

SYNONYMY IN MEDICAL TERMINOLOGY: THE EVOLUTION OF THE TERM «LEPRA»

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Summary

The article considers the theoretical aspects of synonymy in terminology and analyzes the Latin synonymous terms of leprosy in diachrony. It has been shown that in the conditions of the cognitive paradigm the views of scientists on such a phenomenon as terminological synonymy, which is a lexical reality and from which terminological practice cannot be abstracted, have changed. In the course of the research, the authors applied the methods of analysis, semantic-component in particular, sampling, classification, generalization, and historical approach. The material of the study is the corpus of synonymous terms for leprosy, listed in the IV volume of the thorough work *Cyclopaedia of Practical Medicine*, published in 1835 in London, as well as synonyms of the term «lepra», presented in the dictionary by D. Arnaudov. The authors conclude that the presence of a significant number of synonyms of the term under study, which were common in medical discourse as of the 19th century, demonstrates that medical terminology is an open system, some elements of which are integrated by this framework and others disappear. It is emphasized that the etiology and pathogenesis of leprosy were unknown almost until the last quarter of the nineteenth century, so the vast majority of names contained a toponymic component, which indicated the endemic nature of the disease, or metaphorical, zoomorphic, in particular. The processes of terminological evolution have led to the disappearance and archaization of these terms, most of which are currently incorrect, although they provide interesting historical information for a wide range of scientists – clinicians, specialists in the history of medicine, and terminologists. With the development of medical science and terminology, there was a specialization of most terms, therefore, now they denote other medical concepts.

Keywords: cognitive paradigm, terminological synonymy, evolutionary processes in terminology, leprosy.

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1. Introduction

In the frame of the cognitive paradigm, a term is recognized as an integral tool for transferring the scientific knowledge, developing professional thinking, and a central element of occupational discourse (both oral and written), the main purpose of which is to ensure rapid and effective communication between professionals in relevant areas of knowledge and related fields, which renders the studies of synonymy in terminology relevant.

Characteristics that should correspond to the phenomena of «ideal» terms, according to the representatives of the so-called traditional schools of terminology (Viennese, Czech and Soviet) are unambiguity, lack of synonyms, homonymy, brevity – have remained theoretically postulated and never implemented in practice, as evidenced by the numerous works of scientists (*Barros, 1999; Bieliaieva & Synytsia, 2020; Cabré, 1998; Ducháček, 1979; Dury & Lervad, 2008; Musampa, 2007; Petit, 2005; Temmerman, 1997*). In this context, the opinion of the Belgian researcher R. Temmerman is noteworthy: «the new socio-cognitive theory of Terminology emphasizes that Terminology should not be uniquely oriented towards standardization and it questions the validity of objectivism as the theoretical underpinning of terminology» (*Temmerman, 1997: 54*). The scholar also observes: «The univocity ideal of traditional Terminology consists of trying to eliminate some of the near-synonyms and indicating a preferred term. The underlying idea is that to have several terms for the same concept / category is a bad thing as it implies an impediment for unambiguous communication. The functional aspect of synonymy in a discourse community is overlooked. Starting from the example of Southern blotting we can in the first place illustrate the functionality of synonymy and in the second places how that the reason why synonymy is functional may be that the different elements which are at the basis of lexicalization were present in the initial situation when the technique was being developed» (*Temmerman, 1997: 77*).

In this context, we also strongly agree with P. Dury and S. Lervad who assert that synonymy is a lexical reality from which terminological practice cannot be abstracted. From the standpoint of synchronicity of synonymous variations, it is impossible to avoid, because it inevitably arises in everyday professional practice, which terminologists must take into account (*Dury & Lervad, 2008: 77*). Based on this, referring to J. Freixa (2006), synonymy in terminology is due to five main factors: 1) dialect, which is a consequence of geographical, social, and chronological differences between texts and authors; 2) functional, arising from the need to adapt medical texts to the levels and specialization of readers / interlocutors; 3) discursive, dictated by the principle of language economy, the need to avoid repetition, etc.; 4) cross-linguistic, which is the result of the coexistence of «local» and borrowed terms; 5) cognitive – variability that arises due to inaccuracies of concepts and differentiation of conceptualization between different authors (*Dury & Lervad, 2008: 67*).

In our opinion, of significant scientific interest is a study of synonymy in terminology not only in synchrony but also in diachrony, because each synonymous name used at a certain stage of medical development bears the imprint of contemporary medical knowledge, errors, and accumulated empirical experience. We also agree with P. Dury and S. Lervad that the typology mentioned above can be extended by another type presented by diachronic variation, since «conceptual inaccuracy» should be considered as separate from synonymy – «synonymy of circumstances» or «occasional synonymy», without which the evolution of special vocabulary and terminology is impossible (*Dury & Lervad, 2008: 68*).

The aim of this research is to investigate the Latin synonymous terms of leprosy in diachrony.

2. Materials and methods of the research

The following methods were applied in the study: analysis, semantic-component in particular, sampling, classification, generalization, and historical approach. The material of the study was the corpus of synonymous terms for leprosy, listed in the IV volume of the thorough work *Cyclopaedia of Practical Medicine* (Forbes, Tweedie, & Conolly, 1835), published in 1835 in London, as well as synonyms of the term «lepra», presented in the dictionary by D. Arnaudov (1979).

3. Results and discussion

The sample consisted of 23 synonymous terms: «*lepra Orientālis*», «*morbus glandulāris Barbādensis*», «*morbus Hierosolymitānus*», «*elephantūsis Indīca*», «*phlegmatia Malabarīca*» (we assume that there is lapsus calami in this print edition, as the term «phlegmatia» is not recorded in dictionaries, instead there is the term «phlegmasia», which means «inflammatory process, inflammation, and life-threatening condition of the patient»), «*morbus Phoenicius*», «*lepra Americāna*», «*lepra Asturiensis*», «*lepra Egyptiāca*», «*lepra Syriāca*», «*elephantia Arabum*», «*lepra Arabum*», «*lepra Judaeōrum*», «*morbus Heracleus*», «*malum Lazari*», «*lepra nigra*», «*lepra tuberculōsa*», «*leontūsis*», «*lepra ichthyōsis*», «*elephantopus*», «*lepidōsis lepriāsis*», «*ulcus universāle*», «*lepra squamōsa*».

One term from the analyzed array contained a color component – «*niger, gra, grum*» (black). Probably, this attribute indicated a specific dark skin color of patients with leprosy. In three terms we find a reference to the morphological manifestations of leprosy: the definition of «*tuberculōsus, a, um*» (tubercle) and «*squamōsus, a, um*» (scaly) and the appendix «*ichthyosis, is f*» (ichthyosis), which also indicates the dermatological manifestations of leprosy in the form of exfoliation, resembling fish scales.

The analysis showed that out of 23 synonymous terms of leprosy, 10 of them contain a toponymic component, which explicitly indicates the prevalence of the disease in a given period in a particular area, i.e., it emphasizes its endemic nature, or the ethnicity of leprosy patients. It should be noted that the homeland of leprosy is considered to be the Southeast Asia – India, China, Japan, from where this terrible disease was first brought to the territory of the modern Middle East, Greek cities, North Africa, and later leprosy began to spread through Europe. Thus, the endemic nature of the disease is indicated by the following adjectives: (1) «*Americānus, a, um*» (*American probably applies to both South and North America*), (2) «*Asturiensis, e*» (*Asturian - Asturias - a province on the map of modern Spain (formerly a separate Asturian principality), located on the coast of the Bay of Biscay*), (3) «*Barbādensis, e*» (*Barbadian, ie one recorded on Barbados – an island located in the Caribbean Sea near South America*), (4) «*Egyptiācus, a, um*» (*Egyptian*), (5) «*Hierosolymitānus, a, um*» (*Jerusalem*), (6) «*Indīcus, a, um*» (*Indian*), (7) «*Malabarīcus, a, um*» (*Malabar, a historic region in southern India between the Arabian coast and the mountains of the Western Ghats*), (8) «*orientalis, e*» (*eastern*), (9) «*Phoenicius, a, um*» (*Phoenician section on the ancient state of Phenicia, located on the modern Middle East and which had numerous colonies in Egypt, Cyprus, Greece, Turkey, Spain, as well as some islands in the Persian Gulf*), (10) «*Syriācus, a, um*» (*Syrian*).

The ethnicity of the patients is observed in four terms – in two terms «*Arabes, um m*» («Arabs» – a collective term used to denote a large group of peoples who have long inhabited the territories of North and Southwest Africa, the Middle East, East Asia), in one «*Judaeus, i*

m) – «Jew» and in one «*Graecus, i m*) – «Greek». We also found one term with a mythonymic and biblical component: «*morbis Heracleus*) (Hercules – one of the main Greek heroes, the son of the supreme god Zeus and the mortal woman Alcmene, the wife of the Theban king Amphitryon) and «*malum Lazari*) (Saint Lazarus, Lazarus of Bethany, and the Four-Day Lazarus are biblical characters).

Interestingly, the biblical texts contain many speculations about leprosy, in particular, in the thirteenth chapter of Leviticus, which is part of the Pentateuch (Torah), a very detailed description of leprosy is given, as well as an attempt at sui generis differential diagnosis. Thus, if the patient has depigmentation of the hair and «deep» ulcers, the priest must «make a diagnosis» – «leprosy» and declare the patient unclean (*Levit, 13: 3*). In seven days the priest can distinguish leprosy from herpes or psoriasis (*Levit, 13: 6; Levit, 13:31*).

A careful reading of the Torah confirms the thesis that leprosy is often confused with other skin diseases, as evidenced by the large number of synonyms that denote various morphological elements of dermatological manifestations of diseases such as scleroderma, eczema, vitiligo, mycosis, herpes, and psoriasis. Quite a careful analysis of skin diseases in sacred texts is made by Brazilian researchers R. A. M. Frutuoso, G. R. D Ferreira, and S. B. Frutuoso (2017), as well as Uzbek scientists I. Karomatov and H. Gulyamov (2017). However, the interpretation of its etiology and pathogenesis was far from scientific, because it was believed that this disease is a divine punishment for sin and a demonstration to mortals of God's wrath. This situation lasted for centuries – until the last quarter of the nineteenth century – the moment when in 1873 the Norwegian doctor Gerhard Armauer Hansen discovered the causative agent of leprosy *Mycobacterium leprae* (*bacillus Hansenii*).

The «terminological pleonasm» mentioned above vividly illustrates R. Temmerman's thesis that «language is the medium for expressing human world perception and human world conception. Language plays a role in the human understanding of the world. Looking at the relationship between the world and the mind socio-cognitive Terminology considers the world to be (partly) in the human mind. When considering language and mind, socio-cognitive Terminology is ready to accept that the understanding of language cannot be separated from the understanding of the world» (*Temmerman, 1997: 56*).

Regarding the reference component, it is presented by 10 noun terms: (1) «*lepra*) (leprosy); (2) «*morbis*) (disease); (3) «*malum*) (evil, as well as disease, illness); (4) «*elephantopus*) (probably a term meaning «elephant», literally – «elephant's foot», formed from the Greek ἐλέφας, ἐλέφαντος elephant and πούς, ποδός foot); (5) «*ulcus*) (ulcer); (6) «*phlegmasia*) (inflammatory process, inflammation, as well as a life-threatening condition); (7) «*leontiasis*) (leontiasis); (8) «*elephantiasis*) (elephantiasis); (9) «*elephantia*) (elephantiasis); (10) «*lepidosis*) (lepidosis, ie a disease characterized by exfoliation, the appearance of scales, exfoliating rash). It should be noted that most of these terms, for example, «elephantiasis», «phlegmasia», «ulcus» are part of the terminological fund of medicine and denote other, well-studied pathologies and defects, while the Latin term «malum» fell under the process of determinization.

The disease, whose complications for thousands of years killed tens of thousands of patients who were feared and branded, isolated and expelled from society, remained unexplored until the 1870s and only during the rapid development of microbiology there was a real breakthrough in the diagnosis, treatment and prevention of leprosy, when it was proved that it is an infectious disease (*Bieliaieva, Uvarkina, Lysanets, et al., 2020*). This scientific fact, of course, is reflected in the field of terminology: given the unique role played in the study of this disease by the eminent Norwegian bacteriologist Gerhard Henrik Armauer Hansen (1841–1912), who discovered its causative agent *Mycobacterium leprae* (*bacillus Hansenii*) and refuted the theory

of the heredity of this disease, now the synonymous with the standardized and stylistically neutral term *lepra*^{lat.}, *leprosy*^{eng.}, are the terms with an eponymous component: *Hanseni morbus*^{lat.}, *hansenōsis*^{lat.}, *hanseniāsis*^{lat.}, *Hansen's disease*^{eng.}, *hansenosis*^{eng.}, *hanseniasis*^{eng.}

4. Conclusions

The presence of a significant number of synonyms of the term «lepra», which were common in medical discourse as of the 19th century, demonstrates that medical terminology is an open system, some elements of which are integrated by this framework, while others disappear. The etiology and pathogenesis of leprosy were unknown almost until the last quarter of the nineteenth century, so the vast majority of names contained a toponymic component, which indicated the endemic nature of the disease, or metaphorically figurative, zoomorphic, in particular. The processes of terminological evolution have led to the disappearance and archaization of these terms, most of which are currently incorrect, although they provide interesting historical information for a wide range of scientists—clinicians, specialists in the history of medicine, and terminologists. With the development of medical science and terminology, there was a specialization of most terms, therefore, now they denote other medical concepts.

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