COINCIDENCE AND DIFFERENCE OF AGREED ATTRIBUTE IN COMPOUND LITHUANIAN, LATIN AND ENGLISH ANATOMICAL TERMS

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Annotation

It can be said that the anatomical terminology is a specific collection of scientific terms. One of the major flaws in early anatomical terminology was that body structures were described by varying names, while some of the terms were irrational in nature and confusing. At this time, different international committees were working on preparing a unified final version of the anatomical terminology. Each country wanted to have its own nomenclature. To this end, each country based its nomenclature on the international anatomical terminology, and then translated it into its own language.

According to Sakai (2007) the historical development of anatomical terminology – the oldest layer of medical terminology – can be divided into five stages: colloquial Greek words of that period used by Galen as anatomical terms; terms from the early 16th century, when Vesalius described the anatomical structures in his De humani corporis fabrica; terms from the late 16th century when Sylvius in Paris and Bauhin in Basel described muscles, vessels and nerves; terms from the 17th-19th century when anatomical textbooks were written in Latin and later in other modern languages; terms from the end of 19th century, when the first international anatomical terminology in Latin was published as Nomina Anatomica.

Keywords: English medical terminology, Latin medical terminology, Lithuanian medical terminology, aspects of medical terminology.

Introduction

Although the importance of medical language has increased enormously, “there is no recognized discipline called medical linguistics” (Wulff, 2004). Papers dealing with medical language are published in various scientific research journals, medical journals, linguistic journals, journals on teaching, conference proceedings, etc. The language of medicine poses challenges to medical professionals, medical historians, linguists, translators, undergraduate and postgraduate medical students (Džuganová, 2019).

Scientific terminology is a system of names of objects and phenomena, which helps scientists to make themselves understood. The term used to name an object or phenomenon must be unambiguous, precise and clear. Latin and ancient Greek languages have been used for such names since long ago. They are almost unchanging but have sufficient word formation reserves (Česnys, 2002). Because of its permanence and preciseness, the Latin language has been the international language of science for centuries.

Medical language is the language used by medical experts in their professional communication and has a history of more than 2500 years of development, influenced mostly by Greek and Latin medical traditions. Its specific features and characteristics are studied from various perspectives. It is closely related to the immense development of technology and science, resulting in new concepts in the language; therefore, medical vocabulary is an open and continually changing phenomenon and its units often acquire new meanings (Džuganová, 2019).

Like all languages, medical terminology has also changed over time. The basis for medical terminology, however, has remained the same (Dobrić, 2013). While the roots of written medical language can be traced back to the 5th century BC, the spoken language of medicine has naturally existed ever since the establishment of the medical profession itself (Dirckx,1983).

Medical terminology is considered to be one of the oldest specialized terminologies in the world. It is a linguistic discipline that studies, analyses and describes a specialized area of the lexicon. Medical terminology has been studied in various aspects; e.g., historical: “the Greco-Latin core of the medical terminology is a result of the historical development of medicine as a

science" (Doncu & Andronache, 2014). Most linguists have accepted Jespersen's assertion that modern science borrowed heavily from Latin and Greek roots to create compound and derived words. Other perspectives are etymological, explaining the origin and development of terms; e.g., etymon = origin of a word and + logos = word; morphological, when different meanings of the word can be obtained by means of prefixes and suffixes (added word roots) (Džuganová, 2013); semantic, describing changes in the meaning, which are as common as changes in the form. Like the latter, they can be internally or externally motivated. There are changes at the semantic level, widening and narrowing the meaning, and at the syntactic level, marked by frequent nominalization (Džuganová, 2019).

It is estimated that about three-fourths of medical terminology is of Greek origin. The main reason for this is that the Greeks were the founders of rational medicine in the golden age of Greek civilization in the 5th century BC. The Hippocratic School and, later on, Galen (the Greek from Asia Minor, who lived in Rome in the 2nd century AD) formulated the theories that dominated medicine up to the beginning of the 18th century. The Hippocratics were the first to describe diseases based on observation, and the names given by them to many conditions are still used today. Greek medicine migrated to Rome at an early date, and many Latin terms crept into its terminology. Latin was the language of science up to the beginning of the 18th century, so all medical texts were written in Latin. Influenced by the great anatomical work *De humani corporis fabrica* (1543), written by Andreas Vesalius, the terminology of anatomy has become almost exclusively Latin.

Nowadays, the language of medicine undergoes a shift from Latin and Greek influence on medical terminology to English influence on the creation of modern international medical terms (Dobrić, 2013). This is due to modern medicine that has surpassed the boundaries of Greco-Latin terms, introducing new medical terms composed partly or wholly of words borrowed from ordinary English. Doctors from non-English-speaking countries now can choose between importing these English terms directly and translating them into their native language; e.g., bypass operation, screening, scanning (Wulff, 2014).

Coincidence cases of two-word Lithuanian anatomical terms and their Latin and English equivalents

Lithuanian medical terminology usually manifests itself in two varieties: national and international (Klimavičius 1975). In terms of origin, terms differ: they can be (1) formed on the basis of the lexis of the native language: *gimda – uterus* Vest.121, MTŽ571, ŽA412/*cf.* Eng. *uterus* AHA23, *uterus (womb)* CMD691; *nagas – unguis* Vest.34, MTŽ565, ŽA582/*cf.* Eng. *fingernail* AHA33, CMD686; *skrandis – ventriculus* Vest.104, MTŽ586, ŽA337/ *cf.* Eng. *gaster/ventriculus* AHA20, *ventricle* CMD700; *tiltas – pons* Vest.47, MTŽ451, ŽA463/*cf.* Eng. *pons* AHA28, CMD524; gimdos kaklelis – *cervix uteri* Vest.137, MTŽ99, ŽA412/*cf.* Eng. *cervix* of *uterus* PAPh938; nosies pertvara – *septum nasi* Vest.79, MTŽ498/ *cf.* Eng. *nasal septum* PAPh179; *stuburo smegenys – medulla spinalis* Vest.26, *nugaros smegenys* MTŽ329, ŽA443/*cf.* Eng. *medulla spinalis* AHA27, 28; (2) borrowed (as it has already been mentioned, most commonly, Latin and ancient Greek languages are used): *dentinas – dentinum* Vest.108, MTŽ140, ŽA322/*cf.* Eng. *dentine* CMD174; *odena – sclera* Vest.51, ŽA551/*cf.* Eng. *sclera* AHA536, CMD591; *emalis – enamelum* MTŽ169, ŽA323/*cf.* Eng. *enamelum* AHA135, *enamel* CMD; and, finally, mixed or hybrids: danties *pulpa – pulpa* dentis MTŽ464 *cf.* Eng. *pulpa dentis* AHA135 (Litevkienė, Lauruškienė 2012).

Due to the long lasting reticence of countries' international scientific relations, the medicine science of each country formed a distinctive nomenclature. Eventually, this resulted in a great confusion in anatomical terms due to the names for newly discovered parts of human organs, chosen based on different principles.

However, most terms in medical terminology are compound terms. According to A. M. Rassinoux, compound terms are most productive. S. W. Haas, R. M. Losee studied cases of the use of terms and their frequency in natural languages (Losee R. M., Haas S. W. 1995). According to V. Danilenko, only word combinations can have an exact scientific expression because the more words make up the term, the more precisely it can be expressed (Danilenko 1986).

According to foreign scholars E. Marecková, F. Simon , L. Cervený, Latin compound terms form a separate group in medical terminology. Their productivity is determined by the suitability of the Latin language to express the thought economically and concisely when the mother tongue equivalent is expressed in a paraphrase (Marecková, Simon, Cervený, 2002). Compound two-word terms denoting *main* parts and organs of the human body in the international document *Nomina Anatomica* are in the minority.

Compound terms, as a separate kind of terms, were first distinguished and named by our prominent linguist J. Jablonskis in 1913, reviewing K. Jaunius' *Grammar of the Lithuanian Language*. He called multi-word terms *compound terms* (Gaivenis 1975).

Lithuanian, Latin and English compound anatomical terms usually consist of two or three words. Multi-word (four-word to eight-word) compound terms are very rare.

Discussing the aspects of coincidence and difference of constituents of Lithuanian, English and Latin terms, it is necessary to note that Latin and English languages do not have pronominal forms of the adjective or participle. Lithuanian pronominal adjectives have a determinative and emphatic meaning. In Latin and English languages, adjectives do not have such meanings (Litevkienė,Lauruškienė 2012).

Most attributive constituents are made up of adjectives with suffixes *-inis, ė*. What are the Latin and English equivalents of these attributive constituents? Based on the definitions of the meanings of the substantial suffix, three groups of Latin and English suffix equivalents can be distinguished:

Meaning of suffix	*Suffixes of constituents of compound Latin terms*	*Suffixes of constituents of compound English terms*
- Belonging to the object expressed by the main word or the link to that object	- alis, e;-aris,e	- aris, e - ilis, e - al
- Property-related belonging (Skardžius, 1935, 68).	- icus, a, um mean belonging	- ic
- Similarity to the object expressed by the main word	- ideus, a, um mean similarity	- idus, e
- Material from which something is made (Skardžius, 1935, 68).	- eus, a, um - aceus, a, um mean material	- eus - ens

Suffixes - inis, ė (attribute) + noun (determinative) ≡[1] noun (determinative) + adjective (attribute) ≡ noun (determinative) + adjective (attribute) (Litevkienė, Korosteliova 2011):

$A^{2}_{Nn} + S_n \leftrightarrow S_n + A_N \leftrightarrow A_N + S_n$

žiauninis lankas	–	*arcus branchialis MTŽ48*	*arcus branchialis TMP38.*
alveolinė atauga	–	*processus alveolaris MTŽ456*	*process alveolaris TMP420;*
poakinė sritis	–	*regio infraorbitalis MTŽ478*	*regio infraorbital, TMP405;*
žandinis antis	–	*sinus maxillaris MTŽ501*	*maxillary sinus PAPH180;*
sąnarinis paviršius	–	*facies articularis MK18*	*articular surface TMP165;*

Pronominal adjective (attribute) + noun (determinative) ≡ noun (determinative) + adjective (attribute) ≡ adjective (attribute) + noun (determinative):

$A_{Nl} + S_n \leftrightarrow S_n + A_N \leftrightarrow A_N + S_n$

tikrieji šonkauliai	–	*costae verae Vest.26*	*false ribs CMD576*
minkštasis gomurys	–	*palatum molle Vest.107*	*soft palate CMD479.*
netikrieji šonkauliai	–	*costae spuriae Vest.26*	*false ribs CMD576*
blyškusis kamuolys	–	*globus pallidus MTŽ227*	*pale globe, globus pallidus TMP193*
kietasis gomurys	–	*palatum durum Vest.107*	*hard palate CMD479*

Mixed formation adjective with the suffix - inis, ė (attribute) + noun (determinative) ≡ noun (determinative) + compound adjective (attribute) ≡ compound adjective (attribute) + noun (determinative):

$A_{Nn} + N_N \leftrightarrow N_N + A_{Nn} \leftrightarrow A_N + N_N$

seromukozinė liauka	–	*glandula seromucosa Vest.34, MTŽ225*	*seromucosal gland TMP183, AHA33*
abiausė linija	–	*linea biauricularis MTŽ310*	*biauricular line TMP280*
apygyslaininis tarpas	–	*spatium perichorioidale MTŽ504*	*perichorioidal space TMP493;*

[1] ≡ identical to

[2] A – adjective, N – numeral, S – noun, Pr – pronoun, $_N$ – nominative, $_G$ – genitive, $_p$ – positive degree, $_{comp}$ – comparative degree, $_s$ – superlative degree, $_i$ – pronominal, $_n$ – suffix - inis,ė, $_S$ – compound, $_m$ – of mixed formation, P – participle, $_{pos}$ – positive degree, $_C$ – ordinal

paliežuvinė liauka	–	*glandula sublingualis Vest.104*	*sublingual gland PaPh773*
poliežuvinis latakas	–	*ductus sublingualis MTŽ156*	*sublingual canal TMP134*
tarpslankstelinė anga	–	*foramen intervertebrale ŽA62*	*intervertebral foramen PaPh191*

Pronominal passive or active participle (attribute) + noun (determinative) ≡ noun (attribute) + participium praesentis activi (determinative) ≡ noun (attribute) + participium praesentis activi (determinative):

$$P_{NI} + S_n \leftrightarrow S_n + P_N \leftrightarrow P_N + S_{nm}$$

nusileidžiančioji aorta	–	*aorta descendens MTŽ43*	*descending aorta PaPh646*
ištekamoji gysla	–	*vas efferens MTŽ577*	*vas efferens TMP575*
jungiamasis latakas	–	*ductus reuniensMTŽ156*	*ductus reuniens PaPh649*
atitraukiamasis nervas	–	*nervus abducens MTŽ369*	*nerve abducens PaPh434*
įtekamoji gysla	–	*vas afferens MTŽ577*	*vas afferens TMP576*

Nominative of pronominal superlative adjective (attribute) + nominative of noun (determinative) ≡ nominative of noun (determinative) + nominative of superlative adjective (attribute) ≡ nominative of noun (determinative) + nominative of superlative adjective (attribute): $A_{NI} + S_n \leftrightarrow S_n + A_N \leftrightarrow S_n + A_N$. Only one such case was found. Superlative adjectives in Lithuanian, Latin and English compound terms denote the maximum (minimum) amount of the property of parts of the human body or of structural points in the area of the human body. Coincidence cases of two-word compound Lithuanian, Latin and English terms containing superlative adjectives could be found in clinical terminology, when names of a symptom, diseases, diseased conditions, disorders are indicated (Brunevičiūtė, 2001): *ilgiausias raumuo – musculus longissimus MTŽ354 – musculus longissimus PaPh66* (Litevkienė, Korosteliova 2011). Such coincidence in two-word anatomical terms is rare.

Compound two-word terms contain two-thirds of the configurations discussed. It can be stated that those configurations are typical of anatomical terminology. Usually, the constituents of two-word compound terms are presented in a certain order: attribute + determinative; in Latin, determinative + attribute; in English, determinative + attribute. Sometimes the attribute can precede the determinative. According to A. Dumčius, K. Kuzavinis and R. Mironas, if the attributes denoting *place* or *time* precede the determinative, they have a predicative meaning, and if the go after the determinative, they have attributive meaning (Dumčius et al., 1999). It can be argued that practicably such terms are rare. Only two combinations containing such configurations of Lithuanian, Latin and English terms were found (Litevkienė, Lauruškienė 2012).

Nominative of pronominal adjective (attribute) + nominative of noun (determinative) ≡ nominative of adjective (attribute) + nominative of noun (determinative) ≡ nominative of adjective (attribute) + nominative of noun (determinative): $A_{NI} + S_N \leftrightarrow A_N + S_N \leftrightarrow A_N + S_N$: *švelnusis dangalas – pia mater Vest.47, MTŽ437 – pia mater PaPh377; kietasis dangalas – dura mater Vest.47, MTŽ156 – dura mater PaPh377* (Litevkienė, Korosteliova 2011).

Cases of differences between two-word Lithuanian anatomical terms and their Latin and English equivalents

According to the provisions of the PNA (Parisiensia Nomina Anatomica), in anatomical terminology, adjectives denoting the location of parts and organs of the human body as well as the quantitative properties of organs and parts of the body are related by an opposition relation, in other words, antithesis (Litevkienė, Lauruškienė 2012).

$$A_{NI} + S_N \leftrightarrow A_N + S_N \leftrightarrow S_N + A_N$$

mažasis (žastikaulio) gumburėlis	–	*tuberculum minus (humeri) MTŽ560*	*tubercle lesser PaPh200*
didysis (žastikaulio) gumburėlis	–	*tuberculum majus (humeri) MTŽ560*	*tubercle greater PaPh200*

The analysis of the examples enables to state that comparatives are used in Latin compound terms to distinguish the determinative because they denote a considerable or excessive degree of a quality (Allen, Greenough 2002). We use pronominal adjectives to express permanent, characteristic peculiarities, and this way we distinguish objects and living things noted by them. For this reason, they could be called exclusive adjectives. Pronominal adjectives are used when something needs to be distinguished by a permanent, distinct peculiarity, more clearly noted or indicated.

Hence, specific constituents of Lithuanian compound terms, expressed by pronominal adjectives, and constituents of Latin and English compound terms, expressed by gradable adjectives, are used for distinguishing parts and organs of the body according to their qualitative peculiarities. Therefore, it can be stated that in such case, the categorical meanings of words do not coincide. The symmetrical position of parts and organs of the human body with respect to the longitudinal axis is indicated by the attributes of two-word compound terms (Litevkienė,Lauruškienė 2012).

dešinysis *kairysis*	*dexter MTŽ145* *sinister MT501*	*dexter TMP122* *sinister TMP501*

kairysis inkstas	–	*ren sinister MTŽ480*	*left kidney PaPh392*
dešinysis inkstas	–	*ren dexter MTŽ480*	*left kidney PaPh392*
dešinysis skilvelis	–	*ventriculus dexter Vest91*	*right ventricle PaPh594*
kairysis skilvelis	–	*ventriculus sinister Vest91*	*left ventricle PaPh594*

The first group of Lithuanian two-word compound terms, Latin and English two-word compound terms: Lithuanian two-word terms ↔ Latin two-word terms ↔ English two-word terms. Several subtypes of this type are distinguished.

According to K. Gaivenis, in terminology, pronomination is important (to distinguish the kind), but gradation of adjectives is meaningless (Gaivenis 2002). The analysis of terms found in various sources enables to state that there are compound terms in anatomical terminology, one constituent of which is expressed by the comparative adjective or the superlative adjective. This type of compound terms occurs in the systematics of angiology (Litevkienė, Korosteliova 2011).

However, ambiguity arises when Lithuanian, Latin and English terms with this configuration are compared: A_{NIpos} + S_N ↔ S_N + A_{Ncomp} ↔ A_{Ncomp} + S_N

The following cases were found:

A_{NIpos} + S_N ↔ A_{Ncomp} + S_N ↔ S_N + A_{Ncomp}

mažasis (žastikaulio) gumburėlis	–	*tuberculum minus (humeri) MTŽ560*	*tubercle lesser PaPh200*
didysis (žastikaulio) gumburėlis	–	*tuberculum majus (humeri) MTŽ560*	*tubercle greater PaPh200*
mažoji (skrandžio) kreivė	–	*curvatura (ventriculi) minorMTŽ129*	*curvature lesser PaPh59*
didžioji (skrandžio) kreivė	–	*curvatura (ventriculi) miajorMTŽ129*	*curvature greater PaPh59*

1. Nominative of pronominal adjective (attribute) + nominative of noun (determinative) ≠[3] nominative of noun (determinative) + nominative of comparative adjective (attribute) ≠ nominative of comparative adjective (attribute) + nominative of noun (determinative).

A_{NIpos} + S_N ↔ A_{Ncomp} + S_N ↔ A_{Ncomp} + S_N

mažoji taukinė	–	*omentum minus MTŽ390*	*lesser omentumCMD459*
didžioji taukinė	–	*omentum majusMTŽ390*	*greater omentumCMD459*

In Lithuanian two-word compound terms, we find the positive pronominal adjective, while in Latin compound terms and in English terms, their equivalents are comparative degrees. Agreed adjectives of such compound two-word terms do not coincide in the structural aspect: pronominal adjective – comparative adjective – superlative adjective. Do these compound terms have the same limits of identity?

The constituents of two-word terms denote the same qualitative properties of structural points of the same parts of the body. Practicably, agreed adjectives of this type mean the same peculiarity. In this type of terms, logically identical peculiarities are expressed by different lexical units.

The analysis of the terms of the above-mentioned type allows to state that to define the differences of the organ or structural unit, to highlight a greater or lesser amount of peculiarity of one or another part of the body, in Lithuanian anatomical terms, specific constituents are expressed by the positive adjective; while in Latin and English terms, by the comparative adjective. Such two-word compound terms are unproductive (Litevkienė, Korosteliova 2011).

[3] ≠ non-identical to

2. Nominative of adjective with suffix –inis, ė (attribute) + nominative of noun (determinative) ≠ nominative of noun (determinative) + nominative of comparative adjective (attribute) ≠ nominative of noun (determinative) + nominative of comparative adjective (attribute).

$A_{Nn} + S_N \leftrightarrow S_N + A_N \leftrightarrow S_N + A_N$

viršutinė galūnė	–	*extremitas superior ŽA205*	*limb superior AHA241*
apatinė galūnė	–	*extremitas inferior ŽA205*	*limb inferior AHA241*
viršutinė (jungiančioji) vena	–	*vena (anastomotica) superior MTŽ579*	*vena (anastomotica) superior AHA400*
viršutinė landa (nosies)	–	*meatus (nasi) superiorŽA366*	*meatus superiorPaPh722*
priekinis paviršius	–	*facies anterior ŽA93*	*facies anterior AHA400*
viršutinis kraštas	–	*margo superiorŽA94*	*margo superiorŽA94*
užpakalinis kraštas	–	*margo posteriorŽA94*	*margo posteriorŽA94*
apatinė landa (nosies)	–	*meatus (nasi) inferiorŽA366*	*meatus inferiorPaPh722*

It can be hypothesized that such two-word compound terms are characteristic of *anatomical* terminology.

3. Nominative of adjective with suffix –inis, ė (attribute) + nominative of noun (determinative) ≠ nominative of noun (determinative) + genitive of noun (attribute) ≠ nominative of adjective (determinative) + nominative of noun (attribute).

$A_{Nn} + S_N \leftrightarrow S_N + S_G \leftrightarrow A_N + S_N$

epiduralinė ertmė	–	*cavum epidulareMTŽ95*	*epidular cavity TMP74*
sąnarinė ertmė	–	*cavum articulareMTŽ95*	*articular cavity TMP74*
sėdmeninė vaga	–	*crena aniMTŽ125*	*gluteal cleftTMP105*
būgninė ertmė	–	*cavum tympaniMTŽ96*	*tympanic cavityTMP74*
sraiginis latakas	–	*ductus cochlearisMTŽ155*	*cochlear ductPaPh492*

4. Nominative of prenominal adjective or adjective with suffix –inis, ė (attribute) + nominative of noun (determinative) ≠ nominative of noun (determinative) + nominative of participle (determinative)) ≠ nominative of adjective (attribute) + nominative of participle (determinative).

$A_{NIn} + S_N \leftrightarrow P_N + S_G \leftrightarrow A_N + P_N$

laisvieji šonkauliai	–	*costae fluctuantesŽA76*	*floating ribsPaPH193*
pastovieji dantys	–	*dentes permanentesMTŽ180*	*dentes permanentesAHA135*
sėklinis latakas	–	*ductus deferensMTŽ155*	*ductus deferensAHA22*
protiniai dantys	–	*dentes sapientesVest.109*	*dentes sapientesAHA135*

5. Nominative of present tense passive voice pronominal participle (attribute) + nominative of noun (determinative) ≠ nominative of noun (determinative) + nominative of adjective (determinative) ≠ nominative of adjective (attribute) + nominative of noun (determinative).

$P_{NI} + S_N \leftrightarrow P_N + A_N \leftrightarrow A_N + S_N$

regimasis laukas	–	*tractus opticusVest.52*	*optic tractPaPh485*
sėdimasis nervas	–	*nervus ischidiacusMTŽ371*	*sciatic nerve PaPh398*
regimasis nervas	–	*nervus opticusVest.53*	*nervus opticusPaPh474*

6. Nominative of present tense passive voice pronominal participle (attribute) + nominative of noun (determinative) ≠ nominative of noun (determinative) + nominative of adjective (attribute) ≠ nominative of noun (determinative) + nominative of adjective (attribute).

$P_{NI} + S_N \leftrightarrow S_N + A_N \leftrightarrow S_N + A_N$

kramtomasis raumuo	–	*musculus massenterMTŽ354*	*musculus massenterAHA122*
sukamieji raumenys	–	*musculi rotatoresMTŽ350*	*musculi rotatoresAHA68*
keliamieji raumenys	–	*musculi levatores MTŽ350*	*musculi levatores AHA68*

The second group of Lithuanian two-word compound terms and their Latin and English equivalents: Lithuanian two-word ↔ Latin one-word ↔ English one-word terms. Two subtypes of this type are distinguished.

1. Nominative of adjective with suffix –inis, ė (attribute) + nominative of noun (determinative) ≠ nominative of compound noun ≠ nominative of compound noun.

$A_{Nn} + S_N \leftrightarrow S_{NS} \leftrightarrow S_{NS}$

priekinės smegenys	–	*prosencephalonŽA440*	*prosencephalon (forebrain) AHA492*
galinės smegenys	–	*telencephalonŽA442*	*telencephalon AHA492*
rombinės smegenys	–	*rhombencephalonŽA442*	*rhombencephalonAHA492 (hind brain)*
vidurinės smegenys	–	*mesencencephalonŽA439*	*mesencencephalonAHA492 (mid brain)*
tarpinės smegenys	–	*diencephalonŽA442*	*diencephalon AHA492*

2. Nominative of pronominal adjective (attribute) + nominative of noun (determinative) ≠ nominative of noun ≠ nominative of noun.

$A_N + S_N \leftrightarrow S_N \leftrightarrow S_N$

galvos smegenys	–	*encephalonMTŽ171*	*encephalonAHA89*
tikroji oda	–	*dermisVest.33*	*dermisPaPh127*
didžiosios smegenys	–	*cerebrumŽA459*	*cerebrumAHA27*
tiesioji žarna	–	*rectum Vest.123*	*rectumAHA19*

The third group of Lithuanian two-word compound terms and their Latin and English equivalents: Lithuanian two-word ↔ Latin three-word ↔ English three-word terms. Two subtypes of this type are distinguished.

1. Nominative of simple or pronominal ordinal (attribute) + nominative of (compound) noun (determinative) ≠ nominative of noun (determinative) + nominative of adjective (attribute) + nominative of ordinal (attribute) ≠ nominative of ordinal (determinative) + nominative of (compound) noun (determinative) + nominative of noun (attribute).

$N_{N(I)} + S_{N(S)} \leftrightarrow S_N + N_N \leftrightarrow N_{CN} + N_N + N_N$

antrasis pleištukas	–	*os metacarpale secundum ŽA134*	*second metacarpal bonePaPh204*
pirmasis delnakaulis	–	*os metacarpale primumŽA134*	*first metacarpal bonePaPh204*
trečiasis pleištukas	–	*os metacarpale tertiumŽA134*	*third metacarpal bonePaPh204*

2. Nominative of pronominal adjective or adjective with suffix –inis,ė (attribute) + nominative of compound noun (determinative) ≠ nominative of adjective (attribute) + nominative of adjective (attribute) ≠ nominative of adjective (attribute) + nominative of noun (determinative).

$A_{NIn} + S_{NS} \leftrightarrow A_N + A_N + S_N \leftrightarrow A_N + S_N$

priedinė skydliaukė	–	*glandula thyreoidea accessoriaŽA424*	*thyroid glandTMP192*
giliosios limfagyslės	–	*vasa lymphatica profundaMTŽ577*	*lymphatic systemTMP526*
paviršinės limfagyslės	–	*vasa lymphatica superficialiaŽA302*	*Lymphatic systemTMP526*

In anatomical terminology, specific compound constituents are more common in Latin and English structural types. It has been noticed that two thirds of the studied Lithuanian two-word compound terms are terms related by syntactic relations of agreed attribute. Such Latin and English two-word compound terms constitute more than 70 per cent of all terms.

Conclusions

According to Sakai (2007), the historical development of anatomical terminology (the oldest layer of medical terminology) can be divided into five stages: colloquial Greek words of that period used by Galen as anatomical terms; terms from the early 16th century, when Vesalius described the anatomical structures in his *De humani corporis fabrica*; terms from the late 16th century, when Sylvius in Paris and Bauhin in Basel described muscles, vessels and nerves; terms from the 17th-19th century, when anatomical textbooks were written in Latin and later in other modern languages; terms from the end of the 19th century, when the first international anatomical terminology in Latin was published as *Nomina Anatomica*.

Medical terminology provides interesting, useful and unique information for the history of medicine in Lithuania (what health issues were topical, what diseases were common and how

they were treated, what were the means of prevention, who treated patients and where this was done etc.) as well as for the research of Lithuanian language and terminology. Some terms which are currently used in the language of medical science were used 100 years ago, but in general, medical terminology of that time differs from the modern terminology in the use of a figurative sense, Lithuanian origin and the variety of meanings and expression (Zemlevičiūtė, 2018).

The majority of Lithuanian and Latin anatomy terms are two-word terms. According to syntactic relations of the main and secondary constituent, Lithuanian and Latin two-word terms are divided into two groups; i.e., with agreed attribute and with non-agreed (governed) attribute, which may be expressed in the following formula. Two thirds of Lithuanian two-word terms and almost two thirds of Latin two-word terms consist of terms related by syntactic relations of the agreed attribute.

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

Most of the Lithuanian two-word terms consist of *the nominative of the adjective with the suffix -inis, -ė + the nominative of the noun*, while Latin and English two-word terms are made up of *the nominative of the noun + the nominative of the adjective* ($A_{Nn} + S_N \leftrightarrow S_N + A_N \leftrightarrow A_N + S_N$; $A_{Nnm} + S_N \leftrightarrow S_N + A_{NS} \leftrightarrow A_{Nn} + S_N$). The specific attribute of Lithuanian and English anatomical terms usually precedes the determinative. Latin compound terms are characterized by an inverse order of the constituents of compound terms.

Resources

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Received: 5 November 2021
Accepted: 27 January 2022