

DENTAL MEDICAL TERMINOLOGY- PRINCIPLES AND PRACTICES

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Abstract: The development of terminology is a long and difficult process, from its very beginning scientists of all fields have been trying to work out a unified system for term formation which would apply to all sciences and fields of science. The process was initiated by German and Russian scholars who established the first principles of the General Terminological Theory (GTT) and their goal was to create an unambiguous terminology which would enhance professional and scientific communication. The issue of internationalization was brought up and was one of the guiding principles in terminology formation. In medical terminology this issue is partly resolved due to the Greek and Latin origins of terms and concepts which are used in most countries throughout the world. Since English borrows most of its terms from Latin and Greek and since it has come to be the international language in the medical field, this has made scientific communication easier. However, these terms refer mainly to anatomical and clinical terms and do not include the new terminological entities which occur due to the constant development of the field. The present article aims at conducting a contrastive linguistic study of dental medical terminology and exploring the differences and similarities in English and Bulgarian terminology. The materials used are a clinical notebook used in the education of dental medical students and various texts from the field of dentistry. Terminology discussed encompasses both anatomical and clinical entities and studies the origins, the manner of term formation in both languages and the manner in which English dental medical terminology influences the Bulgarian one. The paper also looks into the lay and specialized terms in both languages aiming at revealing the motivation behind the usage and formation of these terms. Terminology is classified according to the manner of its formation in the source language- English and the changes which it undergoes in being translated or transliterated into the other language- Bulgarian. The terms are discussed from the point of view of types of word formation such as derivation, compounding, which prevail in the already established terms which derive from Greek and Latin, and the forming of multi-word phrases which prevails nowadays and leads to the use of abbreviations. What is interesting is the use of the latter in contemporary medical literature in Bulgarian and the manner in which nouns, verbs etc. are directly borrowed from English and transliterated although there is a perfectly appropriate Bulgarian translation of the term. The constant development of new medical terms and their usage in other languages is an ongoing and continuous process and it presents a challenge to the scientists who use it, the translators who work with texts and linguists who are interested in the principles of language development.

Keywords: medical terminology, dental medicine, terminological theory, Bulgarian, English

Terminology is a separate branch of each language due to its specificities and special characteristics. The need for developing a unified corpus of terminology in science originated in the 18th and 19th century when scientist realized the need to set the rules for the formation of terms that would not only serve their own needs but would be used throughout the scientific world. The internationalization of terminology and the mechanisms used to form terms was necessary due to the flourishing of science. The fathers of modern terminology are considered to be E. Wüster (Austria) and D.S. Lotte (Soviet School)³¹– both of them elaborated on engineering terminology. However, they set the beginning of the future systematization and organisation of terms and terminology in the broad spectrum of fields.

The aim of the General Terminological Theory (GTT) which Wüster developed is based on the notion that terminology is different from general language because of its “monsemic reference between terms and concepts”³² i. e. terms refer to only one entity and have only a single meaning while general words can refer to a number of things and have multiple meanings. The aim of Wüster was to create an unambiguous terminology which would make terms efficient in scientific communication. Based on his experience as an engineer, he dealt mainly with technical terms and devised a dictionary of basic concepts. However, the drawbacks of this system arise from the fact that terminology is not and cannot be so limited, on the contrary, it is characterized by a great

³¹ Cabré-Castellvi MT, Terminology: Theory, methods and applications, John Benjamin’s publishing company, 1999. .p.2

³² Faber P. (ed.). A Cognitive Linguistics View of Terminology and Specialized Language. Berlin, Boston: De Gruyter Mouton. – 2012.-p. 17

variety in meaning and multiple spheres of usage.³³ With the development of GTT, several notions were introduced in the concept of terminology. These include synonymy of terms, which is allowed to a certain extent, phraseology, the spoken aspect of terminology etc. But with a view to the basic principle of international standardisation principles such as priority of international forms for designation, limitation to written forms, planning etc. have been preserved.

The internationalisation of terminology, of a language, of a language for specific purposes is an on-going process which is influenced by a variety of factors. First of all, it depends on the evolution and development of a society- whether it is open to new influences or not. Secondly, it depends on the development of the respective language spoken in the specific country or region- e.g. whether it accepts borrowings and the duration of their usage. However, there are fields such as medicine and dental medicine in which, despite the enrichment and development of a language, the language of the source terminology influences and determines the notions of the basic terms- i. e. Latin and Greek as source languages give the basic concepts and rules for formation of medical terms which are translated or transliterated in the target language thus forming an international medical vocabulary. This, of course is due to the fact that medicine was established and developed as a science in the Greek and Roman Empires. But still, some languages have preserved the Latin or Greek nature of medical terminology while others have invented and devised their own terms. Some of principles of GTT apply to their terminological corpuses in a lesser or greater extent.

Terminology formation in medicine and dental medicine is characterized by two types of terms: 1. Specific and standardized terms derived from Latin and Greek and 2. New terminology which develops with the development of the medical field and the different specialties in which it is subdivided.³⁴ Due to this constant development and the invention of new devices, discovery of new diseases etc. it has been impossible to devise a unified international medical terminology. And it is even more difficult to translate or transliterate medical terms into another language. The result is a chaotic approach to medical terminology which consists of the usage of borrowed terms which are partially or fully translated and are part of a set corpus of medical terminology and newly-introduced terms which are used with their original names- either transliterated into the respective language or even used in English.

Wulf (2004) claims that in the past medical terms were derived from Latin and Greek, while nowadays common English words are used to denote medical procedures and equipment- e.g. bypass, inlay, screening. Those new terms are directly borrowed into the medical terminology of non-English-speaking countries and are either translated or directly imported. This is the case in Bulgarian medical terminology and dental terminology e.g. stent is directly imported and used as “стенг” in Bulgarian (transliteration), “sealant” is “силанг” etc. The present paper is to conduct a contrastive research on dental medical terminology comparing and contrasting English and Bulgarian terms. Terminology is classified according to the manner of its formation in the source language – English and the changes which it undergoes in being translated or transliterated into the target language- Bulgarian. The terms are discussed from the point of view of types of word formation such as derivation, compounding, which prevail in the already established terms which derive from Greek and Latin, and the forming of multi-word phrases which prevails nowadays and leads to the use of abbreviations. The terms are derived from contemporary dental medical literature in Bulgarian- and the manner in which nouns, verbs etc. are directly borrowed from English and transliterated although in some of them there is a perfectly appropriate Bulgarian translation of the term.

	English term	Bulgarian term
Derivation <i>nouns</i>	maxillectomy obturator monomer photopolymer polymerization disposition dental prosthesis/ denture inlay/onlay/pinlay liner veneer	максилектомия обтуратор мономер фотополимер полимеризация диспозиция зъбна протеза инлей/онлей/пинлей лайнер фасета

³³ Cabré-Castellvi, M.T., Theories of Terminology. Their description, prescription and explanation, in Terminology John Benjamins Publishing Company, 9(2)/2003, p. 163–199).

³⁴ Džuganova, B. (2013). English medical terminology – different ways of forming medical terms. JAHR, 4(7), 55-69. Available at <https://hrcak.srce.hr/110259>

<i>adjectives</i>	subtotal postresectional intraoral interalveolar affected	субтотален пострезекционен интраорален интералвеоларен афектиран/засегнат
<i>verbs</i>	to initiate to diagnose to arrest to induce to differentiate to produce to extract to monitor	инициирам/ започвам, възниквам диагностицирам стационаирам индуцирам/предизвиквам диференцирам/различавам продуцирам/произвеждам екстрахирам/изваждам мониторирам/наблюдавам
Compounding	carious lesion maxillary tuber maxillary resection light-activated resin impression tray palatal plate buccal gingival connective tissue alveolar ridge stress-induced parafunctions irradiating/referred pain osteointegrated implant	кариозна лезия максиларен тубер максиларна резекция фотополимеризираща смола индивидуални лъжици небцеви пластинки букална гингивална съединителна тъкан алвеоларен гребен стрес-индуцирани парафункции иррадираща/ разпространяваща се болка остеоинтегриран имплант
Multi-word phrases	Craniomandibular Disorder (CMD) Molar-incisor Hypomineralisation (MIH) Dried- freeze Bone Allograft (DFBA) Intraoral Dental Implants (IDI) Temporomandibular Disorder (TMD) Myofascial Pain Syndrome (MFBS)	Краниомандибуларна дисфункция (КМД) Моларноинцизивна хипоминаерализация (МИХ) Замразен изсушен костозаместващ алографт (DFBA/ЗИКА) Интраорални дентални имплантати (ИДИ) Темпоромандибуларно заболяване (ТМЗ) Синдром на миофасциалната болка (МФСБ)

It is worth noting that Bulgarian medical terminology is still using Latin terms in clinical practice (clinical examination) instead of the English ones. E. g. “anamneis familiae” instead of ‘family history’, ‘status generalis’ instead of ‘general condition’, ‘status intraoralis’- intraoral condition etc. Yet the authors preferred ‘dental status’ – the English term instead of the Latin one.

The presented terminology is only a short list of the terms used in dentistry but it represents the main trends in this field. There are several conclusions to be made from the examples given.

1. As it has already been mentioned in the present paper, the communicative goal of terminology is to preserve in the greatest extent the terms no matter the language. To serve this purpose most of the newly adopted terms - nouns in Bulgarian are directly transliterated – obturator- обтуратор, monomer- мономер, inlay- инлей. And with this ‘derivational’ group the origin of terms does not seem to be of great importance- terms from Latin and Greek origin-e.g. photopolymer- фотополимер, along with terms from purely English origin- e.g. liner- лайнер follow the principle of terminology formation and preserve the monosemic nature of the terms used. Yet there are terminological nouns of different origin –e.g. veneer (from German- *furnieren* to veneer, from Old French *fournir* to furnish) which in Bulgarian have Latin origin – фасета (Lat. A segment of the whole).

Adjectives, on the other hand, adopt the Bulgarian adjectival suffixes which are positioned right after the English ones- intraoral- интраорален (the English adjectival suffix ‘-al’ is followed by the Bulgarian ‘ен’).

Verbs, on the other hand, can be used in two possible ways depending on the purpose and user. The directly borrowed verbs in Bulgarian (e.g. инициирам, диференцирам etc.) are part of strictly medical terminology and are mainly used in literature and in communication between specialists and their preserve the monosemic aspect of terminology to denote a specific action in the field of medicine. Their translated versions (започвам, предизвиквам и различавам, respectively) are also sometimes used by

specialists in medical literature -research articles, textbooks etc. but they are lay terms which are mainly used by students and in communication between student-lecturer, patient- doctor.

2. Terms formed by compounding are either formed by two borrowed terms –e.g. carious lesion- кариозна лезия with the addition of a Bulgarian adjectival ending ‘на’ (in this case) and the suffix of the noun for the respective gender and number (‘ion’ turns into ‘ия’ – the feminine suffix for the singular), or a combination of a borrowed term and a translation – e.g. alveolar ridge- алвеоларен гребен- the Latin alveolar is preserved with the addition of an adjectival suffix ‘ен’, while the noun ridge is translated as ‘гребен’. There is a third combination formed by the use of compounding in which the term is fully translated – e.g. palatal plate- небцеви пластинки.
3. Term formation in multi-word phrases is characterized by full matching of the source term and the usage in Bulgarian- e.g. Molar-incisor Hypomineralisation (MIH)- Моларноинцизивна хипоминариализация (МИХ), partial one- e.g. Craniomandibular Disorder (CMD) in which the noun ‘disorder’ is translated as ‘дисфункция’ as it is used in Bulgarian. The same word (disorder) can also be transferred as ‘заболяване’ in Temporomandibular Disorder (TMD) - Темпоромандибуларно заболяване (ТМЗ).

Another point worth mentioning is the word order which influences the Bulgarian term and which differs from the English one. In English adjectives are usually found before the noun no matter their number and the adverbs they are attributed by. In Bulgarian though, the noun sometimes comes before the adjective and is followed by the possessive preposition ‘на’ and a noun e.g. Myofascial Pain Syndrome (MFBS) - Синдром на миофасциалната болка (СМФБ).

The use of such multi-word phrases in Bulgarian is peculiar- they are almost always abbreviated but the abbreviations used can be in English or in Bulgarian – the names of chemicals, enzymes, cells, tests etc. are almost always used with the English variant – e.g. GFAP (Glial fibrillary acidic protein) instead of ГФАП; PARP (Poly (ADP-ribose) polymerase) инхибитори, instead of ПАРП инхибитори.

We can say that terminology is influenced both by the strict rules of term formation and the constant development and influences of the practical aspect of terminology-its usage. The theoretical and practical are intertwined, the preferences of the people who communicate through this terminology and the linguistic laws for term formation are constantly developing, they ‘live’ their own life, just as any language is not a static entity but a constantly developing ‘organism’.

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