SECTION 16.
PHILOLOGY AND JOURNALISM

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MORPHOLOGICAL PATTERNS OF CARDIOVASCULAR TERMINOLOGY: A COMPREHENSIVE ANALYSIS OF AFFIXATION AND BLENDING PROCESSES

Summary. *This article explores the dynamic landscape of medical language, particularly within the cardio domain, influenced by technological advancements, scientific breakthroughs, and evolving patient demands. Rooted in the fundamental concept of morphology, which examines the structure and formation of words, the study delves into the morphological patterns shaping the terminology in cardiovascular medicine. The study focuses on morphological patterns, specifically affixation and blending, which contribute significantly to the creation of medical terms.*
Keywords: *morphology, cardiovascular, affixation, blending, terminology*

The landscape of medicine is continually expanding, driven by advancements in technology, scientific discoveries, and evolving patient needs. As the medical field progresses, so does its language, giving rise to a myriad of lexis related to cardio. This article seeks to explore the morphological patterns inherent in the formation of these words, providing a comprehensive analysis of the linguistic processes.

The term "morphology" first was coined by Johann Wolfgang von Goethe (1749–1832). Its etymology is Greek: "morph-" means "shape, form," and morphology is the study of form or forms. R. Lieber also defined morphology as the study of word formation, including the ways new words are coined [14]. According to M. Aronoff and K. Fudeman in linguistics morphology refers to the mental system involved in word formation or to the branch of linguistics that deals with words, their internal structure, and how they are formed [1].

Morphology, a fundamental branch of linguistics, explores the structure and formation of

words within a language. Morphological patterns, an integral aspect of this field, delve into the systematic rules governing the construction and alteration of words. These patterns govern how words are created, modified, and adapted to convey nuanced meanings, thereby playing a crucial role in shaping the richness and diversity of languages.

In this exploration of morphological patterns, we will delve into some types of morphological processes, namely affixation and blending which contribute to the dynamic nature of language.

In accordance with K. Van Goethem definition, affixation is the morphological process that consists of adding an affix (i.e., a bound morpheme) to a morphological base. Suffixes (i.e., bound morphemes following the base) and prefixes (i.e., bound morphemes preceding the base) are the most common affixes, with suffixation being more frequently recorded in the world's languages than prefixation [21].

N. Beliaeva states that blending is a type of word formation in which two or more words are merged into one so that the blended constituents are either clipped, or partially overlap [4]. M. Aronoff and K. Fudeman identify a morpheme as the smallest linguistic pieces with a grammatical function. It helps to investigate words, their internal structure, and how they are [1].

A comprehensive examination of twenty cardiovascular terms is presented, considering their morphological structures and corresponding definitions to enhance the comprehension of each term.

1. Cardiomegaly — when your heart is abnormally thick or overly stretched, becoming larger than usual, with difficulty pumping blood [24].

Formation:

Morpheme 1: Cardio- (meaning heart)

Morpheme 2: -megaly (meaning enlargement)

Morphological Structure: Affixation (prefix + suffix)

2. Atherosclerosis — hardening of the arteries, the thick tubes carrying blood from the heart) that is caused by a fatty substance building up inside the arteries [2].

Formation:

Morpheme 1: Athero- (meaning fatty deposit)

Morpheme 2: -sclerosis (meaning hardening)

Morphological Structure: Affixation (prefix + suffix)

3. Myocarditis — inflammation of the inner muscular layer of the heart, usually caused by a viral infection [16].

Formation:

Morpheme 1: Myo- (meaning muscle)

Morpheme 2: Cardio- (meaning heart)

Morpheme 3: -itis (meaning inflammation)

Morphological Structure: Affixation (prefix + prefix + suffix)

4. Endocardium — a thin serous membrane lining the cavities of the heart [12].

Formation:

Morpheme 1: Endo- (meaning inner)

Morpheme 2: Cardio- (meaning heart)

Morphological Structure: Affixation (prefix + prefix)

5. Pericarditis — swelling and irritation of the thin, saclike tissue surrounding the heart (pericardium) [18].

Formation:

Morpheme 1: Peri- (meaning around)

Morpheme 2: Cardio- (meaning heart)

Morpheme 3: -itis (meaning inflammation)

Morphological Structure: Affixation (prefix + prefix + suffix)

6. Cardiologist — a doctor who specializes in treating diseases of the heart [6].

Formation:
Morpheme 1: Cardio- (meaning heart)
Morpheme 2: -logist (meaning specialist)
Morphological Structure: Affixation (prefix + suffix)
7. Arrhythmia — is a problem with the rate or rhythm of a heartbeat [23].
Formation:
Morpheme 1: A- (meaning without)
Morpheme 2: -rhythmia (meaning rhythm)
Morphological Structure: Affixation (prefix + suffix)
8. Cardiopulmonary — of or relating to the heart and lungs [10].
Formation:
Morpheme 1: Cardio- (meaning heart)
Morpheme 2: Pulmonary (meaning lungs)
Morphological Structure: Affixation (prefix + root word)
9. Angioplasty — a procedure that creates more space inside an artery that has plaque built up inside it [7].
Formation:
Morpheme 1: Angio- (meaning vessel)
Morpheme 2: -plasty (meaning molding or forming)
Morphological Structure: Affixation (prefix + suffix)
10. Vasodilation — the situation of blood vessels (= the tubes that carry blood) becoming wider [22].
Formation:
Morpheme 1: Vaso- (meaning vessel)
Morpheme 2: -dilation (meaning widening)
Morphological Structure: Affixation (prefix + suffix)
11. Coronary Artery — The right and left coronary arteries supply blood to a heart [8].
Formation:
Morpheme 1: Coronary (meaning related to the heart)
Morpheme 2: Artery (meaning blood vessel)
Morphological Structure: Blending (two root words)
12. Atrial Fibrillation — is an irregular and often very rapid heart rhythm that can lead to blood clots in the heart [3].
Formation:
Morpheme 1: Atrial (pertaining to the atria)
Morpheme 2: Fibrillation (rapid, irregular contractions)
Morphological Structure: Blending (two root words)
13. Cardiotonic — tending to increase the tonus of heart muscle [11].
Formation:
Morpheme 1: Cardio- (meaning heart)
Morpheme 2: -tonic (meaning strengthening)
Morphological Structure: Affixation (prefix + suffix)
14. Thrombosis — is a blood clot within blood vessels that limits the flow of blood [20].
Formation:
Morpheme 1: Thrombo- (meaning clot)
Morpheme 2: -sis (meaning condition)
Morphological Structure: Affixation (prefix + suffix)
15. Myocardial Infarction — is a deadly medical emergency where your heart muscle begins to die because it isn't getting enough blood flow [9].
Formation:

Morpheme 1: Myo- (meaning muscle)
Morpheme 2: Cardio- (meaning heart)
Morpheme 3: -al (meaning related to)
Morpheme 4: Infarction (meaning tissue death)
Morphological Structure: Affixation (prefix + prefix + suffix + root word)

16. Endovascular — (of a surgical procedure) performed by the insertion of a catheter into a blood vessel [13].

Formation:
Morpheme 1: Endo- (meaning within)
Morpheme 2: Vascular (meaning blood vessels)
Morphological Structure: Affixation (prefix + root word)

17. Cardiogenic Shock — is a life-threatening condition in which a heart suddenly can't pump enough blood to meet a body's needs [5].

Formation:
Morpheme 1: Cardio- (meaning heart)
Morpheme 2: -genic (meaning produced by)
Morpheme 3: Shock (meaning inadequate blood flow)
Morphological Structure: Affixation (prefix + suffix + root word)

18. Ventriculotomy — surgical incision of a ventricle (as of the heart) [15].

Formation:
Morpheme 1: Ventrículo- (meaning ventricle)
Morpheme 2: -tomy (meaning incision)
Morphological Structure: Affixation (prefix + suffix)

19. Pericardiocentesis — is a procedure done to remove fluid that has built up in the sac around the heart (pericardium) [18].

Formation:
Morpheme 1: Peri- (meaning around)
Morpheme 2: Cardio- (meaning heart)
Morpheme 3: -centesis (meaning surgical puncture)
Morphological Structure: Affixation (prefix + prefix + suffix)

20. Arteriosclerosis — abnormal thickening and hardening of the walls of arteries, with a resulting loss of elasticity [19].

Formation:
Morpheme 1: Arterio- (meaning artery)
Morpheme 2: -sclerosis (meaning hardening)
Morphological Structure: Affixation (prefix + suffix)

The examined terms display diverse morphological structures, with affixation (utilizing prefixes and suffixes) observed in 18 cases, while blending (fusion of two root words) is present in 2 instances. This observation underscores the predominance of affixation as a more frequently employed and productive mechanism for generating cardio terms, in contrast to the relatively infrequent use of blending.

In conclusion, this study delves into the intricate world of cardiovascular terminology, emphasizing the indispensable role of morphology in shaping the evolving language of medicine. The continual expansion of medical knowledge, driven by technological advancements and scientific discoveries, necessitates a nuanced understanding of the morphological patterns governing the formation of medical terms. The exploration of affixation and blending processes in the creation of cardiovascular terminology reveals a dynamic interplay of linguistic elements, contributing to the precision and specificity required in the medical field.

The prevailing morphological patterns observed in the analyzed cardiovascular terms predominantly involve affixation, where prefixes and suffixes are strategically added to morphological bases. This affixation process imparts specific meanings to the terms. While

blending, as seen in terms like Coronary Artery and Atrial Fibrillation, plays a role in certain instances, affixation emerges as the primary morphological pattern shaping the majority of cardiovascular terms (90% of the terms analyzed).

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