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FROM 'LION FACE' TO 'BUTTERFLY ERUPTION': ZOOMORPHIC METAPHORS AS MESSENGERS OF FACIAL ANOMALIES

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Medicine contributes to every person's health in terms of diagnosis, treatment or prevention of a disease. Hence, constructing the clinical picture and the diagnosis of a health condition and conveying complex technical information in a comprehensible language is of utmost importance. In this regard, medical professionals rely not only on Greco-Latin terms of Classical times, but also resort to metaphors to illuminate many facets of medical observations and clinical findings. These metaphors stem either from anthropomorphic or zoomorphic areas and act as primary interface between scientific thought and understanding. From this perspective, the present article examines the value of metaphor in medicine and through the employment of descriptive method, explores some of the most widespread zoomorphic metaphors, which denominate certain facial anomalies.

Keywords: *metaphor, medicine, diagnosis, zoomorphic metaphor, facial anomaly, deformity, disorder.*

Introduction

Scholars and researchers from different disciplinary backgrounds have long considered the role and employment of metaphor to the advancement of science and scientific knowledge. Drawing from notable publications on usage of metaphor in science, we have established that metaphors are ubiquitous in scientific reasoning, thought and communication (Lakoff & Johnson, 2003, Richards, 1936, Gibbs, 1994, Bleakley, 2017, Van Rijn-van Tongeren, 1997) rather than mere rhetorical devices or linguistic embellishments (Locke, 2007, Vickers, 1970). Brian Arthur, a physicist,

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argues that *"non-scientists tend to think that science works by deduction. But actually science works mainly by metaphor."* (Waldrop, 1992, p. 327). Kai Niebert from Science and Sustainability Education at the University of Zurich, and Harald Gropengiesser from the Institute for Science Education, at Leibniz University Hannover, argue that scientists regularly resort to metaphors to make sense of their theoretical observations. To substantiate this claim, the authors cite real-life situations when scientists used metaphorical constructs, such as:

> *"Robert Hooke was the first to* ***denote the cell using the term "cell" when an image of a piece of cork under his microscope reminded him of the small rooms, or cells, occupied by monks in monasteries.*** *Kepler developed his* ***concept of planetary motion by comparison with a clock.*** *Huygens used* ***water waves to theorize that light is wavelike.*** *Arrhenius described the* ***greenhouse effect by referring to his experience with hot pots****."* (Niebert & Gropengiesser, 2015, p. 2).

One of the major claims cementing metaphor-science 'relationship' has been made back in 1936 by Richards, whose idea posits that it requires much effort to not resort to metaphor *"even in the rigid language of the settled sciences …"* (Richards, 1936, p. 92). Richards then evaluates the usage of metaphor from the perspective of scientific reasoning and states that "*in the semi-technicalised subjects, in aesthetics, politics, sociology, ethics, psychology, theory of language and so on, our constant chief difficulty is to discover how we are using it and how our supposedly fixed words are shifting their senses."* (Richards, 1936, p.92). This statement can safely be projected onto medicine and offer insight into the medical rationality of using metaphors. Medicine can surely be regarded a *'settled science'* with a *'settled'* term-base built on classical languages. However, the literature review shows that clinicians and doctors do not eschew metaphors; to the contrary - they put *'fixed words'* in dynamic sense interactions, thus 'catalyzing' a new character and insight within their field of practice.

In their book titled *"The Philosophy and Practice of Medicine and Bioethics. A Naturalistic-Humanistic Approach",* Barbara Maier - a physician and a specialist in Medical Ethics, and Warren Shibles - late philosophy professor, explore the rationale behind the philosophy of medicine making reference to metaphorical thinking as its focal marker (Maier & Shibles, 2011). Metaphors, thus, attempt to accomplish what the conventional language cannot in terms of medical rationale and thought.

Why is a metaphor necessary?

A key issue is to understand why a metaphor is necessary on the clinical roadmap. Both doctors and clinicians engage in patient care and a broad spectrum of diagnostic activities. They communicate ideas and transform medical calculations and perceptions into a clinical diagnosis. And for purposes of clarity of clinical picture, the health specialist initiates a process to generate a language unit, which will act as a *'messenger'* conveying intelligible diagnosis. During this process, the health professional draws from his embodied experiences shaped by the world '*in vivo*'[1] and eventually bridges rational pattern of an abstract diagnostic notion to a familiar conception for an '*ad hoc'* language unit. The metaphor ***"kangaroo care",*** for instance, precisely showcases that the obstetrician draws upon life perceptions when coining this metaphor to make sense of a therapeutic technique. This metaphor is used to describe *'alternative approach to traditional neonatal intensive care … for low-birthweight infants…"* (Jefferies, 2012). This technique of newborn care is the practice of skin-to-skin contact between infant and parent, where the mother holds her infant upright next to her skin and covers the baby with a blanket for warmth as explained in the following excerpts from clinical research:

> ***Kangaroo care*** *is a method of holding your baby to your chest. This allows for skin-to-skin contact between you and baby. During each session, your baby will be placed (naked except for a diaper and hat) on your chest (also bared to allow skin-to-skin) for up to a few hours. A blanket, shirt, hospital gown or robe can be wrapped around you and over your baby's back for warmth. This*

> *wrapping of your infant into your chest looks very much like a mother kangaroo holding her baby in her pouch — which is where the name* ***kangaroo care*** *comes from.* (Kangaroo care, 2020)

> ***Kangaroo care*** *(KC) is the practice of skin-to-skin contact between infant and parent. In developing countries, KC for low-birthweight infants has been shown to reduce mortality, severe illness, infection and length of hospital stay.* (Jefferies, 2012)

> ***Kangaroo Care*** *positioning before and during heel stick is a simple and inexpensive analgesic intervention to ameliorate pain in stable premature infants.* (Ludington-Hoe, 2005)

> ***Kangaroo Care,*** *skin contact between mother and infant, reduces pain and may reduce crying in response to pain.* (Kostandy et al., 2008)

Simulating marsupial care and drawing parallels between the human behaviour and the animal anatomy has apparently paved way for the coinage of the metaphor *kangaroo care.* Mapping onto the cross-domain insights, this metaphor translates the abstract nature of the medical thought into a specific understanding about the clinical phenomenon.

Clinical diagnosis through zoomorphic metaphors

In quest of a formulation of a novel clinical finding or a diagnosis of a disease, the clinician or the diagnostician may employ metaphoric language, which involves the way they see similarities and differences in life systems. In this case a key feature of the diagnostic process is the imaginative leap to recognize the 'different' and the 'similar', for *"the brain instantaneously compares incoming stimuli with its library of stored images (or sounds, smells and so on) and "sees" that it is "like that" and is therefore a "lion" or whatever."* (Ophuls, 2011, p. 77) Medical professionals blend their

perceptions of the 'resemblances' and 'contrasts', their own professional knowledge, evidence-based fragmentary data and the findings of laboratory tests to generate the needed metaphors. These language units come to describe anomalies, disorders or health conditions identified in various parts of human body both internally and externally. Newly coined metaphors may describe and denominate pathologies or deformities of *chest* (funnel chest, barrel chest, cobbler's chest), *abdomen* (caput medusa, hourglass stomach), *back* (kissing spines, dowager hump, butterfly vertebra), *lower limbs* (elephant leg, tennis leg, athlete's foot, jumper knee), *upper limbs* (opera-glass hand, obstetrician's hand, spring finger), *head* (tower skull, dish face, glue ear, saddle nose, toper's nose, clown nose, Olympian forehead), etc.

These metaphors are created and employed in *clinical medicine,* which has an important role in the diagnosis process (https://www.longdom.org/-scholarly/clinical-medicine-journals-articles-ppts-list-1773.html) and across various sub-disciplines of *internal medicine,* for instance, C*ardiology, Endocrinology, Hematology, Gastroenterology, Infectious Diseases, Neurology, Oncology, Pediatrics, Rheumatology, Pulmonology*, etc. (Kasper et al., 2015).

However, the usage of metaphors is not confined to clinical medicine and internal medicine only; rather, it spans other fields of medicine as well, such as *Dermatology, Diagnostic Radiology, Ophthalmology, Pathology, Physical Medicine and Rehabilitation, Psychiatry, Surgery, Urology,* etc. (St. George's University, 2021).

Thus, in search of metaphors, we have investigated extensive body of medical reports and case studies within the mentioned spheres focusing on diagnoses of facial anomalies or deformities, which are denominated metaphorically. Targeting the face for major research was conditioned by the fact that the face constitutes a special category for human identity and any disfigurement, anomaly or developmental deformity may adversely affect both human's identity and psyche. Even physicians and clinicians make a major claim that *"The face provides our identity as an individual human. Thus, birth defects scarring, or other alterations resulting from pathology or trauma have marked consequences beyond their physical effects"* (Moore et al., 2013, p. 842).

Additionally, we have also narrowed the search to zoomorphic[2] metaphors only, conditioned by the fact that associative links with wildlife

species and domesticated animals form integral part of human life, and the imaginative leap between and mappings across human and non-human domains are inevitable. We therefore tried and filtered specifically the ones, which are widely employed to formulate diagnoses of facial anomalies, affecting some of external facial structures, *i.e.*, the eyes, the nose, the cheeks and certain mouth muscles. Expressions as *lion face, frog face, cat eye syndrome, fish eye disease, dog nose, butterfly eruption, carp mouth* are some examples of the identified zoomorphic medical metaphors.

The logic behind 'cloaking' the diagnosis in such metaphors lies in that the human anatomy, (and in certain instances, human behavior, as is the case of 'kangaroo care') resembles the anatomy of wildlife species or domesticated animals. More specifically, certain disfigurements, pathologies or deformities observed on human's face may be interpreted through resemblances to normal, non-pathological facial structure of a particular animal or bird to foster better understanding of the clinical picture. Thus, clinicians and physicians, for instance, often diagnose the so-called ***bird face*** or ***bird-face deformity,*** which is an abnormal shortness or recession of the mandible. Its diagnosis and treatment are described in multiple research papers published in surgery journals, from which the following statements have been selected:

> *This paper describes our experience in the treatment of 10 patients with bilateral longstanding temporomandibular joint ankylosis occurring during the active growth period and causing severe* ***bird face deformity.*** (el-Sheikh et al., 1996)

> *Bilateral aplasia and hypoplasia of the mandibular condyle lead to the underdevelopment of the mandible, resulting in a lack of symmetrical growth of the mandible, micrognathia characterized by* ***bird face****, and a markedly short mandible.", "The mandible is under-developed, resulting in a retruded chin. These facial features have been described as birdlike or fishlike in morphology.* (Kaneyama et al., 2008)

> *Two different ways of correcting micromandibularism inherent in the **bird-face deformity** have been described. Both procedures may be applied to correct the symmetric or the asymmetric types of **bird-face deformity.*** (Obwegeser, 1987).

Moving to the description of other facial conditions, the metaphoric term ***cow face*** is encountered. It is the cow-like face of a human characterised by abnormally increased distance between eyes. Another facial condition diagnosed in Dermatology is the ***lion face, lion face syndrome*** or ***leontiasis ossea,*** where the affected human displays *'facial features similar to that of a lion with prominent convexities and furrowed creases.'* (Brown et al., 2015). Fortuine claims that this parallel was first drawn by the Medieval Arab physician Avicenna (Fortuine, 2000, p. 87). Later, Rudolf Ludwig Carl Virchow (1821-1902) - a German pathologist - used the term "leontiasis ossea" in 1864 to describe rare and nonfatal enlargement of facial bones (Fortuine, 2000, p. 87, Capon, 1928, Leontiasis ossea, n.d.). According to Oxford Latin Dictionary, *"ossea"* means *"made/consisting of bone, bone-like"* (Osseus, ossea, osseum, 1982) and *"leontiasis"* is the declined form of Latin *"leo"* meaning "*lion"* in English (Valpy, 1828, p. 225). The following excerpts from different research papers describe this malady using the metaphor *lion face, lion face syndrome* or *leontiasis ossea:*

> ***Lion face syndrome** or **leontiasis ossea** is a rare complication of severe hyperparathyroidism in end-stage renal disease patients, which has been less commonly reported due to dialysis and medical treatment advances in the last decade.* (Gameiro et al., 2019)

> *On examination, he had **leontiasis ossea** (leonine facies due to symmetrical frontal and maxillary bossing).*

> *Another remarkable feature was the **leontiasis ossea** involving the entire craniofacial skeleton which has rarely been reported.*

> *Although the term '**leontiasis ossea**' is widely used for localized swellings of the face including those involving the jaw, it should be restricted to a generalized homogenous swelling that implicates most facial bones.* (Maramattom, 2006)

> ***Leontiasis ossea** is a rare medical condition, with characteristic overgrowth of the facial and cranial bones.*

> ***Leontiasis ossea,** also found in the literature as **leontiasis** or **lion face,** is a rare medical condition with characteristic overgrowth of the facial and cranial bones. … **Leontiasis ossea** is not itself a disease, but a condition of other diseases such as Paget's disease, gigantism, fibrous dysplasia, hyperparathyroidism and renal osteodystrophy.*

> *It is important to recognize the features of uremic **leontiasis ossea** as it may result in life-threatening upper airway obstruction and compressive cranial neuropathy.*

> *Today **leonatiasis ossea** is a rare medical condition in patients with end-stage renal diseases.*(Dimkovic et al., 2015)

> ***Leontiasis ossea,** also known as **leontiasis** or **lion face,** is a form of severe bone remodeling that prevails in patients with chronic kidney disease …*

> *Physically, the patient seemed to suffer from malnutrition, **lion face/leontiasis** (upper mandibular enlargement and deformity)…* (Purrunsing et al., 2018).

Another facial deformity is the so-called ***frog face,*** which is characterised by gross facial changes and broadening of the nose occurring in certain nasal polyps, as for instance *"Ethmoidal polyps are allergic in*

nature and their clinical spectrum may extend from a limited disease, which responds to conservative treatment, to a very extensive one, which shows ***frog faced deformity****…"* (Salaria et al., 2015). When suffering from this health condition, the patient's face assumes a resemblance to that of a frog.

Among upper facial anomalies eye diseases are often identified. One of them is called ***cat eye syndrome,*** which is considered a rare genetic disease caused by abnormalities of chromosome in human body (Cat eye syndrome, n.d.). Patients with this syndrome display, in line with other somatic defects, a slit-like iris (coloboma) in one or both eyes, *i.e.*, the pupil is vertically elongated. Resembling the appearance of a cat's eye, this ophthalmological finding has paved way for naming the syndrome "cat eye". The following excerpts highlight its usage in clinical research:

> *The phenotype observed in* ***cat eye syndrome*** *is highly variable and may be superimposed on the phenotype of the oculo-auriculo-vertebral spectrum.* (Rosa et al., 2010)

> ***Cat-eye syndrome*** *is a rare genetic syndrome of chromosomal origin.*

> *The three main characteristic clinical symptoms identifying* ***cat-eye syndrome*** *are preauricular anomalies, anorectal malformations, and coloboma of the iris.* (Jedraszak et al., 2015).

Fish eye disease is another eye condition diagnosed in Ophthalmology. It is an inherited disorder and causes the clear front surface of the eyes to gradually become so cloudy or opaque that resembles the eye of a boiled fish (Carlson & Philipson, 1979). The term is widely employed throughout medical literature, as employed and explained in the following examples:

> *In this review, we describe … the milder phenotype known as* ***fish-eye disease*** *…* (Kuivenhoven et al., 1997)

> *This paper describes a novel genetic defect which causes f****ish-eye disease*** *…*

Unlike other mutations causing ***fish-eye disease,*** *…*

Until now, mutations in the LCAT gene have been reported to underlie either classical LCAT deficiency or ***fish-eye disease*** *….* (Kuivenhoven et al., 1995)

The signs in this case (cloudy cornea, marked decrease in serum …) are typical of ***fish eye disease.*** (Schmidt et al., 1994)

We describe a case of ***fish-eye disease*** *… where the clinical features and visual function were investigated.*

Bilateral corneal opacity is a hallmark clinical feature of ***Fish-eye disease*** … (Kanai et al., 2018)

We have identified the molecular defect in two siblings presenting with classical clinical and biochemical features of ***Fish Eye disease****…*

Two phenotypically distinct syndromes of LCAT deficiency have been reported in the literature: classic LCAT deficiency and ***Fish Eye disease*** … (Klein et al., 1993)

Speaking of facial anomalies, the metaphorical construct ***dog nose*** shall also be mentioned. The term is used to refer to an endemic in West Africa and is characterised by a symmetric swelling produced on each side of the nose reminiscent of a dog nose anatomy ("Dog nose", 2012).

Lateral to the nose are cheeks and one of the disorders seen in a form of a rash on cheeks is called ***butterfly eruption, butterfly patch*** or ***butterfly rash***. This is a facial skin condition present in several disorders and manifests in the form of a scaling lesion on bilateral cheeks and nose, resembling butterfly wings in form (Halprin, 1966, Dreizen, 1991). There are also anomalies affecting the mouth and two of these disorders are named a ***carp mouth*** and a ***tapir mouth,*** where the former displays a mouth with a downturn of the corners. The second term - tapir mouth - describes

protrusion of the lips due to weakness of a facial muscle, which controls movements of the mouth and lips, and if weakened, may cause difficulty in pursing the lips (Mul et al., 2016, Orbicularis oris, 2018). For the present, the above list of zoomorphic metaphors is not conclusive and there always exists room for further exploration in search of metaphoric units, which are at play in everyday clinical practice.

Conclusion

The present article and the research conducted therein was an attempt to identify the zoomorphic metaphors, which are most widely used in a clinical setting specifically for purposes of naming certain facial anomalies. In addition, the outcomes of this research illustrate that metaphors are central to scientific reasoning and thought. From medical perspective, metaphors intelligibly involve key features of a novel clinical finding or diagnosis. Last, but not least, physician's or clinician's imaginative leap stimulates associative perceptions whereby the generated metaphors aid in prompt recognition of clinical signs and facilitate understanding of the clinical picture of a disease, deformity, or disorder.

Notes

1 Cambridge Dictionary defines "in vivo" as "happening or existing inside a living body" as opposed to "in vitro", which is defined as "happening outside the body in artificial conditions, often in a test tube" (https://dictionary.cambridge.org/dictionary/english/in-vivo). In our article, "in vivo" symbolises that physician is 'intertwined' with the natural environment. He practices medicine inside a 'natural' real-life setting, rather than in some remote place confined to himself only.

2 Merriam-Webster Dictionary defines "zoomorphic" as (1) having the form of an animal, (2) of, relating to, or being a deity conceived of in animal form or with animal attributes. The etymology and history section detail that 'z*oo*- (or *zo*-) derives from the Greek word *zōion*, meaning "animal," and -*morph* comes from the Greek *morphē,* meaning "form." The adjective *zoomorphic* was first used in English to describe something that resembles an animal in 1872 (https://www.merriam-webster.com/dictionary/zoomorphic).

References

Bleakley, A.D. (2017). *Thinking with metaphors in medicine: The state of the art.* Abingdon, Oxon New York, NY: Routledge/Taylor & Francis Group.

Fortuine, R. (2000). *The Words of Medicine: Sources, Meanings, and Delights.* Springfield: Charles C Thomas Pub Ltd.

Gibbs, R.W. (1994). *The poetics of mind: Figurative thought, language, and understanding.* Cambridge: CUP.

Lakoff, G., & Johnson, M. (2003). *Metaphors we live by.* London, The University of Chicago Press.

Locke, J. (2007). *An essay concerning uuman Understanding. Book III: Words.* Retrieved January 26, 2021, from https://www.earlymodern texts.com/assets/pdfs/ locke1690 book3.pdf

Maier B., & Shibles W.A. (2011). *The philosophy and practice of Medicine and Bioethics: A naturalistic-humanistic approach.* Netherlands: Springer.

Niebert, K., & Gropengiesser, H. (2015). Understanding starts in the mesocosm: conceptual metaphor as a framework for external representations in science teaching. *International Journal of Science Education.* http://dx.doi.org/10.1080/09500693.2015.1025310.

Ophuls, W. (2011). *Plato's revenge: Politics in the age of ecology*. Cambridge, Massachusetts, London, England: The MIT Press.

Richards, I.A. (1936). *The philosophy of rhetoric.* Oxford: OUP.

Valpy, F.E.J. (1828). *An etymological dictionary of the Latin language.* London: A.J. Valpy.

Van Rijn-van Tongeren, G. W. (1997). *Metaphors in medical texts.* Amsterdam: Rodopi.

Vickers, B. (1970). *Classical rhetoric in English poetry.* London: Macmillan and Co.

Waldrop, M.M. (1992). *Complexity: The emerging science at the edge of order and chaos.* New York: Simon & Schuster.

Sources of Data

Brown, D.N., Wieser, I., Wang, C., Dabaja, B.S., & Duvic, M. (2015). Leonine facies (LF) and mycosis fungoides (MF): A single-center

study and systematic review of the literature. *Journal of the American Academy of Dermatology*, *73*(6), 976–986. https://doi.org/10.10-16/j.jaad.2015.09.017

Capon, N.B. (1928). A case of Leontiasis Ossea (Diffuse osteitic form). *Archives of Disease in Childhood*, *3*(18), 285–291. https://doi.org/-10.1136/adc.3.18.285

Carlson, L. A., & Philipson, B. (1979). Fish-eye disease. A new familial condition with massive corneal opacities and dyslipoproteinaemia. *Lancet (London, England)*, *2*(8149), 922–924. Retrieved April 2020, from https://pubmed.ncbi.nlm.nih.gov/91022/

Cat eye syndrome. (n.d.) *National Center for Biotechnology Information, Genetic Testing Registry*. Retrieved from https://www.ncbi.nlm.-nih.gov/gtr/conditions/C0265493/

Dimkovic, N., Piscevic, V., Jankovic, A., & Djuric, P. (2015). Fatal uremic leontiasis ossea in long-lasting uncontrolled hyperparathyroidism: a case report. *Hippokratia*, *19*(3), 266–267. Retrieved May 2020, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4938477/

Dog nose. (n.d.) *Farlex Partner Medical Dictionary*. (2012). Retrieved from https://medical-dictionary.thefreedictionary.com/dog+nose

Dreizen, S. (1991). The butterfly rash and the malar flush. What diseases do these signs reflect? *Postgraduate medicine*, *89*(1), 225–234. https://doi.org/10.1080/00325481.1991.11700800

el-Sheikh, M.M., Medra, A.M., & Warda, M.H. (1996). Bird face deformity secondary to bilateral temporomandibular joint ankylosis. *Journal of cranio-maxillo-facial surgery: official publication of the European Association for Cranio-Maxillo-Facial Surgery*, *24* (2), 96–103. https://doi.org/10.1016/s1010-5182(96)80020-5

Gameiro, J., Duarte, I., Outerelo, C., & Lopes, J. A. (2019). Uremic lion face syndrome. *Jornal brasileiro de nefrologia: 'orgao oficial de Sociedades Brasileira e Latino-Americana de Nefrologia*, *41*(2), 304–305. https://doi.org/10.1590/2175-8239-JBN-2018-0198

Halprin, K.M. The "Butterfly" Eruption. *JAMA.* 1966;197(6):417. doi:10.1001/jama.1966.03110060091024

Jedraszak, G., Receveur, A., Andrieux, J., Mathieu-Dramard, M., Copin, H., & Morin, G. (2015). Severe psychomotor delay in a severe

presentation of cat-eye syndrome. *Case Reports in Genetics, 2015*. https://doi.org/10.1155/2015/943905

Jefferies, A. L., & Canadian Paediatric Society, Fetus and Newborn Committee (2012). Kangaroo care for the preterm infant and family. *Paediatrics & Child health*, *17*(3), 141–146. https://doi.org/10.1093/-pch/17.3.141

Kangaroo Care. (2020, June 29). *Cleveland Clinic.* Retrieved from https://my.clevelandclinic.org/health/treatments/12578-kangaroo-care

Kanai, M., Koh, S., Masuda, D., Koseki, M., & Nishida, K. (2018). Clinical features and visual function in a patient with Fish-eye disease: Quantitative measurements and optical coherence tomography. *American Journal of Ophthalmology Case Reports*, *10*, 137–141. https://doi.org/10.1016/j.ajoc.2018.02.016

Kaneyama, K., Segami, N., & Hatta, T. (2008). Congenital deformities and developmental abnormalities of the mandibular condyle in the temporomandibular joint. *Congenital Anomalies*, *48*(3), 118–125. https://doi.org/10.1111/j.1741-4520.2008.00191.x

Kasper, D.L., Fauci, A.S., Hauser, S.L., Longo, D.L., Jameson, J.L., &Loscalzo, J. (2015). *Harrison's Principles of Internal Medicine, 19th edition.* New York: McGraw Hill Education, 2770.

Klein, H.G., Santamarina-Fojo, S., Duverger, N., Clerc, M., Dumon, M.F., Albers, J.J., Marcovina, S., & Brewer, H.B., Jr (1993). Fish eye syndrome: a molecular defect in the lecithin-cholesterol acyltransferase (LCAT) gene associated with normal alpha-LCAT-specific activity. Implications for classification and prognosis. *The Journal of Clinical Investigation*, *92* (1), 479–485. https://doi.org/-10.1172/JCI116591

Kostandy, R. R., Ludington-Hoe, S. M., Cong, X., Abouelfettoh, A., Bronson, C., Stankus, A., & Jarrell, J. R. (2008). Kangaroo care (skin contact) reduces crying response to pain in preterm neonates: pilot results. *Pain Management Nursing: Official Journal of the American Society of Pain Management Nurses*, *9*(2), 55–65. https://doi.org/-10.1016/j.pmn.2007.11.004

Kuivenhoven, J.A., Pritchard, H., Hill, J., Frohlich, J., Assmann, G., & Kastelein, J. (1997). The molecular pathology of lecithin:cholesterol

acyltransferase (LCAT) deficiency syndromes. *Journal of Lipid Research*, *38*(2), 191–205.

Kuivenhoven, J.A., van Voorst tot Voorst, E.J., Wiebusch, H., Marcovina, S.M., Funke, H., Assmann, G., Pritchard, P.H., & Kastelein, J.J. (1995). A unique genetic and biochemical presentation of fish-eye disease. *The Journal of Clinical Investigation*, *96*(6), 2783–2791. https://doi.org/10.1172/JCI118348

Leontiasis ossea. (n.d.) *Radiopaedia.* Retrieved from https://radiopaedia.org/articles/leontiasis-ossea

Longdom. (n.d.) *Clinical Medicine.* Retrieved from https://www.longdom.org/scholarly/clinical-medicine-journals-articles-ppts-list-1773.html

Ludington-Hoe, S.M., Hosseini, R., & Torowicz, D.L. (2005). Skin-to-skin contact (Kangaroo Care) analgesia for preterm infant heel stick. *AACN Clinical Issues*, *16* (3), 373-387. https://doi.org/10.1097/00044067-200507000-00010

Maramattom B. V. (2006). Leontiasis ossea and post traumatic cervical cord contusion in polyostotic fibrous dysplasia. *Head & Face Medicine*, *2*, 24. https://doi.org/10.1186/1746-160X-2-24

Moore, K.L., Agur, A.M.R., Dalley, A.F. (2013). *Clinically Oriented Anatomy* (7th ed.). Lippincott Williams & Wilkins.

Mul, K., Lassche, S., Voermans, N. C., Padberg, G. W., Horlings, C. G., & van Engelen, B. G. (2016). What's in a name? The clinical features of facioscapulohumeral muscular dystrophy. *Practical Neurology*, *16*(3), 201–207. https://doi.org/10.1136/practneurol-2015-001353

Obwegeser, H.L., & Hadjianghelou, O. (1987). Two ways to correct bird-face deformity. *Oral Surgery, Oral Medicine, and Oral Pathology*, *64*(5), 507–518. https://doi.org/10.1016/0030-4220(87)90023-5

Orbicularis oris. (2018, January 21). *Healthline*, *Human body*, *Muscular system.* Retrieved from https://www.healthline.com/human-body-maps/orbicularis-oris-muscle#1

Osseus, ossea, osseum. (1982). *Latdict.* Retrieved from http://latin-dictionary.net/definition/ 28983/ osseus-ossea-osseum

Phillips, A.A., & Willcock, M.M. (1999). *Xenophon & Arrian on hunting with hounds.* Warminster, England: Aris & Phillips Ltd.

Purrunsing, Y., Zhang, J., Cui, Y., Liu, W., Xu, Y., Hong, X., Xing, C., Zha, X., & Wang, N. (2018). Sixty-two-year-old male suffering from

uremic leontiasis ossea caused by severe secondary hyperparathyroidism. *JBMR plus*, *2*(4), 240–245. https://doi.org/10.-1002/jbm4.10038

Rosa, R.F., Mombach, R., Zen, P.R., Graziadio, C., & Paskulin, G.A. (2010). Clinical characteristics of a sample of patients with cat eye syndrome. *Revista da Associacao Medica Brasileira (1992)*, *56*(4), 462–465. https://doi.org/10.1590/s0104-2302010000400021

Salaria, N., Sharma, N., Garg, U., Saluja, S.K., & Agarwal, R. (2015). Inflammatory septal nasal polyp. *Iranian Journal of Otorhinolaryngology*, *27*(81), 319–323.

Schmidt, H.H., Diekstall, F.F., Bojanovski, D., & Manns, M. P. (1994). Fischaugenkrankheit [Fish eye disease]. *Deutsche Medizinische Wochenschrift (1946)*, *119*(41), 1393–1396. https://doi.org/10.1055/s-2008-1058851

St. George's University. (2021, January 06). *The ultimate list of medical specialties and subspecialties.* Retrieved from https://www.sgu.edu/-blog/medical/ultimate-list-of-medical-specialties/

ԴԻՄԱՅԻՆ ԱՆՈՄԱԼԻԱՆԵՐԻ ԱԽՏՈՐՈՇՈՒՄՆԵՐ՝ ՁԵՎԱԿԵՐՊՎԱԾ ԶՈՈՄՈՐՖ ՓՈԽԱԲԵՐՈՒԹՅՈՒՆՆԵՐՈՎ

Ալինա Պետրոսյան

Բժշկագիտությունը առնչվում է յուրաքանչյուրի առողջությանը՝ մասնավորապես հիվանդությունների ախտորոշման, բուժման և կանխարգելման տեսանկյունից։ Հետևաբար, էապես կարևոր է, որ ախտաբանական վիճակների նկարագրությունները և կայացվող ախտորոշումները հնարավորինս ըմբռնելի լեզվականացվեն։ Այս առումով բժշկագիտության ոլորտի բառապաշարային ֆոնդը բավականին հագեցած է՝ ներառելով հունալատինահիմք տերմիններ և անգլերեն փոխաբերություններ։ Սույն աշխատանքի շրջանակում փորձ է արվում ուսումնասիրել, թե որոնք են բժշկագիտության ոլորտում փոխաբերություն գործածելու գլխավոր շարժառիթները։ Միևնույն ժամանակ վերլուծության են ենթարկվում լայն տարածում գտած զոոմորֆ այն փոխաբերությունները, որոնց շնորհիվ բժիշկներն ու կլինիցիստները լեզվա-

կանացնում են դիմային մի շարք անոմալիաների ախտորոշումներ:

Բանալի բառեր. *փոխաբերություն, բժշկություն, ախտորոշում, գոռմորֆիկ փոխաբերություն, դիմային անոմալիա, դեֆորմացիա, խանգարում:*