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DENOMINAL EPONYMS IN ENGLISH MEDICAL TERMINOLOGY: SUFFIXATION

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Medical terminology is characterised by various eponyms firmly rooted in the language of medicine. Such eponyms and eponymous terms are mainly created from the surnames of doctors or researchers. Today, there are no clear rules for the formation of eponymous terms, and this method of naming is somewhat random due to a number of extra- and intra-linguistic factors. However, when eponyms are widely recognised, they become common nouns and can form derivatives that adhere to some morphological rules.
Keywords: *eponymous term, morphology, suffixation.*

EPONIME DENOMINALE ÎN TERMINOLOGIA MEDICALĂ ENGLEZĂ: SUFIXARE
Terminologia medicală este caracterizată de dive se eponime ferm înrădăcinate în limbajul medicinei. Astfel de eponime și termeni eponimi sunt creați în principal din numele de familie ale medicilor sau cercetătorilor. În prezent, nu există reguli clare pentru formarea termenilor eponimi, iar această metodă de denumire este oarecum aleatorie din cauza mai multor factori extra- și intra-lingvistici.
Cu toate acestea, atunci când eponimele sunt larg recunoscute, ele devin substantive comune și pot forma derivate care respectă anumite reguli morfologice.
Cuvinte-cheie: *termen eponimic, morfologie, sufixare.*

In linguistic studies, eponyms are locked in deep debates between pro-eponymists and those who advocate de-eponymization. However, finding a field of medicine that does not use eponyms is quite a formidable task. Undoubtedly, eponyms have advantages since they are international, unambiguous, and concise, elicit the evolution of medical research and practice, and ensure the continuity of scientific knowledge [1]. For instance, discoveries in the field of cardiology in the 20-21th century contributed to the tendency to create eponymous names, such as Holter electrocardiogram, a method suggested in 1961 by the American biophysicist, electrophysiologist Norman Jefferis Holter (1914-1983) or Wellens syndrome which is a typical ECG change characteristic of unstable angina or non-ST-elevation heart attack, named in honor of Henrick Joan Joost (Hein J. J.) Wellens (1935-2020), a Dutch cardiologist, one of the founders of clinical cardiac electrophysiology. In spite of all the discussions about the appropriateness of using eponymous terminological units, and ,,despite all the legitimate reasons for dropping them, eponyms are so deeply rooted in medicine that they are here to stay for the foreseeable future" [2, p. 76]. Medical specialists favour this view because they are confident that ,,the use of classical, ethical, and well-recognised medical eponyms will remain a cornerstone in daily clinical settings, textbooks, and medical journals" [3, p. 498].

The problems of eponyms in medical terminology have been addressed extensively in foreign literature by J. Whitworth [4], J. Whitworth & E. Matterson [5], B. Cappuzzo [6], N. Jana, S Barik, N. Arora [7], T. Canziani [8], P. Thomas [9], W. Karwacka [10], K. Andrew, S. Logie, R. Hage [11], M. Brdar, R. Brdar-Szabó [12], etc.

Ukrainian linguists also highlighted the various issues regarding eponyms in English terminology. For instance, A. Dankiv provided a corpus analysis of the functioning of eponyms in the medical terminology of pediatric surgery [13]; V. Kostenko & I. Solohor specified semantic and structural features and thematic groups of eponyms [14]; V. Hryn suggested methods of creating terminological units [15]; O. Matviyas, N. Bazylyak, V. Budzyn described structure and components of compound eponyms [16]; E. Hrytsenko & E. Pylypiuk highlighted specific features of eponyms in the English medical terminology [17]. Moreover,

the phenomenon of eponymy is covered in the dissertation research „English clinical eponymous terms: lexicographic and structural-semantic aspects” [18].

The relevance of the research topic is determined by the scientific focus of linguistic studies on the comprehensive analysis as well as the ways and material means of creating eponymous terms.

The purpose of the article is to identify and describe the suffixal means of creating denominal eponymous terms functioning in English medical terminology. This study aims to distinguish semantic groups of suffixal word-formation of denominal eponyms.

The object of the study is the denominal eponymous terms derived from proper names of people, or nouns of mythological origin.

Research methods: selective, word-formation, analysis.

The material of the work was based on the terms recorded in the two-volume Dorland's Illustrated Medical Dictionary [19].

In general, morphology is considered a sub-branch of linguistics with regard of the internal structure of word-forms. In turn, derivation is the morphological process that results in the formation of a new lexeme [20]. The word derivation originates from Latin noun derivatio „formation”, from verb derivo „to derive” or „to form” [21, p. 528-529]

In linguistics, word-formation is interpreted as „a mechanism for creating new words on the basis of existing ones; creating derivatives is based on those created according to derivational rules and word-formation types inherent in a particular language” [22, p. 729]. The main concepts of synchronous word-formation include motivation and the meaning of a derived word. The word-formation interrelation is interpreted as the relation of a derived word to the one from which it was formed. In its broadest sense, derivation refers to any process that results in the creation of a new word [23, p. 10]. Affixation (prefixation, suffixation, and infixation) is the most productive means of marking derivation [23, p. 16]. It is „the morphological process that consists of adding an affix (i.e., a bound morpheme) to a morphological base” [24, p. 2; 25, p. 9]. Some bound morphemes must always be attached before the central meaningful element of the word, the so-called root, stem, or base, whereas other bound morphemes must follow the root [26, p. 10]. L. Bauer clarifies that a root is the basic part always present in a lexeme that remains when all inflectional and derivational affixes have been removed; and a stem is of concern only when dealing with inflectional morphology [20, p. 20]. R. Quirk defines a stem and base similarly, and according to him, the stem is the form of a word stripped of all affixes that are recognizable as such in English [27, p. 1548].

In English word-formation, suffixation is a productive type of creating new words. Suffixation is putting a suffix after the base, sometimes without, but more usually with, a change of a word class [27, p. 1520]. However, it is worth noting that not all suffixes that can change a grammatical category are objects of derivational origin [28, p. 3]. Only in derivatives, the suffix is a grammatically and semantically dominant element that affects the grammatical category of the lexical root. R. Quirk claims that „suffixes have only a small semantic role, their primary function being to change the grammatical function of the base” [27, p. 1520].

Suffixes have no lexical meaning and perform only a semantic function. When forming a derivative word, they can denote abstractness, precision, diminutiveness, involvement with something/someone, or connection with someone/something. Derivatives with word-forming suffixes, the meaning of which differs from the meaning of the original word by lexical semantics, denote other objects of reality. According to the semantic relations between derivatives and original words, derivatives are combined into mutational word-formation types. In general, suffixes express parts of speech and are carriers of classifying grammatical meanings (subject, belonging to living beings, attribute, etc.) [29, p. 175]. A proper name belongs to the class of nouns, so it possesses its all the grammatical features.

The word-forming type of denominal nouns are derivatives motivated by nouns and formed by suffixation. The material means of creating eponymous terms is a range of suffixes that are commonly of English, Latin, and Greek origin. They are attached to the base, represented by a whole word (the proper name itself) or its part, providing a new meaning to derived eponymous units. Derivation is not only the creation but also the reproduction of language units according to certain models and based on the word-forming elements already present in the language.

When creating eponymous terms, which belong to the class of nouns, the English language „uses a number of suffixes that within this part of speech constitute lexical and semantic groups of words" [30, p. 128].

We distinguish several groups of denominal eponymous terms formed by suffixation, which denote the following:

1) microorganisms:

The suffixes **-ia, -ell(a)** are typical for the terminology of medical microbiology [31]. For instance:

-ia (Lat. -ia) is attached to the base of a proper name, and expresses the meaning of „belonging to or having a common feature", i.e, microorganisms that have the same or similar common biological properties:

Escherichia (Theodor Escherich, German-Austrian scientist and pediatrician, 1857-1911) – a genus of gram-negative, nonsporeforming, anaerobic rod-shaped bacteria;

Elizabethkingia (Elisabeth O. King, American microbiologist, 1912-1966) – a bacterial genus that is commonly detected in the environment;

Cowdria (Edmund Vincent Cowdry, Canadian-American cytologist, anatomist and gerontologist, 1888-1975) – genus of bacteria of a single species.

-ella (Lat. -ell(a)) builds derivatives with a meaning of minuscule size, the common feature of which is the tiny size of living organisms, such as:

Brucella (David Bruce, Scottish military physician, 1855-1931) – a genus of gram-negative anaerobic coccobacilli of unclear etiology;

Kingella (Elisabeth O. King, American microbiologist, 1912-1966) – a genus of gram-negative obligate aerobic bacteria;

Branchamella (Sara Elizabeth Brancham, American microbiologist and physician, 1888-1962) – gram-negative diplococcus, often found in the oropharynx of normal persons.

Several word-forming suffixes form homogeneous classes of words with a particular generalised meaning. They are commonly of Greek or Latin origin and may express new beliefs, conditions, diseases, etc. For instance:

2) names of diseases:

-osis (Gr. -osis) denotes accumulation, painful condition, or spread [32; 33]:

yersiniosis (Alexandre Émile Jean Yersin, Swiss-born French bacteriologist, 1863-1943) – a gastrointestinal disease caused by the bacterium Yersinia enterocolitica;

*brucellosi*s (David Bruce, Scottish military physician, 1855-1931) – a bacterial infection that spreads from animals to people, caused by the bacterial genus Brucella;

ehrlichiosis (Paul Ehrlich, German physician and bacteriologist, (1854-1915) received the Nobel Prize in 1908)) – a tick-borne disease caused by obligately intracellular bacteria belonging to the genus Ehrlichia.

-ism (Gr. -ismos) forms derivatives with three meanings [32; 33; 34]:

3) deviation from the norm, abnormality:

daltonism (John Dalton, English chemist, and physicist, 1766-1844) – a type of color blindness in which people do not have enough cones to distinguish between reds and greens;

narcissism (the Greek mythological figure Narcissus, who fell in love with his own reflection) – mental health condition in which people have an unreasonably high sense of their own importance;

hermaphrodism (Hermaphroditus was the child of the Greek god Hermes and goddes Aphrodite) – physical condition of having both male and female reproductive organs.

4) poisoning or addiction:

nicotinism (Jean Nicot de Villemian, French diplomat, 1530-1604) – nicotine poisoning;

morphism (Morpheus, the Greek god of dreams) – morphine addiction;

etherism (Aether, the God of light in Greek mythology) – state of intoxication caused by ether.

5) theory or study (a logical generalization of practical experience; a set or system of reliable scientific knowledge about a set of objects, explaining and predicting the phenomena of the medical field):

weismannism (August Fridrich Leopold Weismann, German biologist, 1834-1941) – generally accepted concept about „germ plasm" theory of heredity;

freudianism (Sigmund Freud, Austrian neurologis, 1856-1939) – psychological theory and method of psychotherapy that emphasizes the unconscious and sexual roots of human mental life;

mendelism (Gregor Mendel, Austrian scientist, 1822-1884) – a set of principles that explain how hereditary traits, also known as Mendelian inheritance or Mendelian genetics.

6) pathological conditions, a painful process of a non-inflammatory nature:

-iasis (Gr. -iasis) indicates pathological process, or non-inflammatory nature of the disease [33;34]. Denominal eponymous derivatives also specify the process of formation, penetration of a foreign agent into the body:

wucheriasis (Otto Wucherer, Brazilian physician, 1820-1873) – an infection with trematodes of the genus Wuchereria;

nocardiasis (Edmund Isidore Etienne Nocard, French veterinarian and microbiologist, 1850-1903) – an infectious disease caused by Nocardia, bacteria found in soil or standing water;

Synonymous terms are used to describe the state of the body in case of infection, i.e., nocardiasis / nocardiosis or wucheriasis/ wucheriosis.

7) neoplasm of any nature or a painful growth of tissue:

-oma (Gr. -oma) – in medical terminology, it is used to refer to a neoplasm (excessive and uncontrolled cell proliferation) or reflects tumor formation caused by a microorganism [32; 34]:

bilharzioma (Theodor Maximilian Bilharz, German physician, 1825-1862) – pseudotumor caused by Schistosoma infestation that is most common localised in large bowel;

merkeloma (Friedrich Sigmund Merkel, German anatomist, 1845-1919) – uncommon, highly malignant primary cutaneous carcinoma, also called Merkel cell carcinoma;

leydigoma (Franz Leydig, a German zoologist and anatomist 1821-1908) – present as a painless testicular mass or swelling, also known as Leydig cell tumors;

certolioma (Enrico Sertoli, Italian physician, 1842-1910) – neoplasm of the ovary composed of Sertoli cells most commonly arranged in a tubular pattern, also known as Sertoli cell tumor.

8) an acute inflammatory process in a certain part of the body:

-itis (Gr. -itēs) denotes the body’s response to the inflammatory process [33;34]:

cowperitis (William Cowper, British surgeon, 1666-1709) – inflammation of the Cowper’s (bulbourethral) glands;

bartolinitis (Caspar Bartholin the Younger, Danish anatomist, 1655-1738) – inflammation of the major vestibular glands, or Bartholin’s glands;

iritis (in Greek mythology, the personification and goddess of the rainbow and messenger of gods) – the inflammation of the anterior chamber and the iris (coloured part of the eye).

9) names of medicines, substances, or compounds:

-in (Lat. -īn with the meaning „art” or „medicine”) is used to form trivial names of drugs [34]:

brucellin (David Bruce, Scottish military physician, 1855-1931) – drug based on cultures of three Brucella species to diagnose brucellosis;

nocardin (Edmond Isidore Etienne Nocard, French veterinarian and microbiologist, 1850-1903) – antibiotic substance from Nocardia coeliaca, active against tuberculosis.

-ine is used in names of alkaloids with the meaning „related to or originated from something” [35]:

morphine (Morpheus, the Greek god of dreams) – active narcotic alkaloid;

nicotine (Jean Nicot de Villemain, French ambassador in Portugal, 1530-1604) – an extremely poisonous colorless soluble liquid alkaloid;

atropine (Atropos, the third of the Three Fates or Moirai, Greek goddesses of fate and destiny) – a natural alkaloid used for diagnostic dilation of the pupil in the examination of the fundus.

10) names of chemical elements:

-i(um): the names of chemical elements in English are Latinized, therefore they have ending of the second declension, neuter gender:

Bohrium (in honour of Niels Bohr, Danish atomic physicist,1885-1962) – synthetic chemical element with the symbol Bh and atomic number 107;

Curium (in honour of Pierre and Marie Curie, Polish-born French physicist, 1867-1934) – a synthetic chemical element with the symbol Cm and atomic number 96;

Roentgenium (in honour of Wilhelm Conrad Röntgen, German physicist, 1845-923) – synthetic chemical element with the symbol Rg 111 and atomic number [36].

11) names of processes:

-tion: (Lat. -io) used in third-declension nouns to denote action or process [34, p. 93]):

pasterisation (Louis Pastereur, French chemist, author of the microbial theory of disease, founder of microbiology, 1822-1895) – the process of heating milk or other liquids;

galvanization (Luigi Galvani, Italian physicist and physiologist, 1737-1798) – a low voltage electric current designed for cosmetic purposes and aesthetic procedures;

*hypnotizatio*n (Hypnos, the Greek god of sleep) – the act or process of inducing hypnosis in a person.

12) names of specialists or supporters:

-ist: (Gr. -ista) identifies one that performs a specific action [37]:

hygienist (Hygeia, goddess of health, one of the daughters of Asclepius) – a person skilled in a specified branch of hygiene;

darvinist (Charles Darwin, English naturalist, 1809-1882) – someone who believes that the life of humans in society was a struggle for existence ruled by „survival of the fittest", a phrase proposed by the British philosopher and scientist Herbert Spencer.

Creating derivatives from eponyms may result in depersonalization [38, p. 4], i.e., the individualization of the subject of the name is lost due to their transition to a generalised concept. In many cases, eponyms are „no longer capitalized, indicating they have been fully absorbed into medical discourse" [8, p. 227].

Conclusion

English word-formation system shows stability and flexibility, and its suffix word-formation resources can meet the practical and communicative needs of specialists in the medical field of knowledge. The suffixes perform a mutational function. Denominal eponymous terms motivated by proper nouns are formed by suffixes that give a new meaning to the derived eponym. According to semantic relations, suffixes play a semantic role. Twelve groups of denominal derivatives are distinguished. Denominal suffixes which are used in medical terminology in terms of eponyms are **-ella, -ia, - iasis, -ium, -in, -ine, -ism, -ist, -itis, -oma, -osis -tion.**

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