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METONYMISATION OF MEDICAL EPONYMS BASED ON PERSONAL NAMES AND THEIR METONYMIC PATTERNS IN ENGLISH CLINICAL TERMINOLOGY

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ABSTRACT. ***Metonymisation of Medical Eponyms Based on Personal Names and Their Metonymic Patterns in English Clinical Terminology.*** This paper presents insights into the metonymisation of medical eponyms based on a comprehensive overview of relevant literature. The article introduces a corpus-based study that analyses 25,787 medical eponyms derived from proper names

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extracted from articles, dictionaries, and specialised online resources. Given the established metonymic frameworks, this research investigates the characteristics of medical eponyms categorised as metonymic expressions through descriptive analysis. In our study, we considered eponymy as a subclass of metonymy, involving metonymic shifts where a name indirectly refers to a related medical concept. The specific features of a medical phenomenon are transferred from the object to a person who either discovered or is somehow associated with it. In this case, the proper name in an eponymous term does not provide access to biographical information but reveals the meaning of the medical phenomenon associated with a person. We also regard eponymy as a common form of metonymy that manifests in elliptic constructions, where the proper name is used without common nouns like disease, reflex, sign, etc. Metonymy is also considered from a cognitive standpoint in medical terminology, as it is used in reasoning to indicate how humans perceive medical objects. The information contained in eponyms gradually accumulates in the doctor's mind. Such knowledge accumulation helps to elucidate the relationship between language and medicine, enriching not only theoretical linguistics but also medical practice and education. The deeper the knowledge, the more information is condensed within the eponymous term; i.e., the meaning of a medical eponym is revealed as it is studied and characterized by individual associative layers and identification descriptors, where the proper name serves as a trigger for understanding the information ingrained within it. The proper name picks out a unique entity from several similar ones and provides access to some specific information. A mental lexicon uses such names as a compact container for keeping a large amount of information that can be grained into particular categories. Such metonymic categories as PHYSICIAN FOR THE DISEASE, PATIENT FOR THE DISEASE, and PART-FOR-WHOLE METONYMY can be specified within medical terminology due to the associative relations between source and target. Such an associative relationship between eponyms and medical phenomena is based on knowledge and experience, which steadily extend and may convey complex concepts quickly. The cognitive framework of metonymy facilitates the structuring of conscious processes and potentially influences standardized medical nomenclature, which in turn enhances clarity in international communication.

Keywords: *metonymy, eponym, eponymous terms, proper names, metonymic patterns.*

REZUMAT. ***Metonimizarea eponimelor medicale bazate pe nume personale şi modelele lor metonimice în terminologia clinică engleză.*** Acest articol prezintă perspective asupra metonimizării eponimelor medicale pe baza unei analize cuprinzătoare a literaturii relevante. Articolul introduce un studiu bazat pe corpus care analizează 25.787 de eponime medicale derivate din nume proprii extrase din articole, dicţionare şi resurse online specializate. Având în vedere cadrele metonimice stabilite, această cercetare investighează caracteristicile

eponimelor medicale clasificate ca expresii metonimice prin intermediul unei analize descriptive. În studiul nostru, am considerat eponimia ca o subclasă a metonimiei, implicând schimbări metonimice în care un nume se referă indirect la un concept medical conex. Caracteristicile specifice ale unui fenomen medical sunt transferate de la obiect la o persoană care la descoperit sau care este asociată în vreun fel cu acesta. În acest caz, numele propriu dintr-un termen eponim nu oferă acces la informaţii biografice, ci dezvăluie semnificaţia fenomenului medical asociat cu o persoană. De asemenea, considerăm eponimia ca o formă comună de metonimie care se manifestă în construcţii eliptice, în care numele propriu este utilizat fără substantive comune precum boală, reflex, semn etc. Metonimia este, de asemenea, considerată din punct de vedere cognitiv în terminologia medicală, deoarece este utilizată în raţionament pentru a indica modul în care oamenii percep obiectele medicale. Informaţiile conţinute în eponime se acumulează treptat în mintea medicului. Această acumulare de cunoştinţe ajută la elucidarea relaţiei dintre limbă şi medicină, îmbogăţind nu numai lingvistica teoretică, ci şi practica şi educaţia medicală. Cu cât cunoştinţele sunt mai aprofundate, cu atât mai multe informaţii sunt condensate în termenul eponim; adică, semnificaţia unui eponim medical este revelată pe măsură ce este studiat şi caracterizat prin straturi asociative individuale şi descriptori de identificare, unde numele propriu serveşte ca un declanşator pentru înţelegerea informaţiilor înrădăcinate în el. Numele propriu selectează o entitate unică dintre mai multe entităţi similare şi oferă acces la anumite informaţii specifice. Un lexic mental utilizează astfel de nume ca un container compact pentru păstrarea unei cantităţi mari de informaţii care pot fi împărţite în categorii specifice. Categorii metonimice precum MEDIC PENTRU BOALĂ, PACIENT PENTRU BOALĂ şi METONIMIE PARTE-PENTRU-ÎNTREG pot fi specificate în terminologia medicală datorită relaţiilor asociative dintre sursă şi ţintă. O astfel de relaţie asociativă între eponime şi fenomene medicale se bazează pe cunoştinţele şi experienţa utilizatorului, care se extind constant şi pot transmite rapid concepte complexe. Natura cognitivă a metonimiei facilitează structurarea gândirii şi raţionamentului uman şi poate influenţa nomenclatura medicală standardizată, ceea ce, la rândul său, sporeşte claritatea în comunicarea internaţională.

Cuvinte-cheie: *metonimie, termeni eponimi, eponim, nume proprii, modele metonimice.*

1. Introduction

Eponyms usually appear to commemorate an outstanding physician or scientist who played a significant role in detecting medical conditions (Ferguson & Thomas 2014) as well as recognizing leading scientists for their scientific contributions (Schubert et al. 2022). They are a prominent feature of medical

language and the number of articles dedicated to eponyms published each year has been growing (Cabanac 2014). Eponyms flourished in the late nineteenth century (Ferguson, 2014). Since then, they have not fallen out of favour, as evidenced by the steadily increasing number of PubMed queries, which has also been growing since the early twentieth. Thus, the question of eponyms within the medical setting remains relevant and requires further attention.

The word "eponym" comes from the combination of two parts, i.e., the Greek suffix "epi", which originally means "upon", and "onyma" implies "name", respectively (Budrys 2005). There are many linguistic theories about proper names, where the priority is to distinguish between proper names and proper nouns, where proper names are considered "as both linguistic and cultural items whose purpose is to refer to a unique referent, and which convey a meaning that refers to some idiosyncratic characteristics of the referent" (Héois 2020: 2-3). Moreover, proper nouns are specified as "word-level units belonging to the category noun"; and in contrast, "proper names are expressions which have been conventionally adopted as the name of a particular entity" (Payne & Huddleston 2002: 515-516). And finally, proper names are defined "as words or expressions (of several words) mainly used in noun phrases that refer to contextually unique individuals (people, places, institutions, events, monuments, etc.)" (Mignot & Philippe 2022: 1).

Within medical terminology, it is considered that "an eponym comes from the name of a person – real, fictional, mythical, or imaginary – but it can also come from the name of a place or a brand name" (Duque-Parra et al. 2006: 220). An alike opinion can be traced in the definition according to which an eponym is "a person, place or thing after whom or after which something is named" (Nieradko-Iwanicka 2020: 56). Most studies show evidence that the source of eponyms is not only a person but a place as well (Ferguson & Thomas 2014; Mora & Bosch 2010; Kucharz, 2020; Arnaud 2022). In general, an eponym can be considered any name since "there is no reference to whether the name is "proper" or "common", nor to whether it refers to a person, thing or place" (Cappuzzo 2008: 25).

According to various theories, such as philosophical, neuropsychological, and linguistic ones, proper names have a special status in language (Kljajevic & Erramuzpe 2018). In general, proper names are considered to be labels attached to referents and have no semantic meaning. They are "those linguistic entities most specifically suited to fulfill and guarantee an unmistakably established and constant relation between a given phenomenon in the world on the one hand and a linguistic sign or the use of a linguistic sign on the other" (Evans & Wimmer 1990: 259). They are considered lexical units that can distinguish unique entities perceived in the surrounding world or evoked from our internal conceptual

structures (O'Rourke & de Diego 2020). Proper names get into the mental lexicon and undergo the processes of conceptualization and categorization (Karpenko & Golubenko 2015); thus, they are quite often used as a metonymy to refer to a certain object. Specific features of a particular person that have become generally known will allow them to be used as a metonymy, provided that the person or object being described has agnate characteristics or traits (Adam & Palupi 2023). In this regard, metonymy is a cognitive impulse that provides access to the target context (Panther & Thornburg 2004), and a proper name used metonymically serves as a landmark that reproduces in memory the unique properties of an object associated with it. They are viewed as a significant information processing factor during its perception since they become specific headings used for extracting necessary fragments of knowledge from the mental lexicon, preserving essential information in memory, and combining verbal, encyclopedic, and non-verbal information (Karpenko 2006). People's names are also important for social activities, as the use of personal names in communication creates recognition, and attention to the issue being discussed, which is paramaunt in a medical setting.

2. Material and Methods

The study is focused on the analysis of 25787 medical eponyms based on proper names extracted from multiple publications, i.e., articles retrieved from PubMed platform, A New Dictionary of Eponyms (Freeman 1997), Dictionary of Medical Eponyms (Whitworth, Firkin 2001), Dorland's Illustrated Medical Dictionary (2002), and website such as whonamedit.com. The object of the investigation is the eponymous terminological units of English medical terminology, which are considered to be a compound unit where a proper name is the modifier of a common noun. In our study, we were guided by the fine-grained metonymic patterns (36 categories) identified in proper names by Arnaud (2022) based on metonymic patterns (23 categories) specified by Peirsman & Geeraerts (2006). The subject of our research is the characteristics of medical eponyms in the light of metonymisation. We screened all the terms found through the PubMed medical platform for their use in the medical field. The methodology includes descriptive analysis methods, which consist of selecting and systematising the collected facts in their logical comprehension and identification of specific patterns. The etymology of the terms used in this paper was researched using Internet resources such as whonamedit.com.

Eponyms are considered a subclass of metonymy (Lipka 2006), which does not transfer qualities but indirectly refers to one thing by means of another word denoting a similar entity. Eponyms are based on metonymic shifts (Brdar-

Szabó & Brdar 2023) where the name for one thing is applied with the essence of a different but spatially and/or temporally linked item (Ghan 2018). In our study, we considered eponymy from two standpoints:

- eponymy as a subclass of metonymy (eponymous terms in their full form (syntactic construction), e.g., *Hageman factor*) where the specific features of medical phenomena transferred from the object to a person who either discovered or somehow related to it. In this case, the proper name in an eponymous term does not provide access to biographical information but reveals the meaning of the medical phenomenon associated with a person since "the relation between source and target is typically contingent, i.e., conceptually non-necessary" (Panther 2017: 280). Moreover, information about a medical phenomenon can be accumulated and disclosed gradually, depending on the person's knowledge;

- eponymy as a common form of metonymy that manifests in elliptic constructions, where the proper name is used without common nouns like disease, reflex, sign, etc., such as *the Ruffier* instead of *the Ruffier test*.

Our study aims to analyse metonymic categories of eponymous terms and shed light on eponyms based on personal names used for medical concepts associated with them. To collect data from PubMed via its API, we utilized Entrez Programming Utilities (E-utilities), which provide programmatic access to various NCBI databases, including PubMed. These utilities allow us to search, retrieve, and download publication data, such as abstracts, citations, and metadata, in an automated manner. For this purpose, we developed a Python script that combines research and effect services to search PubMed and retrieve abstract information.

3. Results

Metonymised eponyms were compiled based on the metonymic relations and analysed considering metonymic patterns (categories). The study found that certain categories require some clarification in terms of medical terminology. For instance, the category INVENTOR FOR THE INVENTION identified by Arnaud (2022) was aligned with PHYSICIAN FOR THE DISEASE ASSOCIATED WITH detected by Brdar (2019) and subsequently to the truncated form as PHYSICIAN FOR THE DISEASE which are shown in Table 1. We categorized POSSESSED FOR PERSON to the PATIENT FOR THE DISEASE pattern. Table 2 displays the examples found under the metonymic pattern PATIENT FOR THE DISEASE.

When analysing eponyms originating from personal names, PART-FOR-WHOLE metonymy was also found. Table 3 displays such a metonymic pattern in terms of the personal names of physicians. Given eponymy, PART-FOR-WHOLE METONYMY within medical eponyms can be considered spatial since it

relates to the people who lived in different times and countries (dimensions). Such a category as linear PART-FOR-WHOLE metonymy can be drawn up for medical eponyms originating from the family name of people who are relatives and gathered under one surname. PART-FOR-WHOLE METONYMY was also regarded as comparable with synecdoche.

4. Discussion

4.1. Insights into the nature of metonymy

Metonymy has received much less attention in the literature, and metonymic phenomena have only been occasionally subject to investigation considering medical terminology. Traditionally, metonymy is regarded as a lexical phenomenon, i.e., "…as a rhetorical device that gives rise to special meanings of lexical items…" (Barcelona 2012: 257). Given that, linguists have assumed for a considerable period that metonymy is a linguistic device used in various contexts to convey meaning and create associations between related concepts. It is defined as a figure of speech in which one linguistic unit refers to the standard referent of a related item (Lakoff & Johnson 1980) or the name of one item represents another that is usually closely related to the first (Teraoka 2016). Metonymy is also defined as "a figure of language and thought in which one entity is used to refer to, or, in cognitive linguistic terms, provide access to another entity to which it is somehow related" (Littlemore 2015: 4). The study of metonymy from the perspective of cognitive linguistics specifies metonymy as a linguistic form and a powerful cognitive tool to conceptualize the world, i.e., "Metonymy allows us to conceptualize one thing by means of its relation to something else; metonymic concepts structure not just our language but our thoughts, attitudes, and actions" (Lakoff & Johnson 1980: 37). In this respect, metonymy is not only a language issue but also thoughts since languages reflect human conceptualization of the world.

From the perspective of cognitive linguistics, metonymy is based on assumptions that differ from traditional opinions. Lakoff & Turner (1989) view metonymy as a type of structured conceptualization, which is seen as a cognitive tool, rather than a linguistic strategy or rhetorical device. Radden and Koveches (2007) examine metonymy from a standpoint of cognitive processes. They claimed that "metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same idealized cognitive model" (Radden & Kövecses 1999: 21). This point of view echoes another, where metonymy is described as "a conceptual phenomenon represented by the schema X for Y, where X stands for the source meaning and Y symbolizes the target" (Panther & Thornburg 2004: 95).

Credible studies provide insights into the nature of metonymy in connection with metaphor, as well as specify convincing grounds for differentiating these two figures of speech (Barcelona 2000; Dirven & Pörings 2002; Haser 2005). Metaphor and metonymy differ at the level of perception, where the former is considered the result of similarity or analogy, while metonymy is based on contiguity, that is, a complex spatial metaphor when applied to the cognitive domains (Arnaud 2022)**.** They are also said to have different functions, for instance, metaphor is "principally a way of conceiving of one thing in terms of another, and its primary function is understanding," while metonymy "has primarily a referential function, that is, it allows us to use one entity to stand for another" (Lakoff & Johnson 1980: 36). Precisely speaking, "an eponym is the person or place after whom someone, something, or someplace is named; eponymous refers to the disorder, procedure, invention, etc., named after that person. This has become a distinction without a difference. The person and the disorder are now considered one and the same" (Abel 2014: 76).

4.2. Metonymic patterns of eponyms

In respect of eponyms, we follow Lipka, who claims that "eponymy may be regarded as a subclass of metonymy" (Lipka 2006: 32). Within the healthcare setting, metonymy is specified as the substitution of the name, which may concern referring to a person as a disease or other medical phenomenon (Camp & Sadler 2020). Patrick asserts that metonymy is quite common in medical discourse due to the polysemous nature of terms (Patrick 2006). The systematic type of metonymy assumes that it is a universal cognitive phenomenon; therefore, metonymic meanings are considered very accessible and automatically perceived by people (Barcelona 2012; Brdar-Szabó & Brdar 2023; Panther & Radden 1999; Radden & Kövecses 1999, 2007). Since metonymy is systematic and adheres to certain patterns, the following categories have been considered within medical terminology in terms of eponyms coined from personal names: INVENTOR FOR THE INVENTION (Arnaud) / PRODUCER & PRODUCT (Peirsman & Geeraerts); POSSESSED FOR PERSON (Arnaud) / POSSESSOR & POSSESSED (Peirsman & Geeraerts); PART FOR WHOLE (Arnaud) / SPATIAL PART & WHOLE (Peirsman & Geeraerts).

4..2.1. Inventor for the invention

The website *whonamedit.com* comprises a plethora of eponyms named for a person with a biography of this person, most of which fall under the category INVENTOR FOR THE INVENTION / PRODUCER & PRODUCT. This category is relatively controversial in terms of medical eponyms since not all of them are

named after the inventors (discoverers). Besides, Stephen Stigler believes that eponyms do not reward the achievement of an original discoverer because they are usually wrongly attributed. Stigler's law of eponymy states that eponyms are never named after the original discoverer. This law implies that eponyms appeared either to honor a person or due to somebody's contribution, but not discovery (Stigler 1980). Moreover, eponyms are usually named after one person, while scientific discoveries often reflect the efforts and work of a group of people over time (Woywodt 2007). Some eponyms came into scientific use after the scientist's death when another researcher claimed the discovery again, who still paid tribute to the initial discoverer by immortalizing their name in the term. In general, such a method of naming is often quite chaotic and random. It occurs for a number of reasons, sometimes even due to chance or reflects the linguistic and cultural dominance of the time. The naming process usually begins when widespread attention is drawn to an entity, not necessarily for the first time. The physician or scientist whose name becomes eponymous often stands out from others for reasons other than being first. It may be reputation, details in the report, or an accidental rediscovery, often decades later, by someone who links the disease to one or more of the earlier scientists (Ferguson & Thomas 2014). Thus, in our study, we assigned such medical eponyms named after a physician to the category PHYSICIAN FOR THE DISEASE ASSOCIATED WITH HIM / HER (Brdar 2019: 59), that is, DOCTOR / RESEARCHER FOR THE DISEASE STUDIED / DISCOVERED BY HER OR HIM (Brdar 2019: 64) as the well-established metonymy in medical eponymy. The category PHYSICIAN FOR THE DISEASE is more reasonable and acceptable for medical eponyms since it can be attached to any eponym in honor of a doctor associated with a medical phenomenon who they did not suffer from. We advocate using eponyms of such category in a non-possessive because "Non-possessives have already been standardized for compound eponyms and for toponyms. It has also been suggested that non-possessives should be used for concepts based on the name of a family or patient…" (Anderson 1996: 177).

Table 1: Eponyms named after physicians who contributed to the invention but were not original discoverers

Eponym	Etymology
Graves disease	Graves described the disease in 1835. Indeed, it was Parry who first reported a case of hyperthyroidism and goiter in 1786. In 1802, Flajani described a disease characterized by the coexistence of palpitations and exophthalmos.
Burnett syndrome	Burnett et al. described a syndrome in 1949. Earlier, it was described by Cope (1936), Hardt &Rivers (1923), and Sippy (1910).

Eponym	Etymology
Rendu-Osler-Weber syndrome	This syndrome was first described by Sutton in 1864, then Babington published a case in an account of hereditary epistaxis in 1865, and Legg in 1876. Rendu, Osler and Weber differentiated the condition from haemophilia.
Buerger disease	Thromboangiitis obliterans is a disease named after Buerger, who described the pathologic changes in the amputated extremities of patients in 1908. However, von Winiwater described thromboangiitis obliterans in 1879.
Madelung deformity	In 1878, Madelung gave a precise description, with suggested etiology and treatment. Nonetheless, other authors, including those cited by Madelung, had described the pathology earlier, such as Dupuytren (1834), Smith (1847), Adams (1854), Malgaigne (1855), and Jean (1875).
Reinke edema	This benign vocal cord disorder was first described by Hajek 1 in 1891 and subsequently by Reinke in 1895.
Tillaux fracture	The fracture was described by Cooper in 1822 and further characterized by Tillaux in cadaveric studies in 1845.
Hoffman sign	Hoffman first postulated this sign, though it was described by his assistant Curschmann.
Whipple procedure	Whipple, Parsons, and Mullins described a two-stage operation for the resection of ampullary carcinoma in 1935, earlier performed by Kausch in 1912, and in 1899 first reported by Halsted.

4.2.2. Possessed for person

Such metonymic patterns as POSSESSED FOR PERSON (Arnaud) / POSSESSOR & POSSESSED (Peirsman & Geeraerts) within the medical setting due to eponyms can be categorized as PATIENT FOR THE DISEASE as such eponyms arose in honor of a sick person who suffered from a particular condition or were diagnosed with a disease. In this regard, a possessive form can be used for such a category to specify a true possessive sense but not convey structurally adjectival as opposed to eponyms after the doctor associated with it. The possessive form can be constructed by a possessive formant, preposition, or inflection, depending on the proper noun. The eponyms after patients and their rationale for the source of origin are displayed in Table 2. Examples are suggested without a possessive form since additional investigations are required to detect the most acceptable form within a medical environment. Moreover, the AMA manual of style provides some reasons to avoid the possessive forms with regard to spelling and pronunciation.

Table 2: Eponyms named after patients who suffered from a disease

Eponym	Etymology
Carrion disease	Daniel Carrión, a Peruvian medical student, inoculated himself with material from a verruca lesion to record the clinical features of the disease.
Christmas disease	It was named after Stephen Christmas, who was the first person diagnosed with this medical condition in 1952.
Cowden disease	This disease was first described in 1963 by Lloyd and Dennis, who named it after their patient Rachel Cowden.
Hageman factor	Ratnoff named it in 1955 in honor of his first patient, John Hageman, who had 'incoagulable' blood in vitro and no abnormal bleeding after surgery.
MacLeod phenomenon	It was named after Hugh McLeod, the first patient whose erythrocytes showed weak expression of Kell system antigens.
Mortimer disease	Hutchinson in 1898 coined the term after the name of his patient Mrs. Mortimer.
Lou Gehrig disease	It is named after Lou Gehrig, the famous baseball player who got the illness.
Ravn virus	The name is derived from the surname of the patient from whom this virus was first isolated.

4.2.3. Part for whole

An eponym can also be defined as the name(s) of one or more individuals who are believed to have developed or described anatomical structures, classification systems, clinical conditions, principles of examinations, signs, symptoms, or surgical procedures (Hunter & Lund 2000). In this regard, we can speak about PART FOR WHOLE metonymy since medical phenomena result from a cohort study or investigation and not from a single person. In this case, we may discuss SPATIAL PART & WHOLE (Peirsman & Geeraerts). Given that most physicians lived in different centuries and countries, such a category can be considered spatial. PART FOR WHOLE (Arnaud) / SPATIAL PART & WHOLE (Peirsman & Geeraerts) can conventionally adhere to all eponyms of the PHYSICIAN FOR THE DISEASE category. Metonymy is similar to synecdoche and is more likely confused with it since they are both based not on similarity but on contiguity. It is used to represent the whole and vice versa. Generally, it is a synecdoche if A is a part of B or B is a constituent part of A, and a metonymy if A is usually associated with B but not part of the whole, or the whole is used for a part (Ghufraan 2023), like using body parts to refer to people, where “head

counts" is used for the number of persons employed. Synecdoche is also used in medical terminology to describe the relationship between different body parts, which involves the transference of meaning when words are employed to refer to something different from their actual meaning, as in *head-to-toe assessment*, which means an examination of all body systems. Thus, it is necessary to clarify the status of eponyms named after the group of people and whether they should be considered synecdoche or metonymy. We propose considering them as metonymy, as synecdoche implies a semantic change that shifts the meaning of a word. Still, in case of medical eponyms, the meaning does not undergo changes but points out the number of people united under one family name. Given that, we would like to propose the category LINEAR PART & WHOLE metonymy, where eponyms denote the family name of people who are relatives and gathered under one surname (so to speak, they come from the same lineage). Such eponyms and their rationale for source of origin are displayed in Table 3.

Table 3: Eponyms named after the group of people

Eponym	Etymology
Ackerman syndrome	The syndrome was named after the relatives Ackerman J. L., Ackerman A. L., and Ackerman A. B. who described its features.
Brugada syndrome	The syndrome derived its name after Spanish cardiologists Pedro and Josep Brugada, the brothers who defined it as a distinct clinical syndrome.
Hartnup disease	The disorder received its name from the Hartnup family, who were featured in a study of the condition.
Machado-Joseph disease	The condition was originally described in members of Machado family and the descendants of Antone Joseph.
Opitz G/BBB syndrome	The syndrome is derived from the first letter of the family names of the patients described by John Opitz.

To trace the elliptic constructions of eponyms, we selected 5 eponyms from all the eponyms mentioned in our paper that had more than 10,000 publications and counted the number of units within the open sources on the PubMed platform as of August 30, 2024. In the first case, we entered the term in its full form (syntactic construction), such as *Burnett syndrome*, and then only the surname *Burnett*. The number of units containing the surname is much higher since the surname can be used as an elliptical construction and can be mentioned directly as an individual.

Table 4: Syntactic and elliptical constructions

Eponymous term	Number of articles	Number of eponymous terms (Graves disease)	Number of proper names/ellipsis (Graves)
Graves disease	26327	19999	52275
Burnett syndrome	19251	13	16660
Carrion disease	12098	38	8641
Hageman factor	41505	1741	5210
Christmas disease	19431	678	23301
Whipple procedure	19251	3318	12523

We presuppose that elliptical constructions in medical discourse are possible under several conditions:

- proper names should be used with the definite article, an apostrophe, or both to differentiate them, otherwise, the eponymous terms are to be the best-known and stand-alone names so "No physician is in any doubt about what disorder is intended when encountering Down's, Alzheimer's, or Parkinson's" (Abel 2014: 76);

- enhanced by adjectives, as in such terms as *positive Babynskyi* or *prolonged Holter*, where the omitted words do not affect understanding. An elliptical construction without an article or reinforcement of words such as positive, negative, or prolonged is challenging to detect since a proper name can be mentioned directly as a natural person.

The suggested examples prove that there is nothing figurative about metonymy, which is an essential cognitive process pervasive in both thought and language. Metonymic phrases have cognitive status in reasoning, and show how people conceive of entities and events within conceptual frames (Paradis 2004).

5. Conclusion

Medical terminology is not only one of the oldest but also one of the most rapidly developing. Due to the conceptualization of certain analogies in the plane of the new reality, terminological units of various origins have appeared in English medical terminology, including terms based on proper names, i.e., eponyms or eponymous terms. A personal name is like a label that helps open a memory repository. It is a way to collect and add information, where the meaning of the medical eponym is revealed through expertise. Metonymy, in turn, is seen as a relationship in which the meaning of a word is recognized, and this relation is based on everyday experience. The research

results demonstrate that metonymic expressions in the language of medicine have cognitive status in thought processes and reflect ways of conceptualizing medical phenomena. Metonymic relations in medical eponyms structure language, the thoughts, and actions of medical practitioners, which is consistent with the cognitive theory of Lakoff and Johnson. The taxonomy and classification models applied allowed identification of specific frequencies in medical eponyms in the analysed corpus, namely PHYSICIAN FOR THE DISEASE, which is the most widespread pattern covering eponyms honoring physicians who studied or described diseases; PATIENT FOR THE DISEASE, i.e., a pattern for eponyms named after patients who suffered from particular diseases and eventually PART FOR WHOLE pattern which reflects the collective nature of medical research. We also identified a discrepancy between the original discoverers and the individuals after whom eponyms are named. The analysis conducted on this particular corpus supports the findings of earlier research, for which Woywodt & Matteson are credited. Stigler's law of eponymy states that eponyms do not always accurately reflect actual grants to medical science; therefore, it is pivotal to accurately label and logically represent medical objects, as this is a fundamental cognitive process that permeates thought and language. We presuppose that elliptical constructions in medical discourse are possible to detect only when proper names are used with the definite article, an apostrophe, or enhanced by adjectives. Otherwise, a surname can be mentioned directly as a natural person. Metonymy is a common and convenient means of communication and cognition because it enables brevity or verbal economy and helps us perceive the world around us. Metonymisation provides insights into how medical language evolves and may potentially influence standardised medical nomenclature, thereby improving clarity in international communication. Moreover, clear metonymic patterns will facilitate tracing the etymology of terms and promote their inclusion in the dictionary. The study opens up perspectives for further investigation into the diachronic development of medical eponyms, the cross-cultural features of medical eponymy, the impact of contemporary trends on the formation of new eponymic patterns, as well as the standardisation of eponym usage in medical practice.

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