

## Synonymy of medical terminology from the point of view of comparative linguistics.

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### Abstract

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The aim of the paper is to look at the medical terminology in three different languages — English, Russian and Slovak and to estimate the trends of synonym formation as well as their emphasizes role in communication. The author that the problem of synonymy is peculiar especially to clinical medicine terminology, i.e. it relates only to a small extent anatomical nomenclature.

According to motivative signs of terms, synonyms are divided into 2 groups: equivalent and interpretative synonyms. In keeping with criteria determined by basic characteristics of a term in medical terminology there are often preferred international expressions.

In recent years a great number of English expressions have entered into medical terminology due to the fact that English had become a language of international communication. From the practical point view undoubtedly, it is a positive tendency, because it facilitates international communication. In this respect Russian orthography is considered to be an exception, since Cyrillic alphabet often makes international communication more complicated. (Ref. 10.)

**Key words:** synonymy, medical terminology, equivalent and interpretative synonyms, international communication, international expressions.

Despite the fact that “lexical variability being manifested especially by numerous synonymous words and expressions is an important quality of cultivated, refined language”, it is just synonymy which is disadvantageous for terminology because it makes an exact communication more complicated (Horecký, 1968). At

### Abstrakt

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Synonymia medicínskej terminológie z hľadiska porovnávacej lingvistiky

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Cieľom práce je nahliadnuť do lekárskej terminológie v troch rôznych jazykoch — anglickom, ruskom a slovenskom a odhadnúť tendencie tvorenia synonymických výrazov, ako aj ich úlohu v procese dorozumievania. Autorka zdôrazňuje, že problém synonymie v lekárskej terminológii je príznačný hlavne pre terminológiu klinickej medicíny, t.j. iba v malej miere sa dotýka anatomického názvoslovia.

V závislosti od motivačných príznakov termínov sa synonymá delia na ekvivalentné a interpretačné. V súlade s kritériami, ktoré sú podmienené základnými vlastnosťami termínu, sa v medicínskej terminológii často uprednostňujú internacionalizmy.

Keďže sa v posledných rokoch jazykom medzinárodnej komunikácie stala angličtina, do lekárskej terminológie preniká čoraz viac výrazov práve v anglickom jazyku. Z praktického hľadiska je to nepochybne pozitívna tendencia, pretože jednotný jazyk uľahčuje medzinárodnú komunikáciu. V tomto smere tvorí v - nimku ruská ortografia, pretože azbuka medzinárodnú komunikáciu často komplikuje. (Lit. 10.)

**Kľúčové slová:** synonymia, lekárska terminológia, ekvivalentné a interpretačné synonymá, medzinárodná komunikácia, internacionalizmy.

the same time synonymy is a problem which complicates efforts at systematization in medical terminology. Synonyms in terminology denote “words or word combinations which though different phonetically express equal scientific concepts within certain microsystem” (Petrovský, 1983).

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The aim of our paper is to look at medical terminology in three different languages — English, Russian and Slovak and to estimate the trends of the formation of synonymous expressions as well as their role in communication. It is necessary to note that the problem of synonymy in medical terminology relates mainly to clinical medicine, i.e. it relates only to a small extent to anatomical terms. In anatomical terminology the principle of one concept — one term is in general accepted, except the names taken from Latin and Greek which are often adopted, especially by English and Slovak. The names are given in brackets:

<b>English:</b>	<b>Russian:</b>	<b>Slovak:</b>
lungs	лёгкие	pľúca
heart	сердце	srdce
kidney	почка	oblička
large intestine	толстая кишка	hrubé, črevo
thigh bone (femur)	бедренная кость	stehnová kosť (femur)
breast bone (sternum)	грудная кость	hrudná kosť (sternum)
womb (uterus)	матка	maternica (uterus)
thymus gland	вилочковая железа	detská žľaza (týmus)
urethra	мочепускательный канал	močová rúra (uretra)

Terms like femur, sternum and uterus were taken from Latin by English and Slovak, therefore these words have the function of international terms. As in other theoretical scientific fields, international terminology is of a great importance in medicine, because it makes communication in this field easier all over the world. From this point of view Russian terminology is put at a disadvantageous position because according to the purificatory tendencies in the past it avoided the adoption of terms from classical languages and preferred those of domestic origin. But in spite of this tendency, exceptions exist in Russian terminology, i.e. Russian anatomical nomenclature prefers international expressions to words of domestic origin as in the following examples:

гипофиз	instead of	мозговой придаток
таламус	instead of	зрительный бугор
гипоталамус	instead of	подбугорье

These terms, like those derived from them, таламичевский, гипоталамический, гипофизарный, are often used in theoretical and clinical medicine, primarily in neurology and neurosurgery. This preference over the terms of domestic origin is also true for перинард — its Russian equivalent is околосердечная сумка, not only because it is shorter and new terms are more easily derived from it (compare — перикардиальный – околосердечносумочный), but also because due to its structure it can more easily be included in the system of other terms with the same root, e.g. эндокард, миокард. In anatomical terminology, especially in English and Slovak, we can point to many cases of synonymous pairs as a result of using both adopted and domestic expressions. Adopted expressions of these pairs are more often used in specialist texts, domestic words are used in non-specialist texts.

As we have already mentioned, the problem of synonymy is typical especially for clinical medicine terminology. The Russian academic Petrovskij categorises two basic types of synonyms in connection with medical terminology. The basic criterion for this division is considered to be a semantic criterion. This depends on whether the motivation signs of the terms are the same or different, and he divides synonyms into 2 groups: *equivalent* synonyms and *interpretative* synonyms.

Equivalent synonyms are those for which the phonetic shape reflects one and the same motivational sign, which can be expressed by various word-formative elements of the same meaning. Interpretative synonyms are those for which the phonetic shape reflects various motivative signs (Petrovskij, 1983). In Russian and Slovak the largest group of medical terms — synonyms of equivalent type is represented by the terms called dublets (heteronyms). These are the words or word-combinations where the origin is in some other language but the roots and word-formative elements have the same meaning. They are most often dublets, which consist of an international word of Greek-Latin origin and its Russian or Slovak equivalent, e.g.:

<b>Russian:</b>	<b>Slovak:</b>
абдукция - отведение	abdukcia - odtiahnutie
неоплазма - новообразование	neoplazma - novotvar
перкуссия - выстукивание	perkusia - poklep
гиперметропия - дальнозоркость	hypermetropia - ďalekozrakosť
оральный- ротовой	orálny - ústny
миопия - близорукость	myopia - krátkozrakosť
интравенозный - внутривенный	intravenózný - vnútrožilový

The situation is different in English. These dublets occur rarely in English. This results from the fact that English clinical terminology uses 1) the names adopted from classical languages which are adapted from the phonetic-morphological point of view, 2) or the groups of synonyms are so rich that they consist of 3 or more synonyms, e.g.: **English:** abduction, neoplasm, percussion, oral, intravenous, 3) or the synonymous groups are so rich that they include three or more synonyms, e.g.: myopia, shortsightedness, nearsightedness, or hyperopia, farsightedness, longsightedness.

The existence of synonyms of an equivalent type, represented in Russian and Slovak mostly by dublets, proves that the introduction of terms adopted from classical languages was accompanied by the formation of their domestic equivalents especially in the past. Groups rich in synonyms in the English language prove this fact, too. In the case of synonyms of the equivalent type, it is necessary to know the criteria which determine in terminology the usage preference of a certain term over other expressions which are elements of the same synonymous groups. There are criteria which correspond to the essential qualities of a term: motivation, systematism, stability, unambiguity and accuracy, derivativeness, shortness and translatability. In keeping with these criteria in medical terminology there are often preferred international words. This is because the advantages of international words are evident and at the same time the isolation of certain language terminologies from the rest of world is prevented. Forced preference for domestic expressions could have unfavourable consequences for the terminology of each compared languages.

The above criteria need to be taken into account not only in selecting the appropriate term from the synonyms of equivalent type, but also in adopting and introducing the neologisms.

The next kind of synonyms of equivalent type are full and short variants of one and the same term, e.g.:

**English:**

antiseptic devices - antiseptics  
antibiotic remedies - antibiotics  
contraceptive devices - contraceptives  
tuberculous protein - tuberculoprotein  
ophthalmic surgery - ophthalmosurgery

**Russian:**

антисептические средства - антисептики  
антибиотические лекарства - антибиотики  
контрацептивные средства - контрацептивы  
туберкулиновый протеин - туберкулинопротеин  
офтальмическая хирургия - офтальмохирургия

**Slovak:**

antiseptické prostriedky – antiseptiká  
antibiotické prostriedky – antibiotiká  
antikoncepcné prostriedky – antikoncepcia  
tuberkulózný proteín – tuberkuloproteín  
oftalmická chirurgia – oftalmochirurgia

This group contains also abbreviations, i.e. terms formed of initial letters of expressions which consist of more than one word, e.g.:

**English:**

deoxyribonucleic acid - DNA  
ribonucleic acid - RNA  
electrocardiogram - EKG  
electroencephalogram - EEG  
central nervous system - CNS

**Russian:**

дезоксирибонуклеиновая кислота - ДНК  
рибонуклеиновая кислота - РНК  
электрокардиограмма - ЭКГ  
электроэнцефалограмма - ЭЭГ  
центральная нервная система - ЦНС

**Slovak:**

deoxyribonukleová kyselina – DNK  
ribonukleová kyselina – RNK  
elektrokardiogram – EKG  
elektroencefalogram – EEG  
centrálny nervový systém – CNS

The above abbreviations have the characteristics of international expressions, but in each compared language a number of their own abbreviations also exist which are used in medical terminology, e.g.:

**English:**

birth weight - BW  
cerebrospinal fluid - CSF  
periodic health exam - PHE  
total body weight - TBW  
blood sedimentation rate - BSR

**Russian:**

острое респираторное заболевание - ОРЗ  
скорость оседания эритроцитов - СОЭ  
кислотно-щелочная реакция - КЩР  
ультразвуковое исследование - УЗИ  
ядерный магнетический резонанс - ЯМР

**Slovak:**

krvný obraz – KO  
náhla brušná príhoda – NBP  
horné cesty dýchacie – HCD  
pneumothorax – PNO  
bez patologického nálezu – Bpn

Using synonyms of the equivalent type does not cause problems, because these expressions are semantically equal, i.e. there is no need to worry about exact comprehension of the meaning. A more demanding approach is needed in the case of synonyms of the interpretative type because they reflect various motivative signs in their phonetic shape. Their frequent incidence in medical terminology is determined by extra-linguistic factors and by the peculiarities of medical science development (Petrovskij, 1983). Synonyms of the equivalent type are largely used for denoting one and the same diseases and syndromes. This is because for denoting one and the same disease it is possible to use older and never names formed on the basis of various signs. This, one and the same object (symptom, syndrome, disease, diagnostic method, treatment method, surgical operation, infection agent, etc.) can be discovered or described and thus appropriately named by various specialists in one country, or in different countries at different times or at the same time but independently.

These groups of synonyms may become wider thanks to the effort of specialists who try to express a certain concept in the way the newest information is reflected. Since this information is permanently supplied, specialists try to include the most typical sign into the name of objects. In case where the international names for certain phenomena (diseases, syndromes) have been set and these phenomena are denoted by various different names, we can speak about international synonymy, e.g.:

**E:** Grave's disease, exophthalmic goiter, Basedow's disease

**R:** болезнь Грейвса, диффузный (тирео)токсический зоб, Базедова болезнь

**S:** exoftalmická struma, Basedowova choroba

**E:** African sleeping sickness, African trypanosomiasis

**R:** сонная африканская болезнь, африканский трипаносомоз

**S:** afriická spavá choroba, trypanozomiáza africká

In connection with the use of synonyms of the interpretative type, sometimes it is necessary to solve the problem of the degree of adequacy of their meanings to the phenomena denoted by them. When forming the groups of synonyms it is necessary to be sure that they are really synonyms i.e. whether they do not name different concepts. When used in practice, the most adequate and accurate synonyms should be preferred. In this point a dispute about the preference of different expressions can arise between defenders and opponents of various synonyms. Therefore these questions should be solved by the most competent experts.

At the end of this paper we can claim that medical terminology in all compared languages is rich in synonyms. This fact proves the effort to name appropriate phenomena by names which reflect their most typical signs at a given level of knowledge.

The recent years can be characterized as a period of great growth in knowledge where an important role is being played by western medicine. This fact also influences also medical terminology. Pieces of information from western science penetrate all specializations in English. Medicine is not an exception. It is necessary for all doctors to study specialist literature in English. Therefore more and more experts have a command of English (at least a passive command). Due to this, the necessity to search for adequate names for new phenomena in their own native language is dwindling away.

Summing up we can claim that in medical terminology English expressions or abbreviations denoting more than one word names occur more and more often. It means that contemporary medical terminology of languages we have been comparing becomes more and more open for international expressions. From practical point of view this is undoubtedly a positive tendency, because it facilitates international communication. It can hardly be said about Russian orthography, since the Cyrillic alphabet often entails considerable difficulties, that are considered to be an obstacle for international communication.

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