Nijolė LITEVKIENĖ
Šiauliai State College

LATIN AND LITHUANIAN ANATOMICAL TERMS IN *MEDICINOS TERMINŲ ŽODYNAS*: TWO-WORD ANATOMICAL TERMS

Keywords: Latin-Lithuanian anatomical terms, different terms, identical terms, medical writings.

Summary

Based on the collected material, the article reviews the aspects of the appearance of Lithuanian anatomical terms. Anatomical terms, like terms in general, must be short and informative. The scientific-technical term must be accurate, short, and easy to use so that it can be used as a constituent of a new term. Traditional Latin terminology, in some cases, of course, is more precise than Lithuanian: the same thing in Lithuanian dialects has several or even dozens of names. However, the majority of medical terms are composite terms. Composite terms are most productive. Lithuanian terminology has been developed since the last decades of the 19th century. The latest *Lithuanian-Latin Dictionary of Medical Terms* by Vytautas Astrauskas, Stasys Biziulevičius, Salezijus Pavilonis, Adomas Vaitilavičius, and Antanas Vileišis was issued in 1980. The terms of anatomy are given according to the Paris Anatomical Nomenclature with the amendments of New York (1960) and Wiesbaden (1965). Non-relevant terms were rejected. The terms created from scientists' surnames as well as the names of proprietary and branded medications, were also not included. The terms of histology and embryology are presented in accordance with the international nomenclature approved at the International Congress on Anatomy held in Leningrad in 1970.

The dictionary has contributed to the process of purification, standardization, and different development of written Lithuanian language.

Latin as an international language of medicine

Scientific terminology is a system of names of things and phenomena, which enables scientists to make themselves understood. The term that denominates the thing or phenomenon must be unambiguous, precise and definite. Latin and Ancient Greek languages are referred to as "dead" languages. They are ideal for science as their word meanings are fixed in time and disuse, though they have sufficient word-formation resources (Česnys 2001, 16–17). Due to its stability and precision, Latin has been an international language of medicine for centuries. Latin provides a coherent matrix for learning and a context for all knowledge.

After Rome had lost its imperial dignity, Latin was considered to be a "dead" language. Latin is not used in everyday life, and, accordingly, it does not change. Such language that keeps unalterable word forms is suitable for terms. Consequently, new fields of science use Latin to form their terminology. Therefore, scholars using a Latin word as a term may be sure that the word will not gain new meanings and will not cause ambiguity of usage (Brunevičiūtė

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1998, 51). German historian of medicine Heinrich Schipperges states that Latin has entrenched in medicine too (Schipperges 1988, 59).

The development and perfection of medical terminology is a long and near work initiated by Petras Avižonis, Vladas Lašas and further by Vytautas Astrauskas, Stasys Biziulevičius, Salezijus Pavilonis, Adomas Vaitilavičius, Antanas Vileišis (Molytė 1997, 134) at the beginning of the century. Anatomical terminology is being compiled gradually. The first folk terms are found in the work of Konstantinas Sirvydas "Dictionarium trium linguarum", edited in 1620 (Pavilonis 1993, 100).

It is maintained that the Lithuanian medical terminology started developing along with the appearance of old writings of the 16th–17th centuries and the writings of the 18th–19th centuries, from which a number of terms entered the current language of medicine. It was started to publish many Lithuanian and translated medical booklets and articles in the periodicals. First Lithuanian medical periodicals "Sveikata", "Medicina ir gamta", "Gydytojas" were issued. The issues of unification of medical terms were raised.

Later, Lašas, Vaitilavičius, Česnys were writing on medical terminology issues. Birutė Briaukienė (2000) and Nijolė Litevkienė (2006) (Valančiūtė 2014, 90–94) defended their dissertations on terminology.

Review of the dictionary of medical terms (1980)

The dictionary was prepared by a collective of five authors on the initiative of academician Lašas and professor Girdzijauskas. Upon compiling the dictionary by parts, the authors collectively discussed all terms. The discussion of Lithuanian terms was attended by research fellows from the Institute of the Lithuanian Language and Literature of the Lithuanian Academy of Sciences Bartusevičius, Grigas, Kruopas, Labutis, and particularly long and efficiently, by Kačinskaitė. The prepared dictionary manuscript has been deposited in the National Scientific Library of Medicine under the Ministry of Health Protection so that interested persons could get familiar with it and submit comments. The subject-matter problems of the dictionary were discussed in the press. The manuscript was edited by Rimkūnas, Stasiulionytė, Šuminas. Part of the text prepared for the press release was read by the scientific fellows of the Terminology Group of the Institute of the Lithuanian Language and Literature Gaivenis and Klimavičius. The dictionary was finally edited and accentuated by Lemchenas.

The aim of the dictionary was to unify the use and pronunciation of terms, to introduce the meanings of terms to the medical community. The dictionary is intended for doctors of various specialties and pharmacists.

The dictionary encompasses the basic terms of human morphology and physiology, clinical disciplines, pharmacology and pharmacognosy, medicine-related terms of parasitology, microbiology, immunology, and terms of genetics used in the medical literature and their synonyms.

The following elements are distinguished for a separate term: Latin term (or the Latin variant of the term), its grammatical form (for nouns – the flexion of the genitive case and gender, for adjectives – flexions of genders), the Lithuanian variant of the Latin term, purely Lithuanian term, the short explanation of the term, the equivalent in Russian. Due to the different properties of some terms, the said elements are not applied for all terms in the same way. Many terms of clinic, pharmacy, microbiology, and cytology are only used in the Lithuanian variant of the Latin form. In such cases where the Lithuanian variants of the Latin forms and the Lithuanian equivalents are given, they should be considered equivalent and should be used optionally. In the case of composite terms, to save place, more often only Lithuanian variants of Latin forms are given.

Where the meaning of the term is clear from the Lithuanian term, the explanation is omitted. In some cases, especially in microbial names, where it is common to use only the Latin term, Lithuanian and Russian terms are not given, it is only indicated that this is a species and genus of bacteria, fungi, viruses, or medicinal plants.

Explanations of terms are brief. They are intended only to guide the user of the dictionary to which medical field the term belongs or which medicine-related object it symbolizes. These explanations cannot replace the full characteristics or definition of the object: the dictionary is not encyclopaedic in its nature. Explanations are usually given in brackets after the Lithuanian term.

Abundant synonyms of medical terms are given in the dictionary with reference to those terms that are more commonly used in literature. In some cases, the term is explained by the constituent elements of another term that is usually more commonly used; for example, *scrirrhus,* i m = *carcinoma fibrosum*. If necessary, the elements of the composite term can be found in the corresponding places of the dictionary according to the alphabet; similarly, the term can be found if it is trivial, constantly repetitive; e.g., *acutus*, *chronicus*, *purulentus.*

Latin equivalents of the Lithuanian terms can be found with the help of corresponding alphabetical indexes. They indicate only the basic terms because composite terms are found after the main term.

Obsolete and non-relevant terms were rejected. The terms created from scientists' surnames and the names of proprietary and branded medications were also not included. As to pharmaceutical preparations, mostly only the terms formed on the basis of the chemical composition and reconciled with the form established by the State Pharmacopoeia are presented. The terms of pharmacognosy are reconciled with the taxonomy accepted in the Herbal Plants Catalogue.

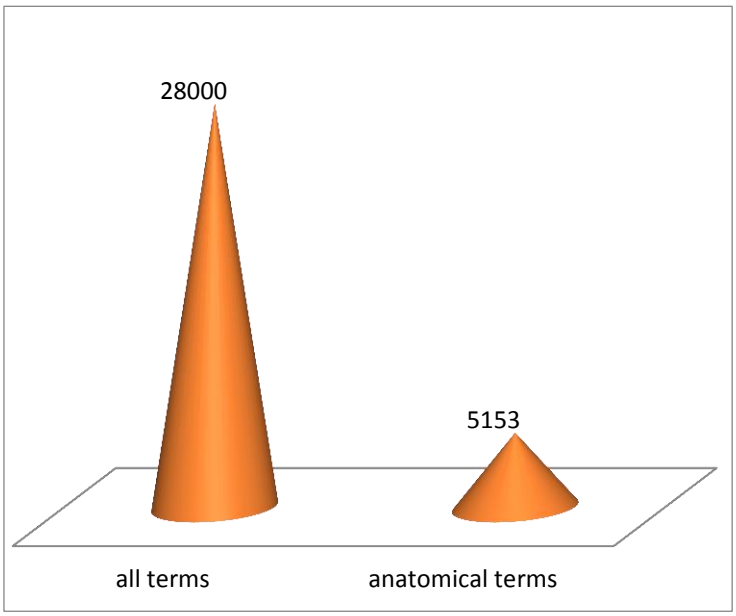
The terms of anatomy are given according to the Paris Anatomical Nomenclature (P.N.A. 1955) with the amendments of New York (1960) and Wiesbaden (1965). The terms of histology and embryology are presented in

accordance with the international nomenclature approved at the International Congress on Anatomy held in Leningrad in 1970.

The authors and editors of the dictionary had to solve not an easy task: to reconcile the terms created by doctors of various specialities during many decades, to draw up their unified system, and to form many of them anew. *The Dictionary of Medical Terms* consists of three parts: the first part (994 p. making up the dictionary), annexes (272 p.), and the part of notices about mistakes that have occurred. The Dictionary consists of approximately 28.000 words of different spheres of medicine.

The majority of anatomical terms are two-word (2908) and three-word (1300) terms (see Figure 1).

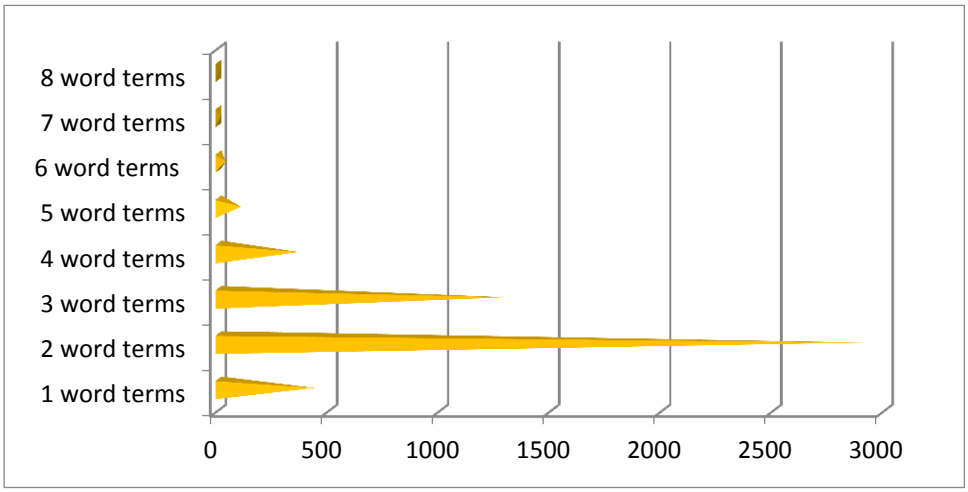
Figure 1. **The number of terms in the dictionary**



Two-word Latin and Lithuanian anatomical terms in *Medicinos terminų žodynas*

Although one-component terms are considered to be better and more convenient to use, however, in various spheres of science, technology, and other special fields of human activities, in order to name more complex concepts, composite terms that "make up the major part of terms" are used (Zemlevičiūtė 2005, 336–337). *Medicinos terminų žodynas* contains 5153 anatomical terms, which makes up 18.40 % of all terms of the dictionary. The number of three-word anatomy terms is half as much – 10.38 %. One-word anatomical words constitute only about 1.54 %; four-word terms, 1.29 %; five-word terms, 0.36 %; six-word terms, 0.12 %; seven-word terms, 0.04 %; and eight-word terms, 0.01 % of anatomical terms (see Figure 2).

Figure 2. **Anatomical terms according to their structure**



Lithuanian two-word anatomical terms and their Latin equivalents form five most frequently used types of grammatical configurations[1].

Since each grammatical configuration can form several combinations consisting of two components, we can get 24 two-word Lithuanian grammatical configurations and their Latin equivalents.

The majority of Lithuanian and Latin two-word terms are terms of the attribute in concord. In this chapter, the most typical structural models, aspects of congruity and differentiation of Lithuanian and Latin two-word terms of the attribute in concord are presented. It has been identified that 83.74 % of grammatical configurations of two-word terms of the attribute in concord are congruous.

According to the common word order in Latin, the attribute of the term goes after the modifier (Jones, Sidwell 2002, 600). The word order in Latin is not strict; however, the subject is at the beginning of the sentence, the predicate, at the end of the sentence, and the attribute, after the modifier (Dumčius et al. 1999, 40). Thus, it can be stated that there is an inverted order of words in Latin, compared with the Lithuanian word order. The usual sequence of the components of Lithuanian binomial terms is *attribute* + *modifier*; of Latin binomial terms, *modifier* + *attribute*. In this aspect, the Lithuanian terminology of anatomy, botany, zoology differs from Latin, where specific attributes go after modifiers (Gaivenis 2002, 31). In rare cases, the attribute precedes the modifier. According to Jonas Dumčius, Kazimieras Kuzavinis and Ričardas Mironas, if the attribute that denotes *place* or *time* goes before the modifier, it has the predicative meaning; if it follows the modifier, the attributive meaning (Dumčius et al. 1999, 97). Cases when the attribute precedes the modifier in Latin anatomical terminology, are rare.

[1] According to K. Gaivenis and S. Keinys, the concept *configurations* means a syntactic model (Gaivenis, Keinys 1990, 107). As concerns the concept "grammatical configurations", see T. N. Moločnaja „О понятии грамматической конфигурации" (1962), O. D. Andersjanas „Идеи и методы современной структурной лингвистики" (1966) (Gaivenis 1969, 46).

Analysing aspects of congruity and differentiation of Lithuanian and Latin terms, it is necessary to point out that there are no pronominal forms of adjectives and participles in Latin. Pronominal attributes have determinative and emphatic meaning.

The majority of attributive components of Lithuanian terms are attributes with the suffix *-inis, -ė*. What are Latin equivalents of attributive components with the suffix *-inis, -ė*? Based on the definitions of the meaning of attributes with suffix *-inis, -ė*, three groups of Latin equivalents can be distinguished:

1. The nominative of the adjective with the suffix *-inis, -ė* (attribute) + the nominative of the noun (modifier) ≡ [1] the nominative of the noun (modifier) + the nominative of the adjective (attribute): *balninis sąnarys – articulatio sellaris*, MTŽ, 59; *deltinis raumuo – musculus deltoideus* MTŽ, 352; *išorinis meniskas – meniscus lateralis*, MTŽ, 334; *gaktinis kampas – angulus subpubicus* MTŽ, 36; *gomurinė skiauterė – crista palatina* MTŽ, 126; *gomurinės vagos – sulci palatini* MTŽ, 519; *grybiniai speneliai – papillae fungiformes* MTŽ, 410; *kaklinė kilpa – ansa cervicalis* MTŽ, 38; *kardinė atauga – processus xyphoideus* MTŽ, 456; *kandinė siūlė – sutura incisiva* MTŽ, 523; *kandinis kanalas – canalis incisivus* MTŽ, 87; *gomurinės vagos – sulci palatini* MTŽ, 519.

2. The nominative of the pronominal adjective (attribute) + the nominative of the noun (modifier) ≡ the nominative of the noun (modifier) + the nominative of the adjective (attribute): *blyškusis kamuolys – globus pallidus* MTŽ, 227; *dantytoji siūlė – sutura serrata* MTŽ, 524; *geltonieji raiščiai – ligamenta flava* MTŽ, 306; *gulsčioji plokštelė – lamina horizontalis* MTŽ, 292; *ilgoji galva – caput longum* MTŽ, 89; *ydingasis ratas – circulus vitiosus* MTŽ, 108; *karališkoji vena – vena basilica* MTŽ, 579; *kietasis gomurys – palatum durum* MTŽ, 407; *lęšiškoji kilpa – ansa lenticularis* MTŽ, 38; *lygioji siūlė – sutura plana* MTŽ, 524.

3. The nominative of the adjective of mixed composition with the suffix *-inis, -ė* (attribute) + the nominative of the noun (modifier) ≡ the nominative of the noun (modifier) + the nominative of the adjective of mixed composition (attribute): *paakinė vaga – sulcus infraorbitalis* MTŽ, 520; *pagleivinis audinys – tela submucosa* MTŽ, 532; *paakinis kanalas – canalis infraorbitalis* MTŽ, 87; *paliežuvinė liauka – glandula sublingualis* MTŽ, 225; *podyglinis raumuo – musculus infraspinatus* MTŽ, 353; *pokapiliarinė venule – venula postcapilaris* MTŽ, 586; *popakinklinė kišenė – recessus subpopliteus* MTŽ, 475; *pošonkaulinė arterija – arteria subcostalis* MTŽ, 54; *priekrūtinkaulinė linija – linea parasternalis* MTŽ, 311; *prienosiniai ančiai – sinus paranasales* MTŽ, 501; *priešgerklinis tarpas – spatium pretracheale* MTŽ, 504; *sausplėvinis šalmas – galea aponeurotica* MTŽ, 216; *tarpskilvelinė pertvara – septum interventriculare* MTŽ, 498; *tarpslankstelinė anga – foramen intervertebrale* MTŽ, 209; *tarpšlapimtakinė raukšlė – plica interureterica* MTŽ, 444;

[1] ≡ equivalent to.

tarppriešširdinė pertvara – septum interatriale MTŽ, 498; *užryklinis tarpas – spatium retropharyngeum* MTŽ, 504.

4. The nominative of the ordinary or pronominal participle of the active or passive voice (attribute) + the nominative of the noun (modifier) ≡ the nominative of the noun (modifier) + the nominative of the participle of the active voice (attribute):

apimanti cisterna – cisterna ambiens MTŽ, 108. *atitraukiamasis nervas – nervus abducens* MTŽ, 369; *įtekamoji gysla – vas afferens* MTŽ, 577; *ištekamoji gysla – vas efferens* MTŽ, 577; *kylančioji aorta – aorta ascendens* MTŽ, 43.

5. The nominative of the pronominal adjective of the superlative degree (attribute) + the nominative of the noun (modifier) ≡ the nominative of the noun (modifier) + the nominative of the adjective of the superlative degree (attribute): *ilgiausiasis raumuo – musculus longissimus* MTŽ, 354.

Only one example of this configuration has been found. The subordinate components of Lithuanian and Latin composite terms – superlative adjectives – indicate the most or the least amount of the quality of parts of the human body or structural units in the human body. *Ilgiausiasis raumuo* starts near the crest muscle and ends near muscles of costarum iliarum. *Ilgiausiasis raumuo – musculus longissimus* really and truly is the longest. Lithuanian and Latin composite terms of this kind indicate the muscle having the most amount of quality. The aspect of such congruity occurs rarely. Cases when superlatives or comparatives do not indicate the most or least amount of the quality also occur. However, they are not frequent.

Supposedly, cases of congruity when the subordinate components of Lithuanian and Latin two-word terms are superlatives occur in clinical terminology if the names of "symptoms, syndromes, diseases, conditions of being sick, disorders" are indicated (Brunevičiūtė et al. 2001,115).

It can probably be stated that the discussed grammatical configurations are typical of anatomical terminology and therefore are used most frequently.

6. The nominative of the pronominal adjective (attribute) + the nominative of the noun (modifier) ↔ the nominative of the adjective (attribute) + the nominative of the noun (modifier): the attribute + modifier – *Švelnusis dangalas – <u>pia mater</u>* MTŽ, 437; *Kietasis dangalas – <u>dura</u> <u>mate</u>r* MTŽ, 156.

The underlined attributes in concord with Latin binomial terms indicate a certain peculiarity of the structural part of the human body. These composite terms are structurally equivalent, there is no ordinary Latin word order. Consequently, the previously mentioned Latin word order is contravened. The inverted order of words when the attribute precedes the modifier is used when it is necessary to emphasize, single out a thing or phenomenon that indicates a peculiarity rather than a thing or phenomenon.

Linguists state that there are certain cases in Latin when the inverted order of words (lat. *Inversion – inversion, reversion, permute places; inversio verborum – conversion of the (ordinary) order of words)* is used (Jones, Sidwell 2002, 600). According to the above-mentioned Romanists, when the order of

words is inverted, the place of the attribute changes. It should be emphasized that suchlike binomial terms are unproductive, though they may occur in the medical terminology of other spheres.

The language of anatomy offers intriguing challenges both to medical historians and linguists. Classical scholars have analysed the content and language of the most ancient medical records in great detail, but later development of medical terminology has received much less attention. For linguists, the language of anatomy is fascinating for the flow of concepts and words from one tongue to another. For medical doctors, the assessment of history and original meanings of words offer a new dimension to their professional language.

Concluding remarks

The above-mentioned examples illustrate the process of the development of Lithuanian anatomical terminology. In the past, the language of medicine commonly employed Greek and Latin words. Today, in addition to the words of Greek and Latin origin, words imported from national languages are used in the language of medicine. The process of evolution of Lithuanian anatomical terms started in the 17th century. In 1980, *Medicinos terminų žodynas* (*The Dictionary of Medical Terms*) was published, presenting anatomical terms according to the nomenclature of Paris (P.N.A. 1955) with the amendments of New-York and Wiesbaden. The terms of histology and embryology are presented in accordance with the international nomenclature approved at the International Congress on Anatomy held in Leningrad in 1970.

Lithuanian terminology has been developed since the last decades of the 19th century. Its development, formation, and correction intensified in the 20th century, along with the increasing number of theoretical research work on Lithuanian terminology, the development of terminology, and special fields of terminology.

The most frequent Lithuanian and Latin composite terms are two-word and three-word terms: 2908 two-word Latin and Lithuanian anatomical terms have been found.

For the most part, Lithuanian and Latin composite terms are two-word terms. They constitute 56.43 % of all analyzed Lithuanian and Latin terms of the dictionary.

According to syntactical relations of basic and subordinate components, Lithuanian and Latin two-word terms are subdivided into two groups, i.e., of the attribute in concord and the attribute not in concord. Terms with the attribute in concord constitute two-thirds of Latin and two-thirds of Lithuanian two-word terms.

Lithuanian two-word terms and their Latin equivalents form 24 grammatical configurations.

The major part of Lithuanian binomial terms are terms with the *suffix -inis, -ė, the nominative of the adjective + the nominative of the noun.* Their Latin

equivalents are *the nominative of the noun + the nominative of the adjective* (6.8 % and 9.48 % of Lithuanian and Latin binomial terms, respectively). In Lithuanian composite terms, the trivial attribute commonly precedes the modifier. The inverted composition of components is characteristic of Latin composite terms.

Based on the analysed material, it is noted that Lithuanian and Latin composite terms with constituent participles, numerals, and pronouns are rare.

Nihil sub sōle novum (there is nothing new under the sun). Anatomy still enjoys the benefits of collaboration between physicians and surgeons, to whom physicists should be added because, without them, no progress could have been made beyond the range of our sense organs. Furthermore, biochemists, immunologists, and molecular biologists are constantly opening up new possibilities to further "objectivise" the human body (Schipperges 1988, 60).

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