

## SPECIFICS OF PHONETIC AND GRAMMATICAL DEVELOPMENT OF MEDICAL TERMINOLOGY IN ENGLISH, RUSSIAN, KYRGYZ LANGUAGES

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**Abstract.** *In the context of accelerating scientific and technological progress, terminology is of particular importance. It is a source of information, a tool for mastering a specialty. The conceptual space of any field of science and technology finds its expression in terms. This article is devoted to the issue of phonetic and grammatical development of medical terminology in English, Russian, Kyrgyz languages. Special attention is paid to the process of assimilation of medical terms.*

**Keywords:** *Latin borrowings, assimilation, medical anatomical terms, partial grammatical borrowings, full grammatical borrowings, calques, semi-calques.*

With the acceleration of scientific progress, terminology assumes special importance. It is a source of information, a tool for the development of specialty. The conceptual space of any field of science and technology finds expression in terms.

Medical terminology is one of the specific formations of vocabulary, which due to the features of structural-semantic, word-forming and stylistic character differs from common words and thus occupies a special place in the lexical system of language. It should be noted that at the present stage medical terms are widely used in everyday discourse, literary language, in the field of health, medical activities, sciences.

The first information about medical knowledge goes back to the distant past (ancient Indian Vedas, Babylonian cuneiform records, Egyptian papyri and Chinese manuscripts). These sources became the basis of medical knowledge of the ancient world, and the terms from the Greek and Latin languages that generalized this knowledge became the basis of the international language of medicine [1].

In the Middle Ages, when the time of stagnation came in Europe, the baton in the development of medical knowledge passed to the countries of the Arab East, Iran and Cen-

tral Asia, whose representatives took leading positions in medical science (Ar-Razi, Ibn Sina Albukasis, Ibn Rushd, etc.). The historical merit of Arabic-language medicine is the preservation and enhancement of the richest heritage of medicine of the ancient world.

In the Renaissance, Europe once again becomes the center of medical science, which is accompanied by the emergence of new directions in medicine, the adaptation of the language of medicine to the needs of the development of living national languages.

As for the Russian language, at the initial stage of the formation of Russian terminology, there was almost no foreign-language term for which several equivalents in the native language were not proposed by different authors. However, not all of them have been fixed in the field of medical terminology, many of them have been replaced by terms of Greek-Latin origin for the following reasons: firstly, it was not always possible to find accurate and concise designations for these concepts in the Russian language; secondly, the use of international terms for a number of languages is pragmatic and expedient, since a conceptual basis for a single common terminology is being created that can be understood by representatives of different countries [2]. This valuable experience should be

used in the formation of medical terminology in the Kyrgyz language.

In the development of medical terminology in the languages of the CIS countries, one can observe the effect of various trends:

1) the desire to preserve the basic backbone of medical terminology on the basis of Greek-Latin elements as international terms;

2) the appeal to the own resources of national languages;

3) the use of detailed propositions interpreting and explaining the content of terms.

In the countries of Central Asia, including Kyrgyzstan up to the 18th and 19th centuries, the basis of medical knowledge consisted of terms from the Arabic language. Since the beginning of the 20th century, international medical vocabulary has been actively entering these languages through the Russian language [3].

Formation of new terms in each field medicine deserves an appropriate attention because the terms become successively a part of general language. Between general (codified) language and the language of science, there is a very close relationship. The language of science forms about three quarters of all written and printed materials of the general language in each nation. While general language serves all of its users, the language of science requires a certain level of scientific education because the terms as names of certain concepts only indicate their meaning. Only experts know their exact meaning. Most anatomical and clinical terms used in medicine today, are Latin or Latinized Greek words, the origin of which can be traced back to the 5th century BC [4].

If medical terminology has to function effectively and be understandable to its users, the terms have to be formed, derived, and pronounced properly. Seminars on Latin and English or German medical terminology are an obligatory part of teaching programs in the first academic year at Slovak medical faculties. Basic information on word-formation and word-analysis enables the students to manage medical terminology in a more effective way. Instead of memorizing lists of terms they can easily predict the meaning of other terms.

At the moment there is no clear generally accepted definition of the term. There are a variety of interpretations of this concept. The most famous is the following definition of it: «The term (Latin terminus «border, limit, end») is a special word or phrase adopted in a certain professional field and used in special conditions» [5].

Experts distinguish the following features of the terms:

- consistency;

- the presence of a sufficiently clear definition;

- the desire for unambiguity within the scope of application;

- lack of expression;

- stylistic neutrality.

Unlike ordinary words, the terms are the result of the conscious activity of the most qualified part of specialists in this field of knowledge working at the forefront of scientific thought, technological solutions.

In terminology, the following structural and functional units are distinguished as a section of the language science: term-word, terminology, terminology, terminology system. The elementary units of terminology are the term-word and the term-collective, which are the basis of the complex units: the terminology, the terminology and the terminology system. The creation of the terminological system of the national language occurs in various ways. First of all, use its own resources. But, as a rule, they are not enough to create a full system of terms, reflecting the modern level of knowledge. In this regard, terminology is subject to an intensive process of borrowing from contacting languages with which traditional links exist. Where, for historical reasons, a particular field of science, professional knowledge or technology is not developed or reflected in the national language, the basis of the terminology is formed by borrowing equivalent vocabulary.

Translation of terms from one language to another occurs in the following ways:

- translation transliteration and transcription;

- calcification;

- descriptive («explanatory») translation;

- approximate translation [6].

Typological features of language, features of linguistic thinking and perception of the world have a significant impact on the functioning of these units in scientific and professional discourse.

However, to date, the development and current status of medical terms in the Kyrgyz language have not been the subject of serious, detailed research. Meanwhile, the creation of medical terminology in Kyrgyz is a requirement of the time and the public. Linguistic science is just beginning to explore this important and necessary topic.

Thus, many Russian borrowings, which are mainly represented by lexical units created by the method of adding bases to suffix, are translated into Kyrgyz by word-combinations in connection with the fact that Kyrgyz linguistic thinking can combine into one the notion of separate entities [5].

In addition to word-forming and propositional calculus, the phenomena of polyemia, synonymy, homonymy and antonymia are not uncommon in the processes of forming Kyrgyz medical terminology.

In Kyrgyzstan, academician B. Oruzbaeva, who was at the origin of this scientific direction, headed the state terminological commission for the creation of national terminology in the Kyrgyz language, was the author of the Russian-Kyrgyz linguistic dictionary, made an invaluable contribution to the problem of studying theoretical and practical terminology in the Kyrgyz language. Such scientists as Ch. Aitmatov, Z. Derbisheva, A. Dzhapanov, K. Nanaev, A. Orusbayev, M. Tagaev, K. Tynystanov, etc. were more or less concerned with the problems of terminology.

Let's analyze representation of medical terminology in investigated languages.

Latin	English	Russian	Kyrgyz
carotis	carotid artery	сонная артерия	каротид артериясы
cornea	cornea	роговицы	көздүн кабыгы
encephalon	brain	головной мозг	баш мээ
lacertus	tendon sprain	сухожильное растяжение	тарамыштын созулушу
masseter	chewing muscle	жевательная мышца	чайноочу булчуң
musculus orbicularis oculi	orbicularis oculi, orbicular muscle of eye	круговая мышца глаза	көздүн тегерек булчуңу

Composition seems to be older than derivation from a diachronic viewpoint because the word-forming affixes developed from independent words. Similar process can be seen nowadays in the process of prefixoids (pseudoprefixes) and suffixoids (pseudosuffixes) e.g. *myo-*, *arthro-*, *haemo-/haemato-*, *adipo-*, *hepato-*, *onco-*, *patho-*; *-aemia*, *-logy*, *-tomy*, *-pathy*, *-cyte*, *-algia*, *-ectomy*, *-scope* etc. Each of these pseudo-affixes hides certain meaning, but they are not used as independent words. They have been developed artificially from Greek and Latin word roots for scientific purposes – to name new concepts [7].

The second type of partial borrowings consists of English terms in which there was a

partial loss of morphemes (mainly suffixes or endings), and in some cases the addition of other morphemes. Some nouns lose their endings and are read according to the rule of syllable type 2 in English (*archus* – *arch*), others, after the reduction of Latin endings, attach other endings, acquire a word form more acceptable in English (*arteria* – *artery*).

Latin adjectives, passing into Latin, lose their endings, and in some cases attach other endings to themselves (*portae* – *portal*, *subclavia* – *subclavian*, *poplitea* – *popliteal*, *saphena* – *saphenous*, *descendens* – *descending*), but in both cases they do not change either by gender, numbers, or cases. For example:

Latin	English	Russian	Kyrgyz
salivatorius	salivary	слюноотделительный	шилкей агуу
arteria femoralis	femoral artery	бедренная артерия	сан артериясы
arteria dorsalis pedis	dorsalis pedis, dorsal artery of foot	тыльная артерия стопы	буттун арка артериясы

Consequently, the following changes in medical terminology can be noticed: the transition of one equivalent from Latin to English without changes; the reduction of endings and suffixes, and in some cases the addition of other vowels and consonants to

the English term. These changes are due to the different lexical and grammatical structure of the languages studied: in all languages, nouns and adjectives have different categories of gender, number and case, and, accordingly, different endings.

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**ОСОБЕННОСТИ ФОНЕТИЧЕСКОГО И ГРАММАТИЧЕСКОГО РАЗВИТИЯ  
МЕДИЦИНСКОЙ ТЕРМИНОЛОГИИ В АНГЛИЙСКОМ, РУССКОМ,  
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***Аннотация.** В контексте ускоряющегося научно-технического прогресса терминология приобретает особое значение. Это источник информации, инструмент для овладения специальностью. Концептуальное пространство любой области науки и техники находит свое выражение в терминах. Данная статья посвящена вопросу фонетического и грамматического развития медицинской терминологии в английском, русском, кыргызском языках. Особое внимание уделяется процессу усвоения медицинских терминов.*

***Ключевые слова:** латинские заимствования, ассимиляция, медицинские анатомические термины, частичные грамматические заимствования, полные грамматические заимствования, кальки, полукальки.*