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BINARY TERMINOLOGICAL UNITS CONTAINING THE BASIC SEME "ERYTHEMA" Валентина СИНИЦЯ, Олена МИРОНИК, Марія ТЕСЛЕНКО, Буковинський державний медичний університет, Чернівці (Україна),

БІНАРНІ ТЕРМІНОЛОГІЧНІ СЛОВОСПОЛУЧЕННЯ З БАЗОВОЮ СЕМОЮ "ERYTHEMA" Valentyna SYNYTSIA, Olena MYRONYK, Mariia TESLENKO, Bukovinian State Medical University, Chernivtsi (Ukraine), ORCIDID 0000-0002-8346-3662; ORCIDID 0000-0002-5717-7267; ORCIDID 0000-0001-7236-918

Валентина Синица, Елена Мироник, Мария Тесленко. Бинарные терминологические словосочетания с базовой семой "erythema". Цель и новизна исследования. В статье впервые исследуется статус терминологических словосочетаний с базовой семой "erythema" в структуре латинской медицинской терминосистемы. Прослеживается вербальная кодификация отобранных терминологических словосочетаний в современных медицинских энциклопедических словарях. Осуществляется этимологический, морфологический, синтаксический анализ бинарных атрибутивных компонентов терминологических словосочетаний, функционирующих в медицинском усном и письменном дискурсе. Методы исследования. Исследовательские задачи реализовывались путем использования совокупности методов и методик: при отборе фактического материала применялась методика сплошной выборки; структурно-словообразовательная методика использовалась с целью выявления словообразовательных моделей терминов; описательный метод позволил интерпретировать результаты наблюдения. Выводы. Атрибутивный компонент в структуре бинарных терминологических словосочетаний с базовой семой "erythema" отображает этиологический признак, симптоматику заболевания, форму, следствие, клиническую экспрессивность. Другими словами, атрибутивный компонент в каждом конкретном случае осуществляет классификационную детализацию обозначаемого явления и тем самым способствует конкретизации клинических форм эритемы, что позволяет избежать неточностей при постановке диагноза. Преимущественное количество терминологических словосочетаний с базовой семой "erythema" составляют бинарные терминологические словосочетания, модель которых представлена схемой Subst. nom. sing. + Adject. nom. sing.; модель образования терминологических словосочетаний по схеме Subst. nom. sing. + Subst. gen. sing./gen. plur. представляется малопродуктивной; терминологические словосочетания с использованием предлогов относятся к непродуктивной модели терминообразования.

Ключевые слова: латинская медицинская терминосистема, терминологические словосочетания, атрибутивный компонент, морфолого-синтаксическая характеристика, этимология.

Scientific novelty. Linguistic features of medical terminology remain in the center of attention of modern researchers given the need for in-depth study of the nomination mechanisms of concepts and phenomena represented in modern medical terminology, identification of compositional and semantic characteristics which will certainly contribute to standardization and unification of medical terminology in general and its individual terminological subsystems. Such sublanguages of medicine ophthalmology (S.V. Shvetsova, Irkutsk, cardiology (K.V. Smirnova, Yaroslavl, 2012), nephrology and urology (M.V. Tokareva, Omsk, 2003), oncology (L.M. Gushchina, Moscow, 2004), genetics (M.F. Kobzheva, Kyiv, 1984) as well as a comprehensive description of terms -mythologies in clinical psychology conducted by researcher T.V. Tritenko (Moscow, 2011) were undoubtedly noticed. The vast majority of publications and theses are based on English language, which is quite understandable given the undeniable influence of English on international medical terminology. Unfortunately, there is not much research devoted to the study of Latin medical terms, despite the influence of Latin language on the terminological fund of any modern medical terminology. Therefore, any scientific research in this direction is quite desirable and relevant.

The aim of the study is to carry out the etymological, morphological, syntactic, cognitive and structural characteristics of Latin terminological units (hereinafter TU) with the basic seme "erythema". The choice of the abovementioned TU as the basis for scientific research is explained, on the one hand, by the lack of any linguistic research in this area, on the other hand, by the sheer variety of clinical forms of erythema which can be both of physiological (erythema pudoris, erythema frigoris, erythema caloricum, et cetera) and of nonphysiological (erythema infectiosum, erythema brucellosum, erythema migrans, et cetera) nature.

Study methods. The following methods were used while conducting the study: the method of continuous sampling which allowed the selection of actual material; descriptive method, due to which the inventory and internal interpretation of the selected TU were carried out; structural method for establishing connections and relationships between language elements.

Object of research is the Latin TU with the seme "erythema" and their attributive components.

Subject of research is the structure and etymology of binary TU and their attributive components.

Source base. The actual material was obtained by

continuous sampling from the educational literature¹, modern medical encyclopedic dictionaries². Publication Whonamedit. The dictionary of medical eponyms³ served as a guideline for studying TU with eponymous components. Etymological conclusions were made on the basis of the dictionary by J.Kh. Dvoretskiy⁴.

Analysis of recent research. The nomination problem of objects or phenomena by polylexemic terminological units is subjected to the works of many modern researchers (S.V. Brykina, 2012; Yu.S. Perevezentseva, 2014: 2016; K.A. G.V. Demidova. Degtvarenko. 2018, The publications S.A. Leonova. etc.). of Yu.S. (2015),A.V. Devvatko Kosenko (2015).O.Y. Snitovska (2017), L.V. Zastrizhna (2018) are worth mentioning regarding the status of terminological units in the medical terminological system. The works of T.D. Kiyak (1989), S.V. Grinyova (1993), S.V. Grinyov-Grinevich (2008), V.M. Leichika (2008) served as methodological basis for current research. They formed a course of terminological work, including inventory, ordering, coordination and design of terminological systems. Particular attention was paid to the works V.F. Novodranova, dedicated to compositional semantics on the basis of medical terminology (2002), problems of term formation in cognitive and communicative aspects (2003), semantic modification of the term in medical discourse (2011) and her monograph "Nominal word formation in Latin and its reflection in terminology" (Moscow, 2008), where the researcher first described word-forming models for the construction and organization of medical terminology.

The main material. In the modern medical encyclopedic dictionaries, the term erythema is interpreted as "redness of the skin caused by the influx of blood to the capillaries"⁵; "redness of the skin due to dilation of blood vessels"⁶; "more or less persistent reddening of the skin associated with transient or stable dilation of blood vessels"⁷; "limited or diffused reddening of the skin due to active hyperemia occurring for various reasons"⁸. And

although the definitions differ slightly, the key word "redness" remains unchanged being represented by the noun of Greek origin *erythema*, which corresponds with the verb *erythainen* – to paint in red.

In general, word families with the basic seme *erythema* contain a significant number of TU: 25 in the dictionary edited by L. Petrukh⁹, 34 in the dictionary by K. Rudzitis¹⁰, but the largest in quantitative terms case, 40 TU, is presented the dictionary article in the medical illustrated dictionary by Dornald¹¹.

According to the number of attributive components TU can be divided into two groups: TU with one attributive component and TU with two attributive components. Three or more attributive components could not be detected.

Binary TU syntactically make up the modifying construction "Noun + Adjective". The first place is occupied by noun erythema, the second – by attribute expressed by adjective. Therefore, the terminological model can be schematically denoted as follows: Subst. nom. sing. + Adject. nom. sing. Regarding morphological characteristics of adjective components, in sixteen cases adjective belongs to the first class of Latin adjectives and only in four cases to adjectives of the second class (*erythema simplex, erythema solare, erythema annulare, erythema fugax*) are used. The main task of adjectives is to perform the classification function, to specify the meaning of the basic terminological unit, to detail the concept expressed by the seme "erythema" and thus "to help improving the structure of the information and communication process" 12. The study results found the binary TU adjectives to indicate:

etiological feature: erythema infectiosum — infectious erythema characterized by airborne transmission and causes fever and rash mainly on the face and extremities; The adjective infectiosum (dictionary form infectiosus, a, um) belongs to the first class adjectives and is a derivative of the Latin verb inficio, feci, fectum, ere meaning to infect; erythema brucellosum — brucellosis erythema: large erythema with itching caused by brucellosis. In this case, the adjective brucellosum (vocabulary form brucellosus, a, um)

¹ Infektsiini khvoroby [Infectious disease]: pidruchnyk (VNZ IV r. a.), O.A. Holubovska, M.A. Andreichyn, A.V. Shkurba ta in.; za red. O.A. Holubovskoi, 2-e vyd., Kyiv: Medytsyna, 2018, 688 p. [in Ukrainian]; Vozianova Zh.I. Infektsiini i parazytarni khvoroby [Infectious and parasitic disease], t. 1, Kyiv: Zdorovia, 2001, 856 p.; t. 2, Kyiv: Zdorovia, 2002, 658 p.; t. 3, Kyiv: Zdorovia, 848 p. [in Ukrainian]; Titov M.V., Titov V.M. Symptomy i syndromy pry infektsiinykh khvorobakh [Symptoms and syndromes of infectious diseases], Lviv: Lvivskyi derzh. med. in-t, 1993, 128 p. [in Ukrainian].

² Iliustrovanyi anhlo-ukrainskyi medychnyi slovnyk Dornalda u dvokh tomakh [Dornald's English-Ukrainian medical dictionary is illustrated in two volumes], Lviv: Nautilius, 2002, 2688 p. [in Ukrainian]; Ukrainsko-latynsko-anhliiskyi medychnyi entsyklopedychnyi slovnyk u chotyrokh tomakh [Ukrainian-Latin-English medical encyclopedic dictionary in four volumes], Vol. 1 A-D, ukladachi: L.I. Petrukh, I.M. Holovko, Kyiv: VSV "Medytsyna", 2012, 700 p.; Vol. 2, Vol. 3 O-S, ukladachi: L.I. Petrukh, I.M. Holovko, Kyiv: VSV "Medytsyna", 2016, 600 p.; Rudzitis K. Terminologia medica in duobus voluminibus [Medical terminology in two volumes], Vol. 1, Riga: Liesma, 1973, 1039 p., Vol. 2, Riga: Liesma, 1977, 866 p. [in Ukrainian]; Georgi Arnaudov. Terminologia medica polyglotta [Medical terminology]: Latinum-Russkyi-English-Francais-Deutsch, Sofia: Medicina et Physcultura, 1979, 943 p. [in Russian]; Volfson S.Y. Latyno-russkyi medytsynskyi slovar [Latin-Russian Medical Dictionary], Moskva: Medhyz, 1957, 424 p. [in Russian]; Knipovych M.F. Slovnyk medychnoi terminolohii: latynsko-ukrainsko-latynskyi [Dictionary of medical terminology: Latin-Ukrainian-Latin], Kyiv: Derzhavne medychne vydavnytstvo URSR, 1948, P. 139 [in Ukrainian].

³ Whonamedit. The dictionary of medical eponyms. URL: /access mode: www. whonamedit.com [in English].

⁴ Dvoretskiy I.H. Latinsko-russkiy slovar [Latin-russian dictionary], Moskva: Russkiy yazyik, 1976, 1096 p. [in Russian].

⁵ Ibidem, Vol. 1, P. 805.

⁶ Ibidem, Vol. 2, P. 9.

⁷ Ibidem, Vol. 1, P. 617.

⁸ Ibidem, P.133.

⁹ Ibidem, Vol. 2, P.89.

¹⁰ Ibidem, Vol. 1, P. 617–618.

¹¹ Ibidem Vol.1, P. 805–806.

¹² Vakariuk L., Panko S. "Slovospoluchennia terminolohichnoho kharakteru v slovotvori" [Phrases of terminological nature in word formation], Naukovyi visnyk Chernivetskoho universytetu, Chernivtsi: Ruta, 2007, Vyp. 321–322, P. 33 [in Ukrainian].

is a name-derived notion: because the English doctor Sir Devid Bruce (1855-1931) was able to identify small gramnegative immobile cocobacteria that cause brucellosis (Lat. brucellosis), an infectious disease of zoonoses; erythema toxicum (another name for erythema venenatum13 is toxic erythema caused by the action of exotoxins or endotoxins. The attributive component *toxicum* (dictionary form *toxicus*, a, um) is of Greek origin, formed from the noun toxon, meaning poison; the participle venenatum (dictionary form venenatus, a, um) is of Latin origin, derived from the verb veneno, avi, atum, are meaning to poison. Note that in medical discourse preference is given to TU erythema toxicum. The reason for this is thought to lie in the widespread use of the original Greek term element tox-, toxic-, toxi- in medical clinical terms, e.g. toxicitas, toxicophobia, toxicoinfectio, toxigenesis, toxaemia, etc.; erythema traumaticum - traumatic erythema caused by shock, friction or pressure. The component traumaticum (dictionary form traumaticus, a, um) is derived from the Greek noun trauma, atis n meaning injury; erythema saturninum – erythema caused by lead poisoning. According to G. Arnaudov¹⁴, the adjective saturninus, a, um refers to the alchemical term meaning lead (modern name Plumbum, in), and is derived from the mythical name of the god and planet Saturnus.

symptom of the disease: *erythema nodosum* –nodular erythema, i.e. dense painful bright or bluish-red nodules of various sizes on the anterior surface of legs, rarely forearms. The component *nodosum* (dictionary form *nodosus*, *a*, *um*) is a first class adjective formed from the Latin noun *nodus*, *i m* (the second declension). According to the data, TU *erythema nodosum* first appeared in 1779 thanks to the English dermatologist R. Willan (1757-1812);

clinical expressiveness; erythema subitum — sudden erythema, i.e. an infectious disease with an acute onset, fever, moderate intoxication and elements of a rash in the form of small pale pink spots (according to the data, first described in 1900). The component subitum (dictionary form subitus, a, um) is the past participle passive of the verb subeo, ii, itum, ere meaning to sneak up, approach, attack; erythema fugax — transient erythema. The attributive component fugax (vocabulary form fugax, acis) — transient — corresponds to the Latin verb fugio, fugi, fugiturus, ere meaning to run, pass and indicates redness of the skin, which quickly appears and passes;

form: erythema annulare — annular erythema i.e. erythema in which the skin lesions have a rounded shape. The attributive component annulare (dictionary form annularis, e) is a second class adjective, formed by the suffix -ar, attached to the base of the noun anulus, i m (the second declension) meaning a circle; erythema gyratum — spiral erythema characterized by the appearance of tortuous, annular, arcuate or reticular lesions with enlightenment in the center. Etymologically, the second component of the TU is a past participle passive of the Greek verb gyro, avi, atum, are meaning to turn, to bypass; erythema figuratum — figured erythema. The component figuratum (dictionary form figuratus, a, um) is a past participle passive of the

Latin verb figuro, avi, atum, are meaning to form, give shape;

consequence: *erythema infrarubrum* – infrared erythema caused by the skin reaction to the infrared rays; erythema ultraviolaceum - ultraviolet erythema which occurs due to the influence of ultraviolet rays on a certain area of skin. The adjectives infrarubrum (dictionary form infraruber, bra, brum) and ultraviolaceum (dictionary form ultraviolaceus, a, um) refer to adjectival composites. It is worth noting, that Latin adjectival composite on the basis of Latin medical terminology were sufficiently studied by M. M. Teleky¹⁵, who, taking into account the partial language approach to the adjectival composites analysis, singled out nine possible formation patterns dividing them into productive, semiproductive and unproductive. One of the above-mentioned analyzed patterns is relevant to our study: the adjective ultraviolaceus, a, um is formed by combining the Latin adverb ultra meaning on the other side, above with the supporting adjective violaceus, a, um, which in turn is formed from the noun viola, ae f. The noun viola means violet (plant) and violet (color) as recorded in the Latin dictionary of I.Kh. Dvoretsky¹⁶, furthermore, Pliny the Elder in his existing work "Historia naturalis" repeatedly used the adjective violaceus, a, um meaning violet, purple. Another adjective - infraruber, bra, brum - is formed by joining the basic adjective ruber, bra, brum and Latin prefix infrawhich has the meaning below, under, after, behind. Etymologically, both adjectival composites are exclusively of Latin origin.

In addition to the TU with adjectives as attributes, the study showed TU with nouns occupying the second position as well as several prepositional constructions. The more detailed description of these TU follows:

- 1) TU with a noun substituting an attributive component. Syntactically, this construction refers to a modifying construction "Noun + Noun", the first position is occupied by the basic terminological unit *erythema*, the second the noun in the genitive singular (6 examples: *erythema iridis; erythema palmae; erythema radiationis; erythema irradiationis; erythema gravidarum*). This also includes a binary TU with an eponym as an attributive component: *erythema Gamelli* (J.A. Gamelli, a modern American physician) is a paraneoplastic lesion of the torso skin in the form of erythema, which migrates rapidly.
- 2) TU having prepositions. Only three such cases were found in the dictionary by K. Rudzitis¹⁷: *erythema ab igne, erythema ab acribus, erythema e frigore*.

According to the study there are synonymous names, which may or may not include the key term *erythema* among binary TU. Some examples are provided below to illustrate the notion. Thus, according to the dictionary by K. Rudzitis¹⁸, *erythema infectiosum* is synonymous to *megalerythema epidemicum, morbus quintus, morbus Stickeri*. The appearance of the term *erythema infectiosum* in medical discourse dates back to 1899, three years after Theodor Escherich (Austrian pediatrician, 1857–1911) in 1896 classified the disease as an independent nosological unit. The term *morbus quintus* was created due to the fact

¹³ Ibidem, Vol. 1, P. 618.

¹⁴ Ibidem, P. 410.

¹⁵ Teleky M.M. "Latynski prykmetnykovi kompozyty u medychnii terminolohii" [Latin adjective composites in medical terminology], *Naukovyi visnyk Natsionalnoho universytetu bioresursiv i pryrodokorystuvannia Ukrainy. Seriia: Filolohichni nauky*, [Scientific Herald of National Sciences], Kyiv: Milenium, 2017, Vyp. 263, P. 94–103 [in Ukrainian].

¹⁶ Ibidem, P. 1082.

¹⁷ Ibidem, Vol. 1, P. 617.

¹⁸ Ibidem, Vol. 1, P. 618.

that scientists tend to consider this disease as one of the six most common childhood rashes. The TU *megalerythema epidemicum* structurally contains a substantive composite *megalerythema*, which, in turn, is divided into a morpheme of adjective origin *megal*- (Greek adjective *megas*, *megale* – large) + noun *erythema*; an adjective of Greek origin *epidemicus*, *a*, *um* (derived from the Greek noun *epidemia*, *ae f* – the rapid and widespread spread of infectious disease in the area) is used as a detailed component.

In the course of the study it was found that different parts of speech and syntactic constructions are used to denote the same concept. This refers to a pathological erythema that can be seen on the palms (liver disease, rheumatoid arthritis, even during pregnancy) or on the palms and soles (a hereditary disease associated with abnormal arterial and venous anastomoses). Thus, palmar erythema in some sources is presented as a binary TU with an adjectival component specifying the place of erythema: erythema palmare (erythema plantare), where the attribute is derived from the noun palma, aef – palm (planta, aef – sole) and is presented as an adjective of the second group. However, the dictionary by L. Petrukh distinguishes another TU with a noun in genitive plural serving as an attributive component: erythema palmarum (similarly: erythema plantarum). Both constructions from the point of view of Latin grammar have the right to exist, but, never the less, comparisons with the corresponding TU in English: palamar erythema, plantary erythema indicate in favor of TU with an adjectival component. This fact once again confirms the statement of M.N. Chernyavsky about the disorder of medical terminology.

Summarizing up the data, it should be noted that:

- 1. The vast majority of TU with the seme "erythema" consists of the binary terminological units formed in the pattern "Subst. nom. sing. + Adject. nom. sing.";
- 2. Model of TU formation according to the pattern "Subst. nom. sing. + Subst. gen. sing./ gen. plur." is unproductive;
- 3. TU using the prepositions belong to the unproductive model of term formation.
- 4. The attributive component, regardless of the model of TU formation, in each case provides a classification detail of the denoted phenomenon and thus contributes to the specification of clinical forms of erythema and allows to avoid misunderstandings between dermatologists and infectious disease specialists.

Prospects for further research. According to the preliminary sample, there are more than 20 TU with a nucleus base of erythema and two attributive components in medical discourse. A linguistic study of the structural and etymological aspects of these polylexemic nominations is thought to provide a complete description of the functioning TU with the basic seme "erythema" in the Latin medical terminology to understand the mechanisms of term formation at the present stage of medicine development.

Валентина Синиця, Олена Мироник, Марія Тесленко. Мета і новизна дослідження. У статті вперше досліджується статус термінологічних словосполучень з базовою семою "erythema" в структурі латинської медичної терміносистеми. Простежується вербальна кодифікація відібраних термінологічних словосполучень в сучасних медичних енциклопедичних словниках. Здійснюється етимологічний,

морфологічний, синтаксичний аналіз бінарних атрибутивних компонентів термінологічних словосполучень, що функціонують в медичному усному та писемному дискурсі. Методи дослідження. В ході дослідження використано метод суцільної вибірки, який уможливив добір фактичного матеріалу; описовий метод, завдяки якому здійснено інвентаризацію та внутрішню інтерпретацію відібраних термінологічних словосполучень; структурний метод для встановлення зв'язків і відношень між мовними елементами. Висновки. За результатами дослідження встановлено, що атрибутивний компонент у структурі бінарних термінологічних словосполучень з базовою семою "erythema" окреслює етіологічну ознаку, симптоматику захворювання, форму, наслідок, клінічну експресивність, тобто, атрибутивний компонент в кожному конкретному випадку здійснює класифікаційну деталізацію позначуваного явища і тим самим сприяє конкретизації клінічних форм еритеми та дозволяє уникнути непорозумінь при виставленні діагнозу. Переважну більшість термінологічних словосполучень "erythema" складають бінарні термінологічні словосполучення, утворені за схемою Subst. nom. sing. + Adject. nom. sing.; модель утворення термінологічних словосполучень за схемою Subst. nom. $_{\text{sing.}}$ + Subst. $_{\text{gen. sing./gen. plur.}}$ ϵ малопродуктивною; термінологічні словосполучення з використанням прийменників відносяться до непродуктивної моделі терміноутворення.

Ключові слова: латинська медична терміносистема, термінологічні словосполучення, атрибутивний компонент, морфолого-синтаксична характеристика, етимологія.

Синиця Валентина — кандидат філологічних наук, доцент кафедри іноземних мов Буковинського державного медичного університету, автор міжнародних та вітчизняних наукових статей, тез, доповідей, співавтор національних підручників з латинської мови для студентів вищих медичних і фармацевтичних навчальних закладів. Коло наукових інтересів: дослідження лексико-семантичних та дериваційних процесів у латинській медичній терміносистемі.

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¹⁹ Ibidem, Vol. 1, P. 806; Vol. 1, P. 618

²⁰ Ibidem, Vol. 2, P. 89.

²¹ Ibidem, Vol. 1, P. 806; Vol. 2, P. 89.

²²Chernyavskiy M.N. Latinskiy yazyik i osnovyi meditsinskoy terminologii [Latin language and the basics of medical terminology], Moskva, 1996, 336 p. [in Russian].