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Problems of the English abbreviations in medical translation

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Abstract

The article deals with the attempt to verify the prevalence of abbreviation-related problems in medical translation over other problematic lexical groups. Medical abbreviations appear extremely fast in modern English, evidenced by abbreviations that are not registered in dictionaries. As a result, the main problem of medical abbreviations translation is that the same abbreviations may have different meanings, depending on the disease, anatomy, or procedure being discussed. The aim of the paper is to study general and nationally specific features of the English medical abbreviations, to survey extra- and intralinguistic requisites of their formation, to determine regularities of medical abbreviations usage in modern English, to analyze peculiarity of classification of abbreviations. Special attention was also given to investigating some basic procedures applicable in translating them. We used such research methods as the method of component analysis of meaning based on dictionary definitions, the method of contextual analysis of the abbreviations, identifying their situational relevance. We also collected and processed nonregistered English medical abbreviations. Continuous sampling of the studied units of scientific and medical texts identified corpus examples. Material for the study was selected from articles, periodical literature on medicine and its related branches of science, from encyclopedic dictionaries. In conclusion, ordering of abbreviation in medicine can be achieved through a more thorough study of medical abbreviations, their proper use in medical professionals training and by means of modeling, which fixes the most convenient, concise and succinct clichés in medical discourse.

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1. 1. Introduction

1.1. Background

Translation is a complex and many-sided type of human activity. Different cultures, different literatures, different epochs are encountered in translation. Culture experts, anthropologists, psychologists, historians are interested in translation, and different directions of translation can be an object of study in the relevant sciences.

Abbreviations and shortenings find a number of grammatical features. The need to study abbreviations and shortened words gives life itself. Abbreviation as an active way of word formation became widespread in our daily labor activity. It penetrates into all spheres of life: in industry, science and culture.

At the present time, there are quite numerous, although fragmentary, researches on the problems of abbreviations in modern languages. Shortened lexical units are in many ways a mystery in linguistic context, because such fundamental problems as the problem of the word structure and its value, morpheme problem, etc. should be considered from the specific point of view. This complexity is due to divergent views, and sometimes, controversial approach to shortened lexical units.

2. Methodological framework

2.1. Relevance of research

The relevance of research is defined by high representation of abbreviated vocabulary and developed system of abbreviation models in modern English; emergence of a significant number of new acronyms, that are a part of the key units for a certain period of time leading to mobility and openness of abbreviated micro-systems. This requires a deep analysis of the features of abbreviations and acronyms, and the problems appeared during their translation. Translation of abbreviations and acronyms is a complicated process and has always been a topical subject for study.

2.2. Aim of the paper

The aim of the paper is to study general and nationally specific features of the English medical abbreviations, to survey extra- and intra-linguistic requisites of their formation, to determine regularities of medical abbreviations usage in modern English, to analyze peculiarities of their classification.

2.3. Methods of the research

We used such research methods as that of component analysis of meaning based on dictionary definitions, the method of contextual analysis of the abbreviations, identifying their situational relevance. We also collected and processed nonregistered English medical abbreviations.

2.4. Factual material of the research

Continuous sampling of the studied units of scientific and medical texts identified corpus examples. Material for the study was selected from articles, periodical literature on medicine and its related branches of science, from encyclopedic dictionaries.

2.5. Practical value of the research

The practical value of this work is reflected in the possibility of using specific methods, techniques and means of translation of English abbreviations and acronyms.

The problem of shortened lexical units as a specific linguistic phenomenon in modern languages attracted the attention of many researchers. These issues are discussed in numerous articles and some works by the Russian and foreign authors. The most well-grounded works on these issues include works of V. Adams, D.I. Alekseev, E.P.

Voloshin, G.V. Pavlov, M.M. Segal, A.P. Shapovalova, O. Jespersen, etc. (Adams, 1983; Alekseev, 1979; Voloshin, 2005; Pavlov, 1969; Segal, 1964; Shapovalova, 2004; Jespersen, 1982).

3. Results

3.1. Study of the English shortenings

We should consider the definitions of “abbreviation” and “shortening”.

Abbreviation (L. *brevis* – short) will be understood as a shortened form of a word or phrase, spelled variously (in most cases in small letters) according to the rules of a particular language; an acronym (L. *ácross* – external), by contrast, is a word created from a string of one to several capitalized initial letters or syllables. With the two of them having separate dictionary entries, and two different definitions, it may be assumed that they are two separate groups of shortened forms which are bound by different grammar rules and should not be confused (Kasprowicz, 2010)

V.V. Borisov understands “abbreviation” as a letter or combination of letters, which have alphabetic similarity with the original word or expression and are used instead of the word or expression for brevity (Borisov, 1972).

D.I. Alekseev under the term “abbreviation” means the process, “a way to create the nominations for the concepts and realities that were originally designated descriptively by attributive phrases”, and “abbreves” are the result of this process (Alekseev, 1979).

The term “shortening”, according to D.I. Alekseev, is the resulting unit itself, and the process of shortening the sound or graphics length of a correlate, which may be 1) a set of morphemes, 2) a word, 3) a phrase, 4) a set of words. (Alekseev, 1979).

The concept “shortening” (as a process and as a result) can also be referred to a few terms: syncopation, apocopic word, abbreviated word, shortening, etc. Thus, according to H. Marchand, shortening is a “syncopation of words to one of its parts” (Marchand, 1975).

E.S. Kubryakova, A.N. Eldyshev and E.A. Dyuzhikova consider a relevant trend in linguistics to equate the terms “abbreviation” / “abbreves” to the concept “shortening”, as the key concept is shortening of a correlate (original unit - words or phrases), and a clear distinction between these definitions can only be seen in the etymology: the term “abbreviation” is a borrowed one (Kubryakova, 1998; Eldyshev, 1983; Dyuzhikova, 1997).

In English medical texts a variety of types of abbreviations occupy a considerable position. In English, shortenings, in sound and graphics, can be divided into abbreviations and acronyms.

Abbreviations are formed from the initial letters of the phrase significant words: ACT (activated clotting time), ADH (antidiuretic hormone), ATN (acute tubular necrosis), EORTC (European Organization for the Research and Treatment of Cancer).

When pronouncing them by letters, stress falls on the last letter. The shortened letters can be written with points, but in the modern English they are usually avoided.

Acronyms are shortenings that, unlike abbreviations (read, spoken and perceived by the names of the letters), are read and seen as ordinary lexical units. Acronyms are formed from different combinations of letters (from first letters, from several first letters with the last one and others). These include, for example: asa (Aspirin), BOD (biochemical oxygen demand), ELF (epithelial lining fluid), GIT (gastrointestinal tract).

Acronyms include termination by the method of coupling or clipping two words and combining them into one. According to the model of compound words - blends or portmanteau words (a hybrid-word, formed by contracting two stems), there appear new complex terms derived from two words by combining the initial part of one word with the last part of the second word. In scientific and technical texts, abbreviations of two types are used:

1) Textual (author’s) that operate within the confines of the text; textual (author’s) abbreviations are explained in the text or presented in a separate list of abbreviations in this text;

2) Generally accepted that are recorded in the official handbooks and are part of the lexical system of the language. The contracted use of long single-word and multi-word terms is the result of the current trend, leading to the creation of user-friendly pronunciation, reading and perception of acronym-terms.

According to their structure scientific- technical abbreviations can be divided into:

- 1) letter: BCG (bacillus Calmette-Guerin), AF (atrial fibrillation), BBB (bundle branch block), BM (bowel movement), MCA(middle cerebral artery), MH (malignant hyperthermia), MI (myocardial infarction);
- 2) syllabic: URAC (uric acid), magtape (magnetic tape), NAPA (N-acetyl-paraaminophenol);
- 3) shortened words: mets (metastases), Neuro (neurology), QALY (Quality adjusted life year), readm (readmission), elect (electrolyte), inj (Injection), postop (postoperative);
- 4) letter (syllable) + word: MUGA scan (MUltiGAted radionuclide scan (of heart)), compole (commutating pole);
- 5) alphanumeric: A1 (A one), VP-16 (epipodophyllotoxin), T4 (thyroxine), 17-OHCS (17-hydroxycorticosteroid).

Acronyms and abbreviations (especially the ones originating from Latin) are one of the most commonly used elements in both written and oral medical communication. Many terms, such as names of disease entities (e.g. *autosomal dominant polycystic kidney disease*, not to mention one of the longest English words: *pneumonoultramicroscopicsilicovolcanoconiosis*), names of chemical compounds (e.g. *6-pyruvoyltetrahydropterin synthase*), or therapies (e.g. *transurethral laser-induced prostatectomy*) hardly ever appear in their full, unwieldy form as it would simply hinder efficient communication. The widespread popularity of abbreviations is doubtless due to the historical tradition of the language of medicine, but also the economy in space and time they provide, so much needed in many medical emergency situations. Additionally, abridging enables medical professionals to code the true meaning of their utterances, making the content inaccessible to the patient, which at times is advisable for ethical reasons.

Medical abbreviations appear extremely fast in modern English, evidenced by abbreviations that are not registered in dictionaries. As a result, the main problem of medical abbreviations translation is that the same abbreviations may have different meanings, depending on the disease, anatomy, or procedure being discussed.

Table 1. English abbreviations with various meanings

Abbreviation	Meaning
A.D.A.	1) American Dental Association 2) American Diabetic Association 3) American Dietetic Association
CHD	1) congenital heart disease 2) coronary heart disease
CT	1) computer tomography 2) cerebral tumor 3) coronary thrombosis
MS	1) multiple sclerosis 2) mitral stenosis 3) mental status
RA	1) rheumatoid arthritis 2) right atrium
RVH	1) renovascular hypertension 2) right ventricular hypertrophy

It should be noted that abbreviations are characterized by high ambiguity, and the smaller the number of characters is, the more frequent ambiguity is. In the list of abbreviations, even in industry dictionaries, letters (A, B, AC) represent a variety of unrelated concepts and subjects. New terms in medical dictionaries may be formed by the names of the authors of new theories and discoveries. Such proper names – terms, initially are “firmly” associated with a particular name and, of course, are written with a capital letter, but then many of them become full members of the terminological system, acquire grammatical form of a nominal name and are often written with a small letter.

3.2. Study of abbreviations “expansion”

From practical experience it is well known that abbreviations are one of the most difficult for understanding and translating elements of foreign specialized texts. A full understanding of the contracted lexical units is only possible with an excellent knowledge of the subject, to which a specific text is dedicated, as well as in the case when the reader knows in advance the meaning of abbreviations used in the text. However, familiarity with the basic principles of abbreviations formation significantly facilitates the task of understanding and translating contractions.

When working with abbreviations the term “expansion” is widely used, and is understood as:

- 1) the process of correlate identification (non-contracted form);
- 2) the very correlate of a certain contraction.

But the meaning of the contraction is not always the same as that of correlate. Therefore, “expansion” is not only identification of a correlate, but the definition of the meaning of this contraction in the specific context.

To expand abbreviations the following basic principles are used:

- 1) Context analysis.

In most cases, the abbreviations at their first occurrence in the given text are usually accompanied by expansion. Therefore, if the nature of the work does not require acquaintance with the first but subsequent sections of the text, and they find an unfamiliar abbreviation, it is necessary to look through the previous sections of the text. It is especially important to familiarize oneself with the whole text if abbreviations expansion is not given.

- 2) The use of dictionaries of abbreviations and other reference books.

Though the identification of the meaning by using dictionaries of abbreviations appears at first sight the most reliable and effective way, in fact it has serious limitations. Since abbreviations are among the most mobile elements of vocabulary, dictionaries of abbreviations get obsolete much faster than other linguistic dictionaries. In this regard, in recent literature one can find many abbreviations that have not yet found reflection in existing dictionaries. When working with a dictionary one should remember the following:

before resorting to a dictionary, one should pre-set by the context in which area of knowledge is this abbreviation;

for a correct translation one should have bilingual general and terminological dictionary;
monolingual dictionary contains only expansion, which may result in error.

- 3) The analysis of abbreviations structure.

This method is applicable only in abbreviations with a complex structure. The composition of abbreviations beside letters may include additional signs: points, slashes etc. For a proper expansion one needs to know their functions. The presence or absence of a point in abbreviation usually does not affect the meaning of abbreviation.

Some additional to the main part of the abbreviation information is always given in parentheses. Hyphen usually indicates the boundaries of words or phrases in the correlate.

- 4) The use of comparison.

The use of comparisons is closely connected with the analysis of the structure of abbreviations and is used as a supplementary method, as it can give only approximate understanding of abbreviation.

This classification of methods for abbreviations’ expanding is rather conventional. In principle, the analysis of the context is a prerequisite for understanding any given text; the use of comparison method requires the analysis of sentence structure. That is why, in practice, a combination of these methods is inevitably used. Having some experience, translator himself identifies specific to certain texts abbreviations model that further allows him to easily direct his attention to common meanings of new abbreviations, formed by such models.

3.3. Study of abbreviations translation

The main methods to convey foreign abbreviations are:

transference of foreign abbreviation with the equivalent abbreviation. It assumes the presence of such abbreviation in a target language and is used most often in the translation of scientific and technical texts, especially for transference of abbreviations defining various physical quantities, units of measurement etc;

borrowing of a foreign abbreviation, mostly words with Latin roots. This method is relatively rare, and is mainly used to transfer abbreviations included in any system of symbols;

transliteration, mainly used for giving proper names;

transcription, to give abbreviations without correlative form in the target language;

descriptive translation, when the target language does not have equivalent abbreviation.

4. Discussions

Informative content, utterance convenience, easy memorability of abbreviations, particularly of acronyms contribute to an increase in their number and use in various fields of communication, and thus increases the need for their research. In studies on the problems of abbreviations, there are many controversial statements. There is still much uncertainty in the question of the nature of abbreviations, of their relationship with the system of language. There is no strict, precise classification of structural types of contracted lexical units. A rigorous scientific analysis of the characteristics of individual structural types is not given. Quite a lot is still unclear on the question of lexical-semantic features of abbreviations, of semantic regularities of their development. Thus, at present, one of the most important tasks in the field of the general theory of abbreviations is the collection and analysis of reliable and extensive factual material, which could be used to generalize contracted lexical units and give their detailed description, which may be the subject of further study.

5. Conclusion

Thus, when translating English medical abbreviations one should primarily focus on the branch of medicine in the context of which this abbreviation is used. This is especially urgent for the homonymous abbreviations. In the translation of English medical abbreviations, it is impossible to do without terminological dictionaries and reference books. It is noteworthy that in the translation of homonymous acronyms an important role is played by denotative meaning of the prototype word and by its connotative and stylistic nuances.

The study discussed in this article was an attempt to verify the quantitative prevalence of abbreviation- and acronym-related problems in medical translations over other problematic lexical groups. Special attention was also given to investigating some basic procedures applicable in translating them.

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