

## Terminology as a Field of Lexicology

MURTAZAYEVA XADICHA NURIDDINOVNA  
*Tashkent Medical Academy, Termez, Uzbekistan*

### ABSTRACT

*Medical lexicon occupies a special place in the lives of the peoples of the world. These lexical units, which cover physiology, pathology, hygiene, treatment methods, medical jurisprudence and other sources related to this field and serve to enrich the vocabulary of terminology, are considered the main object of research in modern linguistics, and the study of their lexical-semantic, morpho-syntactic properties is of particular importance. The history of the formation of medical lexicon is associated with the scientific heritage and discoveries of a number of scientists, the oldest roots of which go back to the Greek and Latin languages. Evidence is provided that in the 7th-6th centuries BC, doctors such as Thales, Anaximenes, Pythagoras, Heraclitus, who made a great contribution to the development of philosophy in understanding the world and the essence of man, worked in Greece.*

**Keywords:** Medical lexicon, terminology, lexical-semantic features, morpho-syntactic properties, medical discourse, physiology, pathology, hygiene, treatment methods, medical jurisprudence, Greek and Latin origins, history of medicine, linguistic analysis.

### 1. INTRODUCTION

The history of medicine goes back several thousand years. I. P. Pavlov emphasizes the following points in this regard: “The work of doctors is equal to humanity itself. It would be unfair to search for the history of medicine only in written sources.” Today's

written sources prove that ancient medical treatises were recorded on papyri. Archaeologist G. Ebers *Book of Medicines for All Organs of the Body* recognizes that in the 2nd century BC more than 300 of the most unique recipes for the treatment of digestive system, respiratory tract, burns, bleeding, eye, skin and other diseases were used. These papyri later became known as the Ebers papyri.

The Smith Papyrus (named after the collector E. Smith) is part of a large treatise on the structure of the human body and surgical practice, and is considered the oldest surgical text. It embodies the anatomical and clinical knowledge of the ancient Egyptians in ophthalmology. It describes diseases such as eye discharge, *pinguecula* (accumulation of oil in the eye), hemorrhage, leukoma, strabismus (crossed eyes), and trachoma, also known as "rainy sky".

It is associated with the name of the great physician of ancient times, Hippocrates (460-377 BC), whose work "Hippocratic Collection" includes more than 100 medical works. This collection covers a terminological group related to the fields of physiology, pathology, symptomatology and nosology. Modern English medical terminology has inherited many concepts from the works of Hippocrates, such as *apophysis*, *bronchus*, *carcinoma*, *cholera*, *coma*, *emphysema*, *epidemic*, *kyphosis*, *nephritis*, *paresis*, *peritoneum*, *polyp (polypus)*, *typhus*, *ureter*.

The Greek philosopher and scientist Aristotle (384-322 BC) made a significant contribution to the formation of biomedical vocabulary. In his works, such terms as "aorta," "glaucoma," "diaphragm," "leukoma," "trachea," "pancreas," and "phalanx" (phalange) entered the scientific language. He also clarified the meaning of some words that already existed in the medical lexicon. For example, he narrowed the meaning of the word *meninges* (shell) and used it in the specific meaning of "meninges" (meninges).

## 2. THE USAGE OF MEDICAL TERMINOLOGY

Medical vocabulary based on Latin, especially terms related to anatomy, is also found in the poem 'On the Nature of Things' (*de rerum natura*) by the poet-philosopher Lucretius the Blind. Some of the names used in the poem are also found in the current international anatomical nomenclature. For example, words such as *membra* (limb), *palatum* (palate), *brachium* (shoulder), *vein* (vein) are among them.

*sic in amore **Venus** simulacris ludit amantis,  
nec satiare queunt spectando corpora coram,  
nec minibus quicquam teneris abrader **membris***

The treatise *De medicina* (On Medicine), which is considered part of a comprehensive encyclopedic work that has not survived to us, referring to the scientific authority of the Greek physicians Hippocrates, Herophilus and Erasistratus, was written in Latin by Aulus Cornelius Celsus in the 1st century AD. The medical terms in it were expressed in a refined form with the meanings of the words changed, and became an integral part of the international anatomical nomenclature of the late 19th - mid-20th centuries. Since Latin medical terms were still in the formative stage at the time of Celsus, he was forced to express various concepts with one word. For example: *vulnus* – 1) wound 2) pus; *cancer* – 1) cancer, 2) necrosis; *Ignis sacer* – 1) shingles, 2) gastritis (acute inflammation).

The Roman writer Pliny (23 BC-79 AD) also contributed to the development of medical terminology with his work *Naturalis historia* ("Natural History"). He introduced the word *tinea* (worm) as a name for certain skin diseases, and also Latinized some Greek terms. The term *paracentesis* (Greek *parakentesis*) that has survived to this day is one of them.

## 3. RELIGION AND MEDICAL TERMS

Religion also played a special role in the development of medical terminology, which was especially evident with the emergence of

Christianity and the Christianization of Roman society. The transition from the classical world to medieval Christian civilization changed the relationship between medical knowledge, religious and secular views, monasteries and miraculous shrines of saints began to function as centers of religious healing. The sick state of humanity was recognized as the result of its sin. At that time, such terms as *cura animarum* – treatment of the soul, *sanatio* – healing, *gratia Dei* – healing by the grace of God were widely used. St. Augustine says the following about this: “This life, which is itself full of so many disasters, if it can be called life, testifies to the fact that from the beginning the whole race of mankind has fallen under a curse.”

Similar situations were observed in the life of the pre-Islamic Arabs, who resorted to ritual practices rather than medical knowledge to treat disease. Treatment of disease was limited to cauterization, bloodletting (phlebotomy), and cupping, as well as diet, prevention, and medical advice. They advanced the wisdom that “the stomach is the house of healing, and diet is the most important medicine.”

Arab-Islamic culture has had a significant impact on Western civilization, especially in the field of medicine. As a result of 24 years of research by researchers from 1986 to 2012, the 1,500-page Paradise Dictionary was published. This dictionary is the first to cover the Arabic origin of English words, especially the Arabic etymology of medical terms. Under the influence of the Arabic language, the following words were formed in anatomical terminology: *nucha* (Arabic *nucha'a*, meaning spinal cord), *saphenous* (Arabic *saḥn*, clearly visible), cephalic and basilic veins (Arabic *al-bazili*, meaning "running"), cornea (Arabic *qarniya*), abdomen (Arabic *al-batan*), mesentery (Arabic *mesariq*), pupil (eye), blind (blind) are also words borrowed from the Arabic language. The Arabs developed special cabinets for storing medicines. Even the word drug (*dori*) comes from the Arabic word *daryaqltiroqi* ("tiraq, medicine").

Not only Western but also Eastern scientists in the development of medicine is incomparable. Ibn Sina, known throughout the world as the founder of Islamic medicine, a supporter of the medical theories of Hippocrates and Galen, is

described by the translators of the work *Al-Qanun fit-tibb* and a number of other researchers as a thinker who improved the scientific views of his teachers in theoretical and practical medicine, and sometimes even provided new scientific foundations. Therefore, his works served as the only medical manual in the Middle Ages in the East and the West and directly influenced the development of medicine for centuries. In it, the symptoms of epilepsy are expressed as weakness, forgetfulness, depression, nightmares, yellowing of the tongue, paresthesia of the tongue (numbness), anger and mental anguish. In the works of Ibn Sina, the word *urum* refers to swelling or inflammation in body parts, *Sui`a Mizaj* refers to a disorder of the client's temperament, and *humma* refers to a pathological increase in body temperature.

Medical terminology, as a main direction of linguistics, has been studied from various aspects to this day. Its historical study is based on the opinion of the Danish linguist Jespersen that "Modern science relies on Latin and Greek roots in the creation of many compound and derivative words" while its etymological aspect is analyzed in the research of M. Bujalkova and A.O. Brown. It is noted that the morphological features of this terminological group arise on the basis of prefixation and suffixation, its semantic features are manifested on the basis of meaning expansion and meaning narrowing, and syntactically on the basis of nominalization (combination).

#### 4. BORROWINGS IN MEDICAL TERMINOLOGY

Starting from the 2<sup>nd</sup> century BC, Greek medical terms entered the Roman scientific environment. More than half of Latin scientific terms were borrowed from Greek, and their reformulation gave rise to "neoclassicisms". For example, the form *pericardion* was Latinized into *pericardium*. The Greek "k" sound was replaced by the Latin "c" sound. This creates problems in determining the etymology of modern medical units. Another complex aspect of medical terminology is that Greek-based medical terms occur in various forms. They are: pure Greek terms, Latinized terms, and terms of mixed forms. For

example: oculus is used as “eye”, ophthalmia is used as “eye disease.”

Medical terminology based on Latin and Greek has a number of advantages, which are manifested in the following:

1. It provides continuity between the past and the present, and Latin terminology is widely used throughout the world.
2. Vocabulary of Latin and Greek remain unchanged, which is why modern terminology is still being created based on these "dead languages".
3. It has practical importance in medicine – the patient does not understand the terms and cannot independently draw incorrect conclusions.

It would not be wrong to say that the development of medical terminology is associated with different periods and the lives of different scientists. We can also understand it through the word "aorta", which is considered an anatomical term. This term, which comes from the ancient Greek word *ἀορτή* (aortē), means “to raise,” “to raise high,” “to hang.”

In the 5th century BC, Herodotus used this term to describe “the bronchial tubes.”

In the 4th century BC, Aristotle defined this term as “the structure from which the heart is suspended.”

In the 1st century AD, the Greek physician Rufus of Ephesus introduced the term aortic *aneurysm* into medical science.

In the 2nd century AD, Galen revealed the difference between true and false anaemia.

In the 4th century AD, the Greek physician Oribasius suggested that peripheral aneurysms could be surgically treated.

16th century AD – Ambroise Pare and his friend Andreas Vesalius first describe the abdominal and thoracic aortic systems.

## 5. CONCLUSION

Medical terminology is becoming the most relevant object of research not only in the past, but also in the present, which is especially reflected in the increased interest in pediatric subtexts.

Among the studies devoted to the issues of medical terminology, attention is paid to the etymology of terms in German-language works. In particular, A. Botsman, O. Petrova considered the issue of determining the methods of their creation, while V. Labov analyzed the functional characteristics of foreign-language medical terms. In particular, the works of many scientists, such as K. Galinsky, T. Kyiak, D. Samoylov, L. Zubova are aimed at studying various aspects of the process of term formation in individual terminological systems. It shows that it is a constantly developing and improving field. This process is closely related to historical development, achievements of science and technology, as well as terminological exchange between different languages. The formation and evolution of medical terms occurs under the simultaneous influence of not only linguistic, but also cultural, social and scientific factors.

## REFERENCES

1. Antoniou, G. A., Antoniou, A. I., Antoniou, S. A., Lazarides, M. K. 2011. A historical perspective of medical terminology of aortic aneurysm. *Journal of Vascular Surgery*, 1527-1528
2. Bsoul L. A. 2016. An Arab-Muslim scientific heritage: Islamic medicine. *Research Gate*.
3. Bujalkova, M. 2018. Are the methods to use historical lexicology (etymology) in contemporary medical terminology teaching reasonable? *POISON*, 4/7, 469-478;
4. Brown, A. O. 2014. Lexical access, knowledge transfer and meaningful learning of scientific terminology via an etymological approach. *International Journal of Biology Education*; 3/2, 1-12.
5. Bujalkova, M. 2018. The coexistence of Latin and English in medical terminology and its contribution to ESP teaching. *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 5/6, 7-14.
6. Chikin S. Y. 1990. Doctor-philosophy: Monograph. M.: Medicine.
7. Dziganova, B. 1998. Word analysis – A useful tool in learning the language of medicine in English. Bratislava Lek Listy.
8. Galinsky, K. 1998. Terminology and specialized communication. International conference on *Professional Communication and Specialized Knowledge*, Vienna, Aug 24-26.

9. Gjuran-Coha, A. & Bosnar-Volkovic, B. 2013. A study into the Croatian language of medicine. *English for Specific Purposes World*, 52, 1-18.
10. Hippocrates & Heraclitus of Ephesus. 1923-1995. London: Heinemann. New York: Putnam.
11. Imankulova, T., Ysmailova, R., Salieva, D., Mamatova, A., Mukhtarova, N., Darbanov, B., Abdullaeva, Zh. & Aliev, G. 2020. Avicenna's contribution to medical terminology. *Open Access Library Journal*, 7, 1-9. doi: 10.4236/oalib.1106724.
12. Julia Vit. 2022. The origins of medical terminology. The origins of medical terminology. *Scientific journal of Polonia University*, 102-108.
13. Kazandzitis, G. 2021. Lucretius on disease. *The Poetics of Morbidity in De rerum natura*. Berlin: Boston.
14. Kiyak, T. R. 1989. *Lingvisticheskie aspekti terminovedeniya*. K.: UMK.
15. Labov, U. 1972. *Sotsiolingvisticheskie model*. Philadelphia: University of Pennsylvania.
16. Al -Fallouji, MAR. 2019. Arab-Islamic origin of modern medicine. *Journal of the British Islamic Medical Association*, 1/1, 1-3
17. Perry Pepper, O. H. *Medical etymology*. Philadelphia, London: W. B. Saunders Company.
18. Zabludovsky, P. E., Kryuchok, G. R., Kuzmin, M. K., Levit, M. M. *History of Medicine*. Moscow: Medicine.
19. Petrova, O. B. Structural-semantic characteristics of medical terminology and narodnykh naimenovaniy bolezney v ukrainian language: autoref. dis. ... candy. Philol. Nauk . - Kharkiv, 1994. – 24 p.
20. Pliny, the Elder. 1481. *Historia naturalis*. Parma: Andreas Portilia.
21. Samoilov, D. V. 2006. Translation of medical text. Samoilov D. V. *O perevode meditsinskogo texta*. Izat. dom "Praktika".
22. Siahpoosh, M., Ebadiani, M., Shah Hosseini, G., Isfahani, M., Nasrabadi, A. N. & Dadgostar, H. 2012. Avicenna the first to describe diseases that may be prevented by exercise. *Iranian Journal of Public Health*, 98-101.
23. Van Dyke, C. 1992. Old worlds of new worlds: Modern scientific and technological word-formation. *American Speech*, 67/4, 383-405.
24. Yulia Vit. 2022. The origins of medical terminology. The origins of medical terminology. *Scientific Journal of Polonia University*, 102-108.

25. Zubova, L. & Yu. K. 2005. voprosu ob osobennostyakh i trudnostyakh perevoda angliyskikh meditsinskikh sokrashcheniy // Vestnik VGU. *Series "Linguistics and Intercultural Communication"*, 96.

**MURTAZAYEVA XADICHA NURIDDINOVNA**

SENIOR TEACHER,

TASHKENT MEDICAL ACADEMY,

TERMEZ, UZBEKISTAN.

E-MAIL: <UGLONOV@YAHOO.COM>

PH: +998915836862, +998915836862