

## ORIGINAL ARTICLE

### Modernization in the Field of Medicine and Health in Pre-Constitutional Iran: A Case Study of the *Ganjineh-e-Fonoon* Journal

#### Abstract

At the beginning of the Qajar era, Iran's relationship with the West created the ground for political, social and cultural developments. One of the most important advantages was that Iran's relations with the West led to the introduction of new ideas and approaches in the field of medicine and health in Iran. At that time, the low-quality healthcare and medical services provided in Iran, compared with the development in Western medical sciences attracted the attention of some Qajar periodicals and journals. One of these journals was *Ganjineh-e-Fonoon*, which devoted itself mostly to publishing articles on the progress made in medical and health issues. This periodical was first published before the Constitution Movement in Tabriz. An examination of the articles published in *Ganjineh-e-Fonoon* showed that while most articles welcomed modern medicine, they challenged the credibility of traditional medicine. Regarding this, it can be claimed that this journal, as one of the influential periodicals of the day, played an important role in informing and helping people in their transition from relying on traditional medicine to modern medicine. The present study is a library research which has employed a descriptive approach in the analysis of the data collected.

**Key words:** *Ganjineh-e-Fonoon*, Qajar, Health, Medicine, Social Change

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## Introduction

Throughout history, there have been various diseases from which people of different countries suffered. Gradually, having gained more and more medical knowledge, human beings sought to cure diseases. Nevertheless, in Iran, during the Qajar period, Iran's poor medical and health status exposed Iranians to various diseases. During this period, traditional medicine was in practice and Hakims (traditional doctors), who followed Avicenna's approach, did not benefit from new sciences in treating patients. In the meantime, people like barbers, prayer writers, dervishes, mullahs, and sometimes fake doctors used to treat patients with no experience and/or knowledge in medicine at all. As a result, over the years, many people lost their lives as a result of various illnesses, improper treatment methods, and poor hygiene. To overcome this problem, during the reign of *Fath Ali Shah*, a number of students were sent abroad to study modern sciences and techniques in the field of medicine and medical sciences. In addition, with the expansion of Iran-West relations, some schools were established in Iran closely following the Western approach to the medicine and science. This played an important role in introducing modern sciences to Iran. Memorial School, founded by religious preachers, the Presbyterians, was one of such schools established in Tabriz in 1881. This school was very influential in promoting modern sciences, especially modern medicine. This was welcomed by some intellectuals and founders of *Ganjineh-e-Fonoon* periodical, such as Hassan Taghizadeh. It is worth mentioning that Taghizadeh, who was one of the founders and main writers of *Ganjineh-e-Fonoon*, was educated in this school, studying sciences, such as ancient medicine, modern medicine, and the science of dissection).

The present study is to show the role played by *Ganjineh-e-Fonoon* in sharing new findings in medical sciences during the Qajar period. Therefore, the present article is an attempt to answer the following questions: What has been the main reason for the journal's focus on medical and health issues? And what effect has this periodical had on the medical community and healthcare during the Qajar era?

## ***Ganjineh-e-Fonoon* Journal and its impact on the medical community of the Qajar era**

In 1902, Hassan Taghizadeh, in collaboration with some of his colleagues, namely Mirza Mohammad Ali Khan Tarbiat, Mirza Seyyed Hossein Khan Adalat, and Mirza Yusuf Khan

Ashtiani Etesam Daftar, launched a scientific journal called *Ganjineh-e-Fonoon* in Tabriz. (Figure 1) This journal, using the lithographic method, was published once every 15 days in beautiful calligraphy.<sup>1</sup> *Ganjineh-e-Fonoon*, except for the first two issues, was written in Mirza Yusuf Khan Etesam's calligraphy. Before *Ganjineh-e-Fonoon*, there was a similar periodical belonging to Falahat Mozaffaril published in 1900. It was published in Tehran with the aim of spreading scientific and technical issues.<sup>2</sup> *Ganjineh-e-Fonoon*, however, in addition to its interest in modern sciences, paid special attention to publishing modern medical papers. An examination of the biographies of the founders of *Ganjineh-e-Fonoon*, such as Mohammad Ali Tarbiat and Seyyed Hassan Taghizadeh, showed that they both were familiar with modern medical and health issues, as both of them, in their youth, along with being involved with political and national activities, educated in modern medicine as well. Mohammad Ali Tarbiat was raised in an educated family and learned sciences such as

1- Ashouri, 2003, 310-311.

2- Ghasemi, 1997, 3-5.

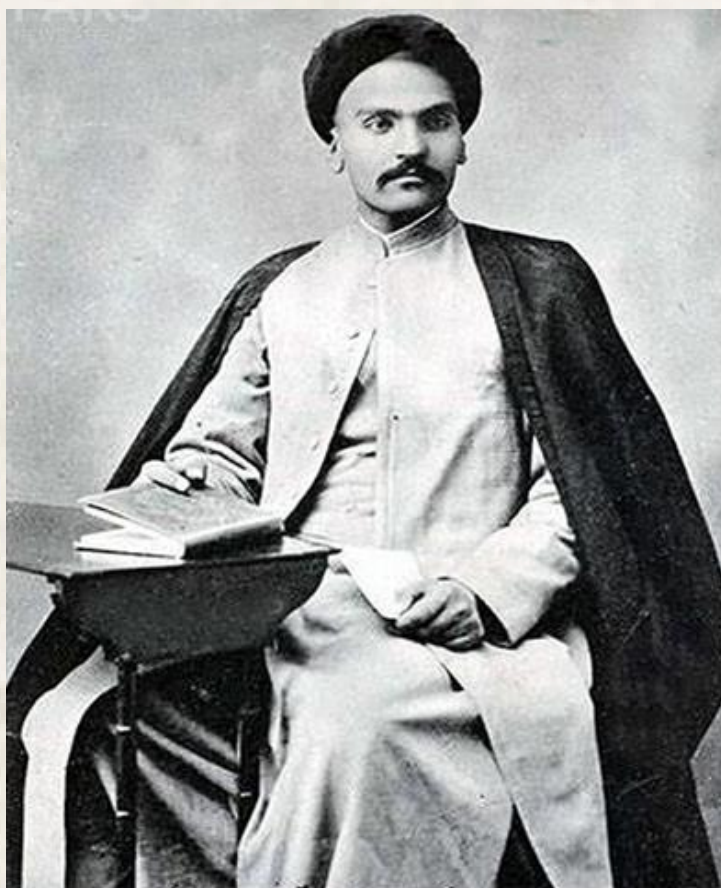


Figure 1. Seyyed Hasan Taqizādeh, Founder of the magazine(*Ganjineh-e-Fonon*)



astronomy from his father as a child. Later, he learned medicine from a man, named Mirza Nasrullah Saif al-Atab'a<sup>3</sup>. Taghizadeh also studied modern medicine as a teenager at the American Memorial School. Therefore, having studied new medical sciences and being aware of the low-quality status of healthcare in the country, Taghizadeh and Tarbiat paid special attention to following and disseminating modern medicine through publishing scientific articles. The journal was published in four separate sections, each with four pages<sup>4</sup> for one year (in twenty-four issues). Haj Mirza Yahya Dolatabadi was very active in publishing the journal which was more popular in Tehran. Publication of the journal made Haj Mirza Yahya Dolatabadi and Taghizadeh close friends. The first issue of the journal was published on January 30, 1903 and the last issue on January 4, 1904. (Figure 2).

3- Tarbiat, 1978, 25-26.

4- Taghizadeh, 1999, 32-34.

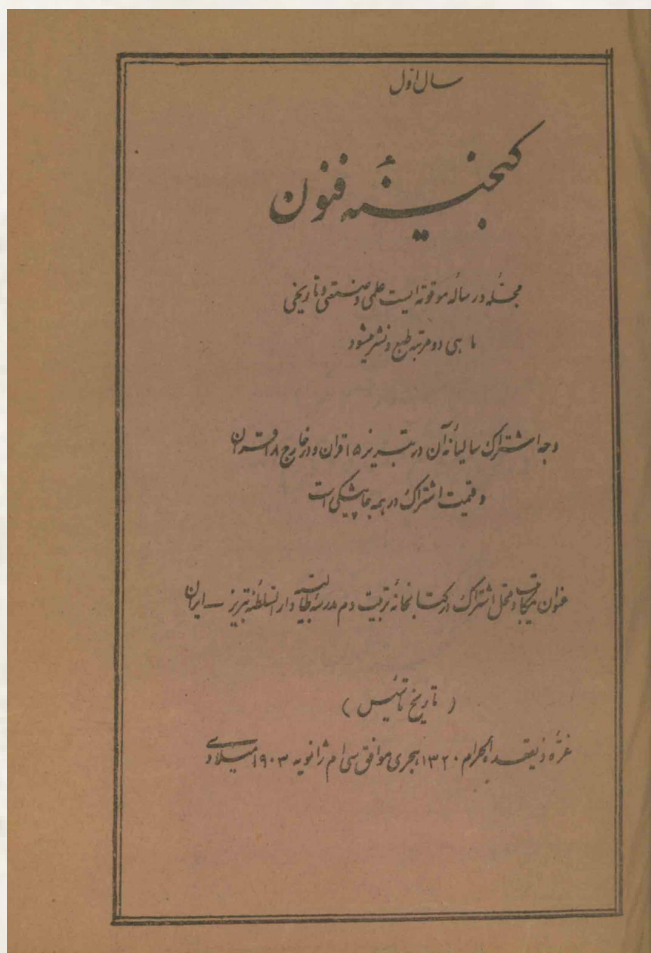


Figure 2. The first page of the *Ganjineh-e-Fonon*

The publication of the journal and informing people about the modern medicine and its superiority over the tradition



one, along with the effectiveness of modern medications, paved the way for Hassan Taghizadeh to launch a pharmacy. Taghizadeh writes in his memoirs:

Having gained some experience as well as making some progress in medicine, I practiced it for a while and began visiting patients. In the meantime, Mirza Mohammad Ali Khan Tarbiat, one of my classmates, and I opened a pharmacy and imported medicines from Germany. Initially, we made some profits from selling medicines. Meanwhile, we befriended a well-known Armenian physician called Dr. Pashayan. He was an Ottoman immigrant and proficient at his craft. He helped us a lot by importing books and medicine from abroad. Later, we made a contract with him to visit patients in our pharmacy for a couple of hours every morning.<sup>5</sup> Despite a small number of issues, *Ganjineh-e-Fonoon* journal was well received. Examining the content of some journals, contemporary to *Ganjineh-e-Fonoon*, it can be seen that *Ganjineh-e-Fonoon* found a good status among people and the press, especially well-educated ones. For example, Nowruz newspaper was published in Tehran at the same time as *Ganjineh-e-Fonoon*. It devoted most of its content to new inventions and discoveries in the West, aiming to inform people of the latest scientific news in the world. Having examined the content of Nowruz, the researchers observed that this magazine took most of its medical and health contents from *Ganjineh-e-Fonoon* journal, so much so that it sometimes republished the same articles already published in *Ganjineh-e-Fonoon* journal.<sup>6-9</sup> Concerning the acceptance of the journal, Taghizadeh pointed out that despite the financial losses; it was well received in cities like Tabriz, Tehran, Bushehr, Shiraz and even Istanbul. This would verify the journal's high popularity among the people and press of the Qajar period. In addition, *Ganjineh-e-Fonoon* journal was easily accessible by people, mainly because of the fact that the journal itself was also responsible for distributing domestic and foreign newspapers<sup>10</sup>. Taghizadeh's reference to the popularity of this journal was also regarded as a proof of the claim that *Ganjineh-e-Fonoon* was available in most parts of Iran and even the Ottoman Empire.

### **Components of modernity in medicine and health in the *Ganjineh-e-Fonoon* Journal**

#### **1- Elaborating New Therapies**

Explaining and analyzing new therapeutic methods was one of the most important topics in *Ganjineh-e-Fonoon*.

5- Ibid.

6- Anonymous, 1903, No. 3: 6.

7- Anonymous, 1903, No. 4: 6.

8- Anonymous, 1903, No. 4: 7.

9- Anonymous, 1903, No. 11: 7.

10- Ghasemi, 1997, 3-5.



There were articles focusing on different branches of medical sciences and explaining the new methods of treatment for the first time. In addition, it was this journal that first referred to “electrotherapy” (the treatment of some patients with electric current) and explained the role of this treatment in treating people with tuberculosis, comparing this with that suggested by traditional medicine.<sup>11</sup> In addition to electrotherapy, topics such as hydrotherapy, arotherapy, and gymnastics were introduced and discussed in the journal, instructing how to put these new methods into practice. For instance, new methods of treating wounds and burns were elaborated on in *Ganjineh-e-Fonoon*. Here, there were articles writing about the effectiveness of the thyme solution for skin burn treatment. They believed that washing the wound with this solution would accelerate its healing process.<sup>12</sup> They also explained and introduced a new ointment for the treatment of a burnt limb (Figure 3).

11- Anonymous, 1902, Vol. 9: 35-34.

12- Anonymous, 1902, Vol. 4: 15.

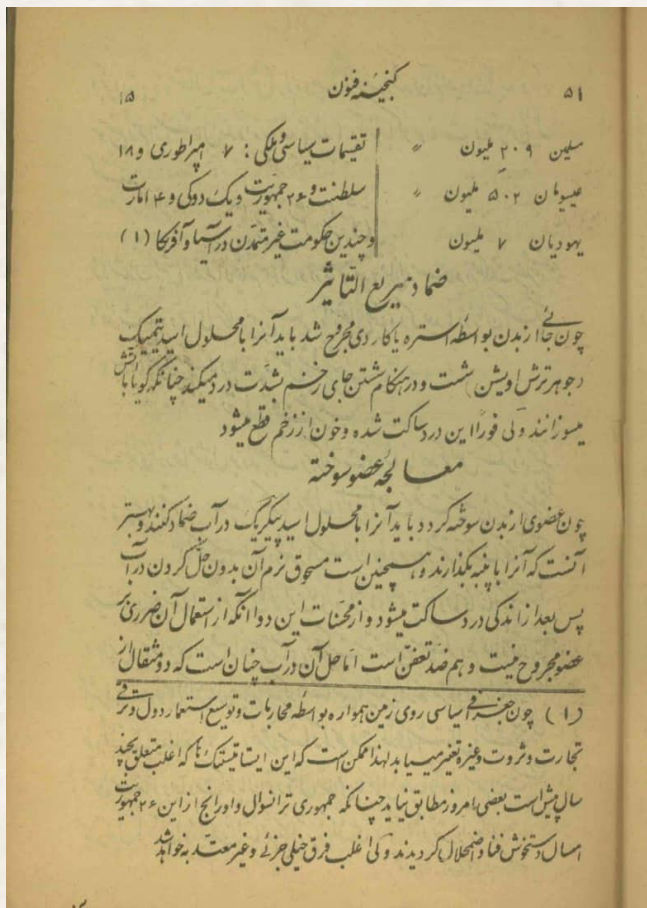


Figure 3. Medical information in the *Ganjineh-e-Fonon*



## 2- Elaborating the way human body fights off microbes

One of the most important issues in the *Ganjineh-e-Fonoon* journal was the role of microbes in causing diseases. By explaining the human body response to a variety of microbes, the journal tried to inform its audience about the role of different organs of the body in fighting against microbes. By questioning superstitious thoughts and ideas, *Ganjineh-e-Fonoon* made an attempt to show the reader how the body resists germs.

The prevalence of various kinds of microbial diseases led the *Ganjineh-e-Fonoon* journal to introduce various types of microbes and explain their adverse effects on the human body, as well as the body's resistance to microbes. The journal published an article, citing Western scientific findings about the presence of more than 30 types of microbes in the human oral cavity that could penetrate the stomach and abdomen, causing diseases<sup>13</sup>. Referring to the role of the human nose in preventing germs from entering the body, the paper pointed out that although various microbes entered the body through the mouth, some of them were destroyed by oral moisture and some by stomach acid.

*Ganjineh-e-Fonoon* illustrated the human body as a strong fortress against microbes, and while trying to acquaint the reader with red and white blood cells, it also explained the role of white blood cells in fighting off microbes.<sup>14</sup>

By discovering the microbe by Pasteur, as well as recognizing and being aware of different types of microbes, France, on the one hand, was able to control the cow's Cholera and prevent the loss of several million livestock in France, and on the other hand, it helped to treat microbial diseases such as typhoid and diphtheria<sup>15</sup>. In addition, the journal, for the first time, informed its readers about serotherapie treatment, which could treat each type of infection (microbial diseases) with its specific germ<sup>16</sup>.

New European advances in the treatment of various diseases, such as typhoid and diphtheria, were among the topics that *Ganjineh-e-Fonoon* never overlooked. After a year of research, British physicians developed a serum to treat typhoid. The journal reported its effectiveness in preventing tuberculosis among British soldiers.<sup>17</sup>

## 3- Observing principles of personal and public health

Another important topic in *Ganjineh-e-Fonoon* was the publication of materials related to public health, which, given the conditions and status of public health in Iran, was of

13- Anonymous, 1902, Vol. 9: 35-34.

14- Anonymous, 1902, Vol. 2: 6-5.

15- Anonymous, 1902, Vol. 3: 11-10.

16- Ibid.

17- Ibid.



utmost importance. The journal, in addition to explaining methods of avoiding food spoilage, illustrated the types of sanitary ware, as listed below:

#### **A. Methods of preventing food spoilage**

The unfavorable health conditions in Iran during the Qajar period made *Ganjineh-e-Fonoon* pay special attention to publishing articles which addressed food spoilage and the way to prevent it. In addition to providing information on how to prevent food spoilage, the journal made an attempt to classify different types of nutrition and the food people eat on a daily basis. The journal also offered scientific solutions for keeping eggs, meat and fish, including the use of salt as an important way to prevent food spoilage. However, along with the method of using salt, it also introduced new methods of preserving food.<sup>18</sup> As one of the most important nutrients in the Qajar period was edible oils, the journal could not overlook oil and its role in people's health. The journal explained how to prevent the spoilage of olive oil by preventing the air from entering the oil container. In addition, owing to the importance of Vinegar in people's diet, the journal suggested that they should put the vinegar containers in boiling water<sup>19</sup>. The journal also informed the readers of the proper way of storing meat. To this end, it suggested using charcoal to prevent meat spoilage<sup>20, 21</sup>. The article also provided some solutions for preserving hunted meat.

#### **B. Informing the reader about the dangers of smoking**

*Ganjineh-e-Fonoon* was perhaps one of the first journals to provide scientific and up-to-date information on the harms of smoking. During the Qajar era, the use of tobacco increased dramatically; it was so important that its impact on important political movement, such as the Persian Tobacco Protest, was vividly observed. Thus, owing to the status and popularity of tobacco consumption in Iran, *Ganjineh-e-Fonoon* devoted itself to publishing articles about its harm and adverse health effect. To this end, the journal published articles and alerted its readers about the presence of dangerous toxic substance (nicotine) in tobacco.<sup>22</sup>

#### **C. Introducing different types of sanitary soaps and their usage**

One of the most important topics in the *Ganjineh-e-Fonoon* journal was to help people of that period to observe their personal hygiene with soaps. Inadequate health condi-

- 18- Anonymous, 1907, Vol. 15: 59.
- 19- Anonymous, 1907, Vol. 16: 12.
- 20- Anonymous, 1907, Vol. 13: 14.
- 21- Anonymous, 1903, Vol. 19: 74.
- 22- Ibid.





tions in Iran during the Qajar period and lack of knowledge about new types of sanitary tools turned soap into one of the most important health items of this period. Prior to the introduction of Western soap, people used naturally home-made washing materials (such as ash and tallow) in Iran. Soap and its importance in individual and public health was so great that this journal, in addition to informing the readers of various types of chemical soaps, wrote articles and acquainted people with the history of soap-making in Iran and in the world. By publishing parts of Mohammad Ali Tarbiat's book entitled "Apprentice, useful industries and their history", *Ganjineh-e-Fonoon* introduced different types of soaps and their production methods. This article, for the first time, provided the readers with a scientific definition of soap.<sup>23</sup>

In addition, the journal explained about different types of soaps and the specific application of each. It wrote in details about two forms of soaps (hard and soft) in six colors, each being effective in eliminating a specific type of germs. The authors also emphasized that soaps, such as liquid soap, almond soap, and wool soap was suitable for hygienic purposes, such as removing stains, cleaning toilets, etc. However, soaps made abroad were believed to be more effective in eliminating contamination than domestic soaps.<sup>24</sup>

#### **D. First Aid: different types of unconsciousness and its underlying factors**

The *Ganjineh-e-Fonoon* journal first defined fainting as follows: it would happen when a person loses equilibrium and lies unconscious<sup>25</sup>. The journal named three issues of fainting, congestion of the brain, and stroke as the most important causes of losing consciousness. It then emphasized the importance of diagnosing the underlying cause of fainting for proper treatment. The article continued elaborating on the prominent symptoms of each type of unconsciousness and its probable effects, namely fainting, brain congestion, and stroke.

According to the *Ganjineh-e-Fonoon* journal, in the face of an unconscious person, the first thing one must do is to find out if the unconscious person has fainted or become unconscious due to a stroke or a the congestion of the brain. The journal sees this very crucial since the underlying cause of lying unconscious (being due to fainting, stroke or congestion) determines its treatment.

Congestion (*Ehteqān*) is also one of the causes of losing consciousness that this journal addressed. The journal de-

23- Anonymous, 1902, No Issue: 15.

24- Ibid.

25- Anonymous, 1903, Vol. 17: 59-60.



fined it as follows: congestion causes blood accumulation in the veins, causing them to be dilated or if in the brain, leading to cerebral congestion. ...<sup>26</sup>. Explaining the causes of vascular or cerebral congestion, the writer assumed being exposed to the sun, staying in a warm place, becoming angry, having mental activities and consuming alcohol as the most important causes of brain congestion. It then looked at the symptoms of this type of unconsciousness caused by cerebral congestion, enumerating symptoms such as red or purple cheeks, red face, and difficulty breathing that required medical first aid. Emergency aid for this type of fainting was as follows: the unconscious person must first be put to sleep on his or her back, with his or her head held high, loosening belts and collar and suspending any part of the clothing that hindered free blood circulation<sup>27</sup>. Then rub the feet with a woolen cloth and put the unconscious person in a well-ventilated room as much as possible and rinse his face and forehead with cold water.<sup>28</sup>

Stroke is also one of the causes of losing consciousness that the journal not only explained, but also prescribed the ways to control and treat it. "Stroke is a severe congestion in which a blood vessel wall ruptures, leading to the cerebral hemorrhage. Here, the blood flows in the brain extracellular space." The next step is to diagnose the symptoms of a stroke. The affected person loses his equilibrium and becomes unconscious after a headache. The journal also recommended medical first aid for the stroke patient. However, the journal, at the end, recommended local treatments such as sticking leeches on the patient's arms and legs.

Fainting was also one of the most important issues that the journal paid special attention to. The logic behind that was the fact that the symptoms, treatment and recommended medical first aid for fainting were essentially different from those advised in case of the congestion of brain and stroke; therefore, the writer tried to emphasize the importance of distinguishing and diagnosing fainting from the other two types of unconsciousness.

The *Ganjineh-e-Fonoon* journal described fainting as follows: "Fainting or unconsciousness may happen because of insufficient blood flow to the brain ..."<sup>29</sup>. Unlike congestion and stroke in which the patient's lips and face becomes red, in case of fainting, the patient is pale and starts to sweat with a weak pulse, signifying the heart's malfunctioning.<sup>30</sup>

Owing to the fundamental difference between fainting, on one hand, and congestion and stroke, on the other, *Ganjineh-*

26- Ibid.

27- Ibid.

28- Anonymous, 1903, Vol. 16: 62.

29- Ibid.

30- Ibid.



*e-Fonoon*, put an emphasis on differentiating them in the first place. Having diagnosed that the patient was fainted, the nurse was advised to help the patient lie on his back, keep his head down and elevate the legs, keep the patient warm, take off his clothes, sprinkle cold water on his face and help him drink water.<sup>31</sup>

31- Ibid.

### Conclusion

From the Qajar period, the relationship of Iranian society with the West led to some political, social and cultural development. One of the most important developments was the establishment of the press in Iran, which helped Iranians be informed about the political and social status of the West. Some media did not confine themselves to political developments and various forms of government and democracy in the West. They strived to acquaint Iranians with the latest scientific and technical issues. To this end, some periodicals felt responsible for sharing Western discoveries and inventions in the fields of science, industry, health care with their readers. One of the most important issues that some periodicals of this period desire to communicate was the publication and dissemination of new medical and health methods, encouraging Iranian health authorities to apply new methods in health and medicine. *Ganjineh-e-Fonoon* was one of the most important journals that published new developments in the field of medicine and health. Years before the Constitutional Revolution, along with other periodicals introducing modern ideas, *Ganjineh-e-Fonoon* devoted itself to disseminating modern medical knowledge and the findings of Western physicians. The journal, also questioned the reliability of traditional medicine and healthcare in the society. Undoubtedly, the publication of periodicals, such as *Ganjineh-e-Fonoon* was crucial in informing people and trying to make them accept new medical and health institutions in the country after the Constitution.

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