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**EASTERN SURGERY IN MANUSCRIPT SOURCES IN THE COLLECTION OF  
THE INSTITUTE OF MANUSCRIPTS OF THE NAN OF AZERBAIJAN**  
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**Abstract**

For many centuries, scientists, creating scientific works in various fields, have enriched world science and culture and thereby contributed to their development. Analysis of existing sources gives grounds to assert that a new culture, a new civilization was formed in the Muslim Middle Ages. The history of medicine, being an integral part of the common human culture, was formed against the background of the general historical development of society according to the laws common to any science. And it is generally known that this era, full of the greatest discoveries and bringing up outstanding scientists - encyclopedists, known to the whole world, was called the era of the "Muslim Renaissance "[1,71].

**Key words:** manuscripts, medicine, surgery, science, history, outstanding scientists, middle Ages, Ancient East, Institute of Manuscripts of the National Academy of Sciences of Azerbaijan.

It was to this time that the highest achievements of Muslim scientists in the field of medicine and, in particular, in the field of surgery, who had a great influence on the further development of world medical science, belong. In addition, many works of the Ancient East, Greece and Rome, thanks to the efforts of Muslim scholars, reached Europe only in Arabic translations. Enriched with the achievements of Muslim science and culture, these works penetrated Europe and gave impetus to the European Renaissance.

As you know, according to Muslim traditions, operations on both a living person and a dead body - vivisection and autopsy - were actually prohibited. For this reason, most doctors in the East were forced to ignore surgery, which was threatened with complete excommunication from medicine and handing it over to ignorant "healers". However, such outstanding scientists as Abu Ali Ibn Sina, Abu al-Qasim al-Zahrawi, Abu Bakr Muhammad Zakariya Razi and many others managed to bypass religious prohibitions and restrictions and, fruitfully using and improving the already known operative methods of treatment, they enriched the medieval surgical science with new discoveries. These scientists had a great influence on the development of both general medicine and surgery, as an independent discipline, which is an integral part of medical science. Indeed, since the times of ancient civilizations, surgery as the most radical part of medicine has come a rather difficult path.

In the collection of the Institute of Manuscripts. M. Fizuli of the National Academy of Sciences of Azerbaijan keeps unique handwritten lists of famous oriental scientists, thanks to whose huge contribution the world medicine and, in particular, surgery were enriched. These are "Zahire-i Kharezmsahi" by Zeynaddin ibn Abu Ibrahim Jurdjani, "Zahire-i Nizamshahi" by Rustam Jurdjani, "Kifaye-i Mansuri" "Tibb-i Yusifi" by Yusuf ibn Muhammad and many others. Each of these manuscripts has a separate chapter, which provides recommendations and describes the means and methods of treatment for fractures, sprains, dislocations, bruises, various wounds and other surgical procedures.

But speaking about the development of surgery, it should be especially noted some oriental scientists, the merit of which is extremely great. The outstanding philosopher, physician and chemist of the early Middle Ages Abu Bakr Muhammad ibn Zakariya ar-Razi (865-925) made his contribution to the development of medicine, in particular, surgery. His works "Al-Hawi" ("Comprehensive book on medicine") and "Medical book on Mansur" in 10 volumes, written in Arabic and translated into Latin, have been widely used as medical guidelines for centuries by European doctors. Abu Bakr al-Razi was the first to introduce into medical practice the compilation of a case history for patients and the imposition of a plaster cast to immobilize a limb in case of fractures. His name is also associated with the use of cotton wool in dressing wounds and the use of threads from twisted dried intestines of sheep. His merit also lies in the fact that he proposed a special tool for extracting foreign bodies from the respiratory tract of a person.

Handwritten lists of 9 works of Abu Bakr ar-Razi, of which 2 "Min la yakhduruh at-tabib Zakariyya" (sh. B-468), "Kitab-i al-Mansuriyya" sh. A-527, sh. A-464, which are kept at the Institute of Manuscripts of the National Academy of Sciences of Azerbaijan, have significantly enriched the collection of our fund [2, p. 288, 321]

A significant contribution to the development of medieval surgery was made by the great scientist-encyclopedist of the medieval East, philosopher, physician Abu Ali al-Husseini ibn Sina, known in the West as Avicenna (980-1037), author of 450 works in 29 fields of science. His "Canon of Medicine" is an outstanding work that has shaped the medical thinking of doctors for many centuries. One of the five books of "Canona" is a book about surgery (dislocations, fractures, abscesses, tumors), which reveals the methods and methods of surgical intervention, as well as the healing of diseases as a result of surgical operations. In this work, much attention is paid to the treatment of a wide variety of wounds as a result of endless wars and armed conflicts in the Middle Ages. Ibn Sina owns a kind of classification of wounds with detailed descriptions of simple, deep, poisoned, penetrating and other wounds. An important place in the surgical practice of the scientist was occupied by the treatment of injuries, dislocations, sprains and fractures. He established the types of fractures, described such symptoms and signs of fractures as pain, swelling, deformation of the extremities, pointed out the factors that stimulate bone healing and slow down this process, established the time intervals necessary for bone healing in various parts of the body. Ibn Sina described in detail the rules for applying a splint dressing, while noting the importance of careful wound care for an open fracture. He also described such signs of a skull fracture as unconsciousness, dizziness, and loss of speech. Surgical methods, along with therapeutic ones, were used by Ibn Sina in the treatment of patients with stones in the kidneys and urinary bladder.

The work of Ibn Sina "Al-Qanun" ("Canon of Medicine") in the collection of the IR NAS of Azerbaijan is represented by the unique, most complete and well-preserved list of sh. M-148 [2, p. 82].

The medieval scientist Abu al-Qasim Khalaf ibn al-Abbas al-Zahrawi (936-1013), known in Europe as Albucasis, was rightfully called the "Father of surgery", who laid the foundations of this science. He penned many works on medicine. The encyclopedic work of al-Zahrawi "At-Tasrif" ("The book on the provision of medical knowledge at the disposal of those who fail to compile them") contains 30 volumes. Az-Zahrawi is the author of over 150 new surgical instruments, many of which are still

used in surgery, and the only one who described them by presenting them in drawings. Some of the most famous instruments that are still in use today include a syringe, forceps, a surgical hook and needle, a bone saw and a scalpel. He also owns descriptions of the course of surgical operations performed with the help of instruments invented by him. Among the surgical devices he designed, there are many different dental instruments. In addition, Az-Zahrawi described the operation of tooth extraction using a golden thread, removal of the thyroid gland, cataracts, a new method of removing stones from the kidneys. Moreover, he introduced the use of ink to mark the incision sites on the patient's skin, which is used in surgery today all over the world. He was the first to use intestinal threads (modern catgut) for the imposition of internal sutures, silk - for cosmetic operations, cotton - as a dressing material and described a plaster dressing for fixing cracked bones.

The fund of the Institute of Manuscripts of the National Academy of Sciences of Azerbaijan contains a unique, well-preserved manuscript of the work of al-Zahrawi "Treatise on surgery and instruments" (sh. M-398) [2, p. 102], included in the UNESCO Memory of the World Register. The work of al-Zahrawi "Treatise on Surgery and Instruments" in 1983 was translated into Russian by Acad. ZM Buniyatov [3].

This work by al-Zahrawi, in which the scientist, using his rich medical experience, linked ancient surgery and the surgery of the Middle Ages Europe, for several centuries remained an authoritative guide for all those involved in the surgical treatment of human diseases. ... He described what is today called tuberculous bone lesions, introduced cataract surgery into eye surgery.

A large place in his work was given to the treatment of wounds, a description of nature, methods of their treatment by stitching abdominal wounds and other wounds. In the fight against the then frequent complication of wounds - gangrene, especially in the case of damage to the wounded limb, az-Zahrawi advised to resort to amputation as early as possible. In addition, he was involved in the treatment of eye diseases a lot and successfully, especially eye surgery, first used the term "cataract", was engaged in the study of this disease and its treatment.

Thus, the study of ancient manuscripts makes it possible to trace the history of the emergence and development of various medical disciplines and, in particular, surgery, in the development of which the role of Eastern scientists is invaluable. Without exaggeration, it can be argued that the scientists of the East in their numerous works not only generalized the accumulated knowledge, but also developed it, enriching it with the results of their research, bringing it into a harmonious unified system. The bright and multifaceted medieval medicine of the East went far beyond and had a great influence on the development of medicine and, in particular, surgery, both in Europe and around the world.

## References

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