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METAPHORIC TERM FORMATION IN MEDICAL DISCOURSE

The article considers the metaphoric mechanisms of medical terminology formation. The basic categories of medical terms created by metaphorical transfer of meaning, as well as their functions and text-producing potential have been analyzed.

Keywords: *metaphor, term, term formation, medical discourse.*

У статті розглянуто метафоричні механізми утворення медичної термінології. Проаналізовано основні категорії медичних термінів, сформованих шляхом метафоричного перенесення значень, їхні функції та текстотвірний потенціал.

Ключові слова: *метафора, термін, терміноутворення, медичний дискурс.*

В статье рассмотрены метафорические механизмы образования медицинской терминологии. Проанализированы основные категории медицинских терминов, сформированных путем метафорического переноса значений, их функции и текстообразующий потенциал.

Ключевые слова: *метафора, термин, терминообразование, медицинский дискурс.*

The anthropocentric tendency of contemporary linguistics aspires to study language as closely connected to men, their consciousness and intellectual activities. In this context, the system of metaphorical meanings and the ways of their implementation are of particular interest. Broadly speaking, metaphor is a process and result of comparison, primarily a concealed one [8, p. 24]. Most known concepts and objects from the nearest human environment often undergo the process of metaphorization. Name of a particular concept is transferred to another object or concept based on their similarities. Moreover, quite often metaphors are rooted in the complex associative relations, pertaining to a certain speech community and its everyday practical experience. Therefore, the links within the mechanism of metaphorization are sometimes difficult to define [7, p. 207].

A metaphor is a universal phenomenon in language, and it holds a specific place in the scientific and technical communication [3, p. 113]. Metaphorical transfer of meaning is a productive way of term formation which renders this area relevant for linguistic research. The aim of the present paper is to identify the functions of conceptual metaphors in different types of medical texts; namely, to determine their role in the formation of medical terms; to consider the issues of origin and development of scientific metaphors, and to reveal their terminological potential. It stands to reason that knowledge, understanding and proper application of medical terminology is a necessary part of training future health professionals. In this context, the practical significance of metaphors in teaching English as a foreign language has been already largely confirmed by researchers [1; 4; 7].

It is commonly known that medical terminology may have different etymology. Medical terms are different in structure; they can be formed by stem-composition or word-combination, as well as based on metaphorical transfers («solar plexus»; «drumstick fingers»; «kidney stones»; «cockscorb»; «biceps»; «malleus»; «anvil»; «elephant leg» and the like). Thus, metaphorical transfer is one of the productive ways within the area of medical terminology formation. In addition, metonymic relations are of great importance as well. For instance, «Madura boil» or «Madura foot» (a chronic infection involving the subcutaneous tissue, skin and contiguous bone) stems from the name of Indian city Madura where the disease was first described by British physicians in 1846. Another example is the term «tennis elbow» (severe pain in the elbow joint) which spread after it was first described in 1882 by Dr. Morris upon the case study of a tennis player. In this context, it is necessary to bear in mind that metaphorical and metonymical transfers are sometimes closely interrelated.

Within the structure of metaphors, the emotionally colored information is better absorbed. Therefore, physicians apply such terms as «cobble's chest»; «pigeon breast»; «Turkish saddle» and so on. It is necessary to bear in mind that emotional connotation depends on the speaker's attitude towards the concept; therefore, it may be both positive and negative [2, p. 13]. However, negative connotations are particularly undesirable in medical terms, since they may be associated with possible development of iatrogenesis, that is, a disease caused by careless words or actions of a doctor or another member of medical personnel, adversely affecting the psyche of the patient. A number of special nominations carry negative emotions and even sound offensive («beef heart»; «barking cough»; «frog abdomen» and the like). In this connection, such terms should not be applied in front of patients or their relatives.

The universal categories generating metaphorical terms in medicine can be grouped as follows: biomorphic (anthropomorphic, zoomorphic and botanical metaphors), sociomorphic, and geo-meteorological metaphors. Biomorphisms represent the most productive group of metaphorical terms. Biomorphic metaphors include anthropomorphic, zoomorphic and botanical subcategories.

It is necessary to observe that anthroponymization is one of the major tendencies in the process of metaphorical term formation [11, p. 30]. In medicine, the anthropometrical principle is implemented in the somatic and household subclasses. Somatic metaphors are related to the human body: «blind gut»; «wisdom tooth»; «molecular death»; «dental neck»; «waist of heart» (the middle segment of the cardiac silhouette in a chest X-ray); «mind blindness» (a cognitive disorder in which an individual is unaware of others' mental states) and the like. The household subclass includes the following medical terms: «pericardial sac»; «saddle nose deformity» (a condition where the support of the nose is weakened whereby the nose is «saddled» in the middle); «lacrimal sac»; «Douglas's pouch» (a deep peritoneal recess between the uterus and the upper vaginal wall anteriorly and the rectum posteriorly); «cracked pot

sign» (late hydrocephalus, in which percussion of the skull evokes a «jagged» sound); «bone spur» (a bony growth formed on the normal bone); «mantle dentin» (outer portion of dentin bordering the enamel or cementum of the tooth); «shovel-shaped teeth» (a special form of incisors most commonly found in mongoloids); «dental arch» (the curve of the row of teeth in each jaw); «cobble's chest» (a congenital deformity, producing a sunken appearance of the chest); «hand of the obstetrician» (the cramped and coned posture of the hand and fingers seen with carpal tetany in acute hyperventilation syndrome) and the like.

Meanwhile, medical zoomorphic metaphors usually express the assessment of the affected functional systems of human body by means of animalistic images, for example: «elephantiasis» (a disease that is characterized by the thickening of the skin and underlying tissues); «cat scratch disease» (benign inoculation lymphoreticulosis, most commonly found in children following a scratch or bite from a cat); «dromedary gait» (a rolling, high-stepping gait with protrusion of the buttocks due to excessive lordosis); «goose skin»; «crocodile tears syndrome» (an uncommon consequence of recovery from Bell's palsy where faulty regeneration of the facial nerve causes sufferers to shed tears while eating); «bird face» (postnatal dwarfism with a small head, narrow bird-like face and a beak-like nose); «pigeon breast» (a deformity of the chest characterized by a protrusion of the sternum and ribs) and the like. Botanical metaphors are formed by the names of the plants, their parts or fruits: «nettle rash» (an eruption on the skin resembling the condition produced by stinging with nettles); «Adam's apple»; «nutmeg liver» (a liver dysfunction due to venous congestion); «nerve root»; «hay fever» (allergic rhinitis); «maple syrup urine disease» (an inherited disorder in which the body is unable to process amino acids); «tooth bud»; «mulberry molar» (a dental condition, characterized by multiple rounded rudimentary enamel cusps on the permanent first molars) and so on.

Geo-meteorological metaphors are also quite widespread within the medical terminology: «eye ground»; «pancreatic islet»; «geographical tongue» (an inflammatory condition of the mucous membrane of the tongue, with the patches resembling the islands of an archipelago); «chromosome map» (a systematic, semiabstract representation of the physical position of loci on a karyotype) and others. It should be noted that this category often displays a strong tendency to combine metaphorization and metonymization: «spring conjunctivitis» (a recurrent, bilateral, and self-limiting inflammation of conjunctiva, having a periodic seasonal incidence); «river blindness» (a disease caused by infection with the parasitic worm *Onchocerca volvulus* which lives near rivers); «Mongolian spots» (dark-bluish or mulberry-colored spots on the lower back, observed in newborn infants, most commonly in Asians); «Turkish saddle» (a saddle-shape depression in the sphenoid bone of the human skull); «tropical sprue» (a disorder that occurs in warmer climates, often associated with enteric infection and nutritional deficiency), etc.

It is necessary to observe that plenty of metaphorical terms in Ukrainian or Russian may not be reflected in the English language: for instance, «вовча паща» («волчья пасть») is rendered quite neutrally («cleft palate»). Meanwhile, transformations from one metaphorical category into another are also quite possible, for example, «вітряна віспа» («ветряная оспа») (meteorological metaphor) is rendered both as «waterpox» (meteorological metaphor) and «chickenpox» (zoomorphic metaphor). Furthermore, divergences within a certain metaphorical category can be observed: for instance, «курячі груди» («куриная грудь») as opposed to «pigeon breast». Hence, these metaphors are motivated by the complex associative relations within different speech communities and their everyday practical experience.

Sociomorphic metaphors constitute yet another productive group of terms. This category contains proper names and abstract notions related to the social being of men: «gene library» (a collection of DNA fragments of one organism); «Gothic palate» (an abnormally highly arched palate); «emergency hormone» (referring to adrenaline because it is released by the adrenal glands under the conditions of stress or excitement); «Napoleon's hat» (the shape of adrenal glands); «Habsburg jaw» (mandibular prognathism) and the like. In this context, a vast majority of metaphors is formed by means of the «culprit» concept: «culprit artery» (coronary artery, «responsible» for the development of myocardial infarction); «culprit vessel» (the one which compresses the root of the trigeminal nerve); «culprit nerve root»; «culprit disorder» and so on. In immunology, the «culprit» concept is widely used for identification of medications and substances which trigger the hypersensitivity reaction. As a matter of fact, the culpability of medications is an extensively studied field of immunology and allergology: «In some cases, the *culprit substance* may not be identified or patch testing by an allergist may be necessary» [6, p. 284]; «Once the eruption has occurred, it may be necessary to discontinue the *culprit medication* and treat the eruption with a potent topical corticosteroid» [5, p. 825]; «In most instances, discontinuing the *culprit medication* leads to complete resolution of the problem» [9, p. 128] and so on.

Thus, the study of metaphorization mechanisms in medical terminology enables us to reveal the origin of metaphorical meanings, as well as their common directions of development. Medical terminology is characterized by extensive use of metaphorical terms which form a separate corpus with its own laws, typological characteristics and models. The analyzed metaphorical terms perform nominative function, filling the empty conceptual gaps and thus providing the names of physiological phenomena or pathologies by means of already known words. Moreover, these terms perform the function of emotional evaluation which is based on negative or positive characteristics of a concept. The understanding of profound metaphorical mechanisms of term formation promotes the mastering of medical terminology, contributes to the development of clinical thinking and enhancement of professional outlook.

List of references:

1. Andreou G. Teaching Idioms in a Foreign Language Context : Preliminary Comments on Factors Determining Greek Idiom Instruction / Georgia Andreou, Ioannis Galantomos // *Metaphorik. de.* – 2008. – Vol. 15. – P. 7–26.
2. Arutyunova N. D. Axiology in Life and Language Mechanisms / N. D. Arutyunova // *Problems of Structural Linguistics.* – 1982. – P. 11–16.

3. Baranova A. A. Dynamics of Metaphorical Creation of Terms within the Main Subject Groups of English Terminology of Oil and Gas Branch / A. A. Baranova, A. A. Efremov // *The Bulletin of the Adyghe State University. Series «Philology and the Arts»*. – 2012. – Issue 3. – P. 112–116.
4. Chen Y. Teaching English Idioms as Metaphors through Cognitive-Oriented Methods : A Case in an EFL Writing Class / Yi-chen Chen, Huei-ling Lai // *English Language Teaching*. – 2013. – Vol. 6 (6). – P. 13–20.
5. Drucker A. M. Drug-Induced Photosensitivity : Culprit Drugs, Management and Prevention / A. M. Drucker, C. F. Rosen // *Drug Saf.* – 2011. – 34 (10). – P. 821–837.
6. Johansen J. D. Contact Dermatitis / Jeanne Duus Johansen, Peter Frosch, Jean-Pierre Lepoittevin. – New York : Springer, 2010. – 1266 p.
7. Kömür S. Using Conceptual Metaphors in Teaching Idioms in a Foreign Language Context / S. Kömür, S. S. Cimen // *SBED*. – 2009. – Vol. 23. – P. 205–222.
8. Lakoff G. *Metaphors We Live By* / George Lakoff, Mark Johnson. – London : The University of Chicago Press, 1980. – 242 p.
9. Novick N. *You Can Do Something about Your Allergies : A Leading Doctor's Guide to Allergy Prevention and Treatment* / Nelson Novick. – Bloomington : iUniverse, 2000. – 228 p.
10. Urdang L. *The Bantam Medical Dictionary* / L. Urdang. – New York : Bantam Books, 2009. – 628 p.
11. Vendina T. I. Word Formation as a Way of Universum Discretization / T. I. Vendina // *Problems of Linguistics*. – 1999. – No. 2. – P. 27–49.