al-Alaeiyyah, which is in two small volumes, Jurjani has written it in the order of Alaa al-Dawlah Atsez of Khwarazmshah and he has summarized the contents importance of the Zakhireye khwarazmshahi in it. Jurjani says at the beginning of this work: But the author of this book, Amir Seyyed Ismail Ibn al-Hassan Ibn Ahmad al-Husseini al-Jurjani, says that when we finished collecting the Zakhireye khwarazmshahi book, Zakhire book is big book according to the words of Amir Isfasalarajl, Seyyed Alam Bahau al-Din, Umdat al-Islam, Alaa al-Dawlah, the parents of Abul Muzafar, Sultan Khawarizmshah, the book should be as brief as possible. This abbreviated book was in two volumes, it was able to attach narrow and long volumes in the museum (Chakmeh) and that's why this abbreviation was called Khafi Alaei. It is understood from the above text that Khafi Alaei has been authored after the Zakhireye khwarazmshahi and during the reign of Atsez, i.e., between 502 and 504 AH.

Khafi Alaei also had a great reputation like Zakhire among medical books, both during the Seyyed Ismail Jarjani's lifetime and after him. As Nizami Arouzi Samarkandi has mentioned about the medical science and the physician guidance in the fourth article of his books: ((...although it is achieved in this degree which one should always have this Sagas book with himself that experienced masters have composed it, such as "Tahfa al-Muluk" by "Muhammad Ibn Zakaria" and "Kafaya" by "Ibn Manduyeh Isfahani" and "Preparation of all types of error in al-Tadbir al-Tabi)" by "Abu Ali" and "Khafi Alaei and Yadgar" by "Seyyed Ismail Jurjani" because

memory is not trusted...)). It is understood from the above statement that Jurjani has been one of the experienced medical masters and reading his book has been recommended for applicants of medical science. Khafi Alaei is a short course in a medical science like al-Mansouri and it has the same content in the Zakhire book as Razi. The book's subject is about health, scientific and practical medicine and especially about emergency treatments during trips. There are many copies of this medical work in Iran and world libraries. Because this work has not been thick, hence it was easily copied. Khafi Alaei has been lithographed in 1891 AD (1309 AH) in India (Ganpur) in 21 lines in a small Vaziri cut.

Khafi Alaei's book has two parts: the first part has two articles and the second part, which is the practical part, has seven articles. The first article of the first part is about maintaining health and the second article is about the knowledge introduction and each of these articles has chapters.

The first article of the first part consists of sixteen chapters and is as follows: the first chapter on air planning; the second chapter on seasons of the year planning; the third chapter on city and housing planning; the fourth chapter on dressing planning; the fifth chapter on food planning; the sixth chapter on water managing; the seventh chapter on the preparation of wine; the eighth chapter on sleep and vigilantism arrangement; the ninth chapter on motion and motionless; the tenth chapter: on vomiting to laxative medicine; the eleventh chapter: on vomiting to puke medicine; the twelfth chapter on phlebotomy and bloodletting; the thirteenth chapter on other vomiting; the fourteenth chapter on psychiatric symptoms; the fifteenth chapter on care of the elderly and the sixteenth chapter on travelers planning.

The second article of the first part, which is about the knowledge introduction and consists of seven chapters, as follows: the first chapter on recognizing the disease; the second chapter on recognizing maturity; the third chapter on recognizing the crisis; the fourth chapter on recognizing the health signs; the fifth chapter on recognizing the causes that are eliminated due to other cause; the sixth chapter on situations that

appear and are illness sign and the seventh chapter on recognizing the death time of diseases.

The second part, that is the practical part of the book, has seven articles, as follows: the first article is about the wills that the physician should be known about the treatment of the ear; the second article on the diseases treatment of organs from head to toe; the third article on the treatment of fevers, typhoid, smallpox and like them; the fourth article on the treatment of bulges and ulcers; the fifth article on the treatment of bone fracture and dislocation; the sixth article is about keeping the epidermis clean and the body appearance, which physicians call ornament and the seventh article on the treatment of poisons (3).

6-1. More Research about the Khafi Alaei Book

- The second article “on the treatment of organs diseases from head to toe” has eighteen chapters, which includes the diseases treatment of the head, nose, eye, ear, nose, tongue, mouth, larynx, pharynx, throat, catarrh, coughs and colds. (When wind does not sit on the side, people suffer from internal swelling of the side, abdominal pain and vein throbbing (from Montahi al-Arab)) (swelling of the veil and ribs = pleuritis), pleurisy, pneumonia, stinginess of breath, heart and stomach and types of diarrhea and types of colic and diseases of the anus and liver and spleen and jaundice and polydipsia and kidney and bladder and testicles and male penis and women's diseases and joint pains and Varices (3).

- Jurjani writes about laqwa in Khafi Alaei (p. 138): “Laqwa is the reason that appears in the muscles of eye and face and the eyebrow, skin, forehead and lip turn away from their situation and become wrinkled. Its signs: god cannot pour this water from the right mouth and cannot blow the right wind”.

- Khafi Alaei's book is one of Jurjani's works that is available (2). Dr Mohammad Moin has considered in his dictionary this book among the important works of Jurjani and he writes: Jurjani's important works include Khafi Alaei, al-Tabb al-Maluki, Zakhireye khwarazmshahi, Agharaz, Yadgar, al-Tazkarah al-Ashrafiya fi lasnah al-Tabiyyah, fi al-Qiyas book, fi Tahlil book, al-Munba book and, Zubda al-Tabb (11).

- Khafi Alaei was revised and published by Dr Ali Akbar Velayati and Dr Mahmoud Najmabadi based on several manuscripts and printed copies in 1369 SH. First, these two physicians has wrote a preface about Seyyed Ismail Jarjani' life and works and then have added the necessary medical specialized explanations to the respective subject at the end of each chapter and have adapted it to the current medical points (16).

- Khafi Alaei Gorgani (Jorjani) has mentioned the reason for naming this book at the end of the introduction and has wrote that he has wrote this book in two narrow and long volumes for a physician who constantly do practical work and it is needed to get himself to the scene of the accident quickly by horse (emergency physician) to can locate this book in his museum (riding boot) so that if necessary he can take a look at it while riding, that's why he has called this book “Khafi Alaei” (can be hidden in the boot). Gorgani has written at the end of the introduction like this: I asked God Almighty for help to finish it (16).

- Khafi Alaei has been lithographed in 1891 AD (1309 AH), on 114 pages in Ganpur of India and has been published. Also, this medical work has been printed and has been published in Tehran (3).

7. Zakhireye Khwarazmshahi

The “Zakhireye khwarazmshahi” book (picture 4) which Seyyed Ismail Jurjani has written it in Farsi in 504 in the name of Qutb al-Din Muhammad Anushtkin Khwarazmshah, since its authoring, it has always been considered as one of the medicine pillars. This important medical work has been included among important books of basic medicine, such as Jalinus Eshar and containing Muhammad Ibn Zikriya Razi, Ibn Sina's Law and al-Maae Abu Sahl Mashee's book. Anyone who wants to become skilled in medicine should read one of them carefully (2). The importance of Jurjani's medical works is because that has been comprehensive of all the medicine principles, like simple and concise medical books that had been written in Arabic before this era and it has made unnecessary for the reader to study likes of them. Zakhire, due to the importance that it had found in the medicine world, a translation of it was done in

the Arabic language and then another translation was done in Turkish language (by Abulfazl Muhammad Ibn Idris al-Daftari, died in 982 AH). The Zakhire is twelve volumes that each book is divided into several chapters and includes all chapters of medicine, dissection and singular and compound spices. Seyyed Ismail Jurjani himself had translated the Zakhire book in the Arabic language at the end of his life (2). There are numerous copies of this book in Western and Iranian libraries (11). The literary importance of Zakhireye khwarazmshahi is that many words and proper compounds used in medical knowledge have been used in it. Jurjani, by writing such a venerable and huge book, has proved that the Persian language is prepared to author the work largest and most detailed in medical knowledge. The method of this great physician and author of the Islamic realm in authoring the Zakhire is the general method of the authors of scientific works, except that he “didn't have an unnecessary adverb in abandoned words or terms of Persian against singulars and compounds of Arabic and wherever the common language of the time requires, it is attempted to bring Persian words or combinations” (2). Seyyed Ismail Jurjani writes about the weather of Khwarezm and the reason of diseases abundance in this comprehensive book:

“As the prayer servant of this book compiler, Ismail Ibn al-Hasan Ibn Muhammad Ibn Ahmad al-Hussaini al-Jarjani, give the status of this province and knowed the need of the people of this province for the medicine knowledge, this book served this god and because he was always present in the parliament, this God saw great scholars and imams of the present time and you have heard a point from the word of this honorable God when you spoke about every science, which many great people are unaware of it and if you asked a question when you had a problem that no one could answer and this meaning testifies to the soul honor, the pure gem, the great effort, the abundant knowledge, the clear mind, the sharp understanding, the right character, the right mind and the complete wisdom and he

tried to serve in such a way that it is possible to use such a criterion and open the treasury of this God and although has served in Persian and known the words of Tazi that are famous And it is easier to talk in Tazi, that word also mentions Tazi to be away from assignment and more fluent in languages, God willing and more of these words should be spoken in Persian, so that not to be hidden from anyone and each book that they have made scientific, has another benefit and property and the property of this book is complete, because of his purpose he came to know what the physician should know in each chapter, he has mentioned science and practice completely and it is clear that there is no book available about this subject and although they have wrote many great books in the field of medicine, there is no book that a physician exclude them from other books by this book and his purpose is not achieved until the other books do not have any purpose and purpose does not seek anywhere and this book has been collected in such a way that the physician does not need any other chapter in any book and his mind is not scattered because of the return of books and the praying servant of that time who studied Hami medicine and looked at Hami medical books, wished a lot that what should be known about Hami medicine should be included in that book and he did not find any book, therefore he intended to be done what the servant had wished by the blessings of this God's government and the purpose of the praying servant in writing this book was to achieve such a book in the time of this God and such a souvenir of this servant should remain in his government so that the right of his blessing be given to this service and the scholars of the times who study this book and compare it with other books know the difference between this book and other books and testify that this is a complete collection and justice seekers of this science has been given in this book and the way to reach the purpose of medical has been shortened for everyone and he has fulfilled what he has promised in this sermon, thank God and from him...” (2).



Picture 4: The opening page of the Zakhireye Khwarazmshahi, manuscript in 603 AH

8. Zakhireye Khwarazmshahi Books

The Zakhireye Khwarazmshahi book has twelve volumes (2). The number of magazines is less than twelve volumes in other sources. Anyway, its volumes are as follows:

The first book: This book consists of six discourses and understanding the medicine limit, ingredients (pillars), temperaments, confusions, habits, dissection of the organs and powers. In addition to the dissection, has also been paid to physiology in this book.

The second book: The second book has nine discourses and the status of the body, health and illness, symptoms of diseases and their causes, pulse states, sweat, urine and feces have been considered in it.

The third book: Has two parts, each is divided into seven discourses and it has been dedicated to maintenance of hygiene and well-being.

Air health, housing, status of water, physiology of food and recognizing them, therapeutic use of some wines and intoxication state, sleep and wake, movement and stillness, use of clothes, advantages and disadvantages of perfumes and cosmetic oils, vomiting, blood drawing, diarrhea

and laxatives, maintaining health planning, rearing children planning, the care for the elderly and travelers are discussed in this book. This book should be called the health of life and the living.

The fourth book: This book has four discourses and is as follows: how to diagnose diseases and the maturity or period of the disease, the crisis and peak of the disease and introducing the knowledge.

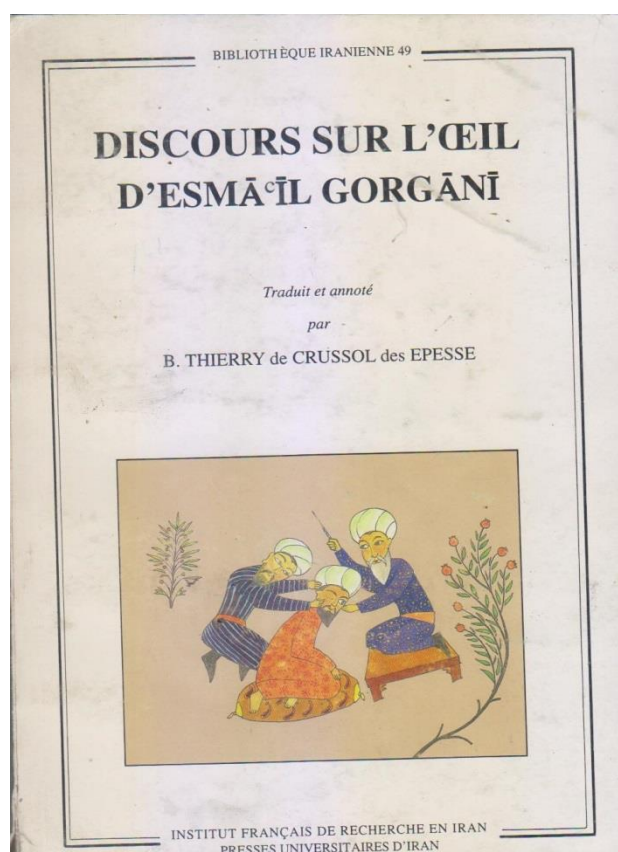
The fifth book: the types of fever and their causes and treatment recognize that includes six discourses. The main subjects of the fifth book are as follows: What is fever and how many kinds are there, recognizing running fever and its causes and symptoms, infectious fevers and the causes of infection, kinds of infectious fevers and the treatment of each, constant fever, smallpox and typhoid fever and their treatment, return of the disease and the recovery state.

The sixth book: Has been paid the description and treatment of diseases of different organs of the human body from head to toe in this book and has 72 chapters. This book includes about 40% of the Zakhireye Khwarazmshahi contents. The main list of the sixth book subjects is as follows: Head diseases in five parts, in which brain edema and

its membranes, madness and mental disturbance, melancholy, wake and insomnia, dizziness and vertigo, paralysis and kinds of headaches have been discussed.

Eye physiology, eye diseases and its treatment (picture 5), which is a detailed and fruitful discussion, diseases of ear and auditory system, diseases of nose, physiology and diseases of the mouth, teeth and tongue the pharynx and larynx situations and its diseases, diphtheria, diseases of the respiratory system and its treatment, diseases

of the heart and its treatment, diseases of the breast, stomach, esophagus and their treatment, diseases of the liver, spleen including jaundice and dropsy, diarrhea and slimy of intestines, anal diseases and its bleeding, intestinal worms diseases and its treatment, colic and its treatment, kidney and bladder diseases and its symptoms and treatment, male reproductive diseases, the situation of women and their diseases, back pain, joint deviation, gout, sciatic nerve swelling (sciatica).



Picture 5: Eye surgery in Zakhireye Khwarazmshahi

The seventh book: This book includes kinds of edema, ulcers, wounds, injuries, cramps, fractures, joints dislocations and burns. Also, some surgeries, heating and orthopedics have been described in this book.

Eighth Book: Adornment and grooming and cleanliness from head to toe have been discussed in this book.

Ninth Book: This book is dedicated to types of poison, snakebite, dog and other animal bites,

rabies and insect bite. Jurjani has apologized to the readers for finishing the book late when he reached this stage.

The tenth book: It has dedicated to the benefits of animal organs or drugs of animal origin and has been arranged based on alphabetic.

The eleventh book: This book is called Qarafazin (Qarabadin/ Aqrabadin/ Qarafazin) that means “a prescriptions collection of medicines preparation” and has two discourses and is described as

follows. Various medicines related to various organs and various diseases of the body have been mentioned in the first discourse. The second discourse of the eleventh book is dedicated to pharmaceuticals, i.e. the practical kinds of drug combination such as syrup, tablet, poultice, drop, suppository, how to make and maintain each of the single and compound drugs, the dosage of drugs prescription and the law of weights and many other points (17).

8-1. More Research about Zakhireye Khwarazmshahi

- Cyril Elgoud has considered the Zakhireye Khwarazmshahi superior to Abu Ali's "Law in Medicine" and writes: "This point should not be denied that Ibn Sina's Law book has been written very vague, while the Zakhireye Khwarazmshahi has clearly been written and its content is understandable easily. It is understanding" (6).

- Dehkhoda has researched about the importance of the Zakhireye Khwarazmshahi and has considered it better than the Razi and Law of Ibn Sina's medicine and writes in his dictionary: "Some craft people have preferred the Zakhire to the Razi and the Law of Bu-Ali and also, it is a unique masterpiece in Persian prose in terms of politeness. We say unique because of that this author has fulfilled his intentions with eloquent and unequivocal eloquence everywhere in the field of medicine with many chapters and a variety of topics, which is the real industry, while those two people have only done their art in expressing historical events and those who have been seduced by the childish sophistry of a biased group and they consider low the current Persian language for scientific purposes, if they practice a few such books a day, this compound language is most eloquent language for explaining the science topics when they see the sun for half a day" (18).

- Was with Baha al-Dawlah (died: Ray 913 AH/1507 AD) a famous physician of the ninth and tenth centuries AH and with another physician named Ghiyath al-Din of contemporary century who practiced medicine in Isfahan. This physician has a book with the title "Muraat al-Saheeh fi al-Tabb" which is an important representation of Arab medicine and is mostly based on the Zakhireye Khwarazmshahi book of

Seyyed Ismail Jarjani, but anywhere in the book, he has not mentioned the sources that he has used (6).

- Joseph Labrosse, was born in 1636 AD (1046 AH) in Toulouse of France. He has chosen the religious name "Angel Los Saint Joseph" for himself after entering the Colony of the "Barefoot Carmelites", he has reached Isfahan in the winter of 1664 AD (1075 AH) and he is the author of a book called Pharma Copea Persica, which he has published it in Paris. He writes: "I read a lot of Arabic and Persian books and above all the Zakhireye Khwarazmshahi". Common and studied books of that time have been Zakhireye Khwarazmshahi of Ismail Jarjani, Teb of Yousefi and Kefaye of Mansouri (6).

- Jurjani most likely has wrote the Zakhireye Khwarazmshahi for Qutb al-Din Muhammad (reigned from 491 to 521 AH/1097 to 1127 AD) after 504 AH (1110 AD). This book is the first medical encyclopedia which has been written in Farsi instead of Tazi language and is one of the basic and comprehensive medical works in traditional medicine. This medical work of Satreg includes almost 75,000 words in nine books (75parts, 1107 chapters). Also, the tenth book named Qarabadin has been attached to it later. He has authored another book for the successor of Qutb al-Din, Atsez (reigned from 521 to 556 AH/1127 to 1156 AD), called Agharaz al-Tab which has been mostly based on the Zakhireye Khwarazmshahi and it has been finished around 521 AH to 530 AH (1127 to 1135 AD)

- An unknown translator has translated a summary of the Zakhireye Khwarazmshahi into the Arabic language. This matter is very noteworthy because there are practically no other translation of Persian medical works into Arabic (13).

- Seyyed Ismail Jurjani has mentioned a person named Ahmad Farrokh professor in the tuberculosis topic, in the treatment section of the mentioned disease with milk in the Zakhireye Khwarazmshahi, who seems to has been one of his medical professors. Jurjani says: "And Ahmad Farrukh professor, may God have mercy on him, has mentioned in his book Who will tell me the weight of milk should be half of mine and when these animals should be milked, so that they can

eat mountain plants and if there is no spring water, rainwater should be given...”.

- Jurjani has mentioned respectfully several cases such as Ibn Abi Sadiq Neishaburi, one of Ibn Sina's students in the Zakhireye Khwarazmshahi. He, who has lived in Neishabur for some time, has been profited from his presence. From this point of view, Jurjani can be considered with an intermediary as one of Ibn Sina's students. He writes in the Zakhire: “And Khwaja Rais Abu al-Qasim Ibn Abi Sadiq al-Nisaburi, may God have mercy on him, is among the recent ones and he wrote a book about the description of the dissection book and the organs benefits book of Galenus and the eloquent inquiries of Kurds, Zakhire 34” (17). Perhaps Ahmad Farrokhi same Ahmad Faraj is the owner of the Kefayeh book, which his name has mentioned in four articles (p. 70), but there is no description of his situation (17).

- From the point of view of Persian literature and medicine, the Zakhire book is one of the greatest works of medicine, which is actually a medical encyclopedia course.

Because it has been written in Persian, it was used by many old physicians and traditional perfumers for centuries.

- The Zakhireye Khwarazmshahi has been translated into Urdu language and now, using it by sages of India is common.

- Professor Edward Brown has noted the advantages of this medical work and its merit in his scientific lectures.

- Dr. Abbas Nafisi has considered it the basis of his brief book about Iranian medicine (6).

- Students who were studying and investigating more and deeper about the philosophic and theoretical principles of diseases and pathology in general, it is recommended to these students to read in free time one or more paragraphs from the books of Galenus's Sixteen Articles, al-Hawi of Muhammad Ibn Zakaria Razi, Kitab al-Malki of Ali Ibn Abbas Magusi Ahwazi, One hundred chapters (parts) of Abu Sahl, the Law of Ibn Sina, or Zakhireye Khwarazmshahi (6).

- The midwifery work was not completely limited to women during the Jurjani era. This point is deduced from the fact that there is a chapter about difficult births in all major and detailed medical books. Most of the midwives of that time were women without sufficient information and thus it was not expected that they can read and understand the important books of that era, such as Ibn Sina's Law and Zakhireye Khwarazmshahi's Jurjani and act according to them (6).

- The law book of Ibn Sina has a comprehensive chapter about pregnancy, which also includes a subject about the difficult birth. There is also a similar chapter in the Zakhireye Khwarazmshahi, a part of which is about induction of parturition by drugs or medical devices (6).

- Seyyed Ismail Jurjani received a salary equal to 1000 gold dinars per month As soon as he entered the court of Khwarazmshah (6).

- Jurjani writes about a peritoneal wen, the only treatment is to cut the lower abdominal muscles and continue the cut to the depth of the peritoneum, put the hand in and draw out as much pus as possible and then locate a tube inside the wound to remove the pus (6).

8-2. Publishing the Zakhireye Khwarazmshahi

The fevers part of the Zakhireye Khwarazmshahi, which constitutes about 50 pages of the whole book, has been lithographed and published with the title “Hamiyat” in 1282 AH (1865 AD). The first and second volumes of Zakhireye Khwarazmshahi has been printed and published by the University of Tehran by the efforts of Mohammad Taghi Daneshpajoh and Iraj Afshar from the copy belonging to the first half of the seventh century in 1344 SH and 1350 SH (the first volume on 218 pages and the second volume on 230 Page). Also, the first volume of the Zakhireye Khwarazmshahi has been published by Etemad, Shahdad and Mustafavi in 1344 SH. The second volume of the Zakhireye Khwarazmshahi has also been published by Jalal Mostafavi in the Society for the National Heritage publishers in 1349 SH. The third volume of the Zakhireye Khwarazmshahi has also been published in two parts: the first part has been published on 210 pages in 1352 SH and the second part has been

published on 207 pages in 1356 SH, by Jalal Mostafavi by the same publishers. It should be said that the edition of the first three books of Zakhireye Khwarazmshahi has been performed from one copy and the words explanation and book problems are imperfect and it does not have the corresponding list. The remnant of the Zakhire components, that is, the part, has not been published generally (17). A complete or incomplete copy of Zakhireye Khwarazmshahi is found. Saeedi Sirjani has published a complete and exquisite copy of the entire copy of Zakhireye Khwarazmshahi (that is apparently the oldest complete copy of this work) by printing a photo on 75 large pages by Iran Culture Foundation in 1355 SH; Date of writing this copy is 603 AH (73 lunar years after Jurjani's death) (17).

9. Yadgar

Yadgar is a brief book about medical science and one of the compilations of Seyyed Ismail Jarjani, which is apparently the fourth compilation of his medical works.

This work has been one of the studied books about the medical science like the other three compilations of Jurjani during his lifetime and after his death, as Nizami Arouzi Samarkandi says in his four articles in the fourth article about the medical science and the physician guidance: "... Because experienced masters have composed from this small book, one always has one with him, such as "Tahfa al-Muluk" of Muhammad Ibn Zikariya, "Kafaya" of Ibn Manduyeh Isfahani, "Preparation of Types of Errors fi al-Tadbir al-Tabi" of Abu Ali, "Khafi Alaei" and "Yadgar" of Seyyed Ismail Jarjani, because memory is not trusted..."

There are several copies of Yadgar's book in the libraries of the world. A copy of it is available in the Tipu Sultan library (Teachings of the four articles-the fourth article – p. 406 of Dr. Mohammad Moin). Also, there is this medical work in the library of Tehran University and the Medicine Faculty of mentioned university and the library of the late Dr. Hossein Miftah (P. 610 of Persian manuscripts list of Regional Cultural Institute Journal No. 14, authored by Mr. Ahmad Manzavi, Tehran 1348 SH).

The Yadgar has five parts as follows:

The first part - is about the scientific benefits that is used in medicine.

The second part - is about the treatment of diseases from head to toe includes thirty chapters.

The third part - has two chapters.

The fourth part - has eleven chapters.

The fifth part - has three chapters (quoted from the Persian manuscripts list, authored by Ahmad Manzavi, in 1348 SH) (3).

This medical work includes a course of medical knowledge, diseases and pharmacy like other medical works of Jurjani, which has been used by medical students and physicians (3).

10. Result

A little more than two decades after the Abulqasem Ferdowsi death, Iranian great epic poem poet (born 329/330 - died 411/416 AH), who wrote the Shahnameh in Persian, including the kings of the fictional and historical dynasties of Iran and created an eternal masterpiece, Seyyed Ismail Jurjani appeared in the other corner of Iran vast land and continued the life path of that honorable man by writing several Persian works on medicine. Jurjani authored his most basic medical works in Persian language, such as Zakhireye Khwarazmshahi, Khafi Alaei, Aghraz and Yadgar, after more than four centuries of Arabic writing and he used many words and compounds in these works which deserve to be used in medical knowledge.

In fact, Jurjani is the first person who researched all the subjects of medical knowledge in his medical works as predecessors have thought, by new researches and studies, with new researches and studies and collected many Persian words and terms of medical knowledge that was existed until that time and were possible to disappear, in medical and other works. He proved that the Persian language is ready to author the most detailed and comprehensive medical books. The result of the great and perdurable and parturient work of Seyyed Ismail Jurjani was that Tohfa Hakim Momin (or Tohfa al-Mominin) of Muhammad Momin Deilmi Tankabani and "Makhzn al-Adowieh" with the original name "Majjam al-Jawama" authored by "Mir Hossein Ibn Mohammad Hadi Alavi Aghili Shirazi, a

physician of Khorasani origin” and the likes of these precious works may be influenced by Jurjani's Persian books, but it should be mentioned that their authors have used the opinions before him and their own innovations in the medical works after Jurjani. Certainly, most of the books (perhaps all medical works) in our country and many compositions of this Indian subcontinent have been profited from the medical works and ideas of Seyyed Ismail Jurjani. If Seyyed Ismail Jurjani had not appeared a thousand years ago and had not become the propagation ensign of Persian language, what is certain is that our country would not have today's desired position from the viewpoint of political, medicine, religious and other knowledge.

Conclusion

Zany al-Din Sayyed Isma‘il ibn Ḥusayn Gorgani (also spelled al-Jurjani) (c.1040-1136) was one of the Persian prominent pioneers and Scholars of traditional medicine in 11th and 12th century AD. He was a royal physician from Gorgan. In addition to medicine and pharmaceuticals, Jurjani was an adept scientist in theology, philosophy, ethics, human anatomy and chemistry.

Zayn al-Din was a pupil of Ibn Abi Sadiq and Ahmad ibn Farrukh. In 1110, when he was already a septuagenarian. Arrived in Khwarizm, a province of Persia and became a court physician of Kwarizmshah Qutb al-Din Muhammad 1 (reign: 1097-1107). He continued as court physician and composed his 750,000 word medical encyclopedia, Dhakhirah-I Khwarizmshahi (Thesaurus of the Shah/King of khwarism also known as the “Treasure of Khwarizmshah”) (19).

Jurjani was a court physician until some unspecific time and then moved to Merv, the capital of Sultan Sanjir (rolled 1118-1157) and died there at the age of about seventy (19).

Dhakhirah-I Khwarizmshahi is a complete and comprehensive compendium which covers all aspects of medical subjects such as medicine, surgery and anatomy physiology, hygiene, nutrition etc. Jurjani although referred to Avicenna's Canon of Medicine but his medical

encyclopedia is not a merely translation of Canon, is a Complementary of canon and other medical works.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest related to this research.

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