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**THE TERMINOLOGY OF PAEDIATRIC DENTISTRY- A CONTRASTIVE ENGLISH-BULGARIAN STUDY**

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**Abstract:** The goal of terminology from its very beginning, and especially that of specialized medical or technical terminology, has been to establish and facilitate professional communication. The development of terminology and its theory 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 ‘fathers’ of the contemporary General Terminological Theory (GTT) were the Austrian scholar Wüster and the Russian scholar Lotte, both working on terminology of engineering, 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 the terminology of paediatric dentistry and exploring the differences and similarities in English and Bulgarian languages. The materials used are textbooks from the field of paediatric dentistry used in the education of university students at Medical University-Plovdiv. 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. 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. 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, terminology of paediatric dentistry, 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)<sup>1</sup> – 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 “monosemic reference between terms and concepts”<sup>2</sup> 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 variety in meaning and multiple spheres of usage.<sup>3</sup> 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<sup>4</sup>. 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. spreader, scaler, gutapercha. 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. aligner is directly imported and used as “алайнер” in Bulgarian (transliteration), “sealant” is “силант” 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
<b>Derivation</b> <i>nouns</i>	periodontium	периодонциум/пародонт
	obturation	обтуриране
	occlusion	оклузия
	irrigation	иригация
	polymerization	полимеризация
	disposition	диспозиция
	liner	лайнер/подложка
	apexogenesis	арехигенезис(Lat.)/апексгенезис
	apexification	арехификацио (Lat.)/апексификацио
	exacerbation	екзацербация
	vitality	виталитет
	extirpation	екстирпация
	cavity	кавитет
	gutapercha	гутаперка
contamination	контаминация/замърсяване	
dentine bridge	дентинов мост	

	obliteration application exposure transparency tooth mousse spreader scaler	облитерация апликация експозиция/оголване транспарентност tooth mousse (паста) спредер скалер
<i>adjectives</i>	reparative (dentin) postresectional intact interalveolar affected arrested (caries) acute (caries) rampant caries	Репаративен (възстановителен) дентин пострезекционен интактен интералвеоларен афектиран/засегнат стационариран (кариес) акутен/остър кариес “флуориден” кариес/ рампантен кариес/ caries fluidis
<b>Compounding</b>	carious lesion maxillary tuber maxillary resection light-activated resin impression trays palatal plate buccal gingival connective tissue alveolar ridge stress-induced parafunctions irradiating/referred pain connective tissue attachment  clear aligners tooth eruption bitewings radiography	кариозна лезия максиларен тубер максиларна резекция фотополимеризираща смола индивидуални лъжици/”капи” небцеви пластинки букална гингивална съединителна тъкан алвеоларен гребен стрес-индуцирани парафункции иррадираща/ разпространяваща се болка съединителнотъканно прикрепване/ съединително-тъканен аташман прозрачни шини /алайнери зъбен пробив “bitewings” рентгенография
<b>Multi-word phrases</b>	Craniomandibular Disorder (CMD) Molar-incisor Hypomineralisation (MIH)  Temporomandibular Disorder (TMD) Fibre-optic Transillumination (FOTI) Digital Fibre-optic Transillumination (DIFOTI) Quality Laser Fluorescence (QLF)	Краниомандибуларна дисфункция (КМД) Моларноинцизивна хипоминаерализация (МИХ)  Темпоромандибуларно заболяване (ТМЗ) фиброоптична трансилуминация (FOTI) дигитална фиброоптична трансилуминация (DIFOTI) количествена лазерна флуоресценция (QLF)

It is worth noting that Bulgarian medical terminology is still using Latin terms in clinical practice instead of the English ones. E. g. “apexigenesis” instead of “apexogenesis”, “apexificatio” instead of “apexification” “Caries superficialis” instead of ‘superficial caries’, ‘macula cariosa’ instead of ‘demineralization’, ‘Pulpitis chronica ulcerosa’- ulcerative chronic pulpitis etc. In this aspect the Bulgarian terminology complies with Latin terminology preserving it in its original form while the English terminology uses its own suffixes.

The presented terminology is only a short list of the terms used in paediatric 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 new-ly adopted terms - nouns in Bulgarian are directly transliterated – spreader-спредер, spreader-спредер. 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 synonymy in terminology is observed in its greatest in this section- the terms deriving from

latin have the translated version as a synonym in Bulgarian e.g. contamination- контаминация, замърсяване etc. The first borrowed term is used mainly in scientific literature in the communication between specialists while the other one – in the teaching of students and in communication with patients.

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

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’. Another combination is exemplified by the term “impression trays”- the term in Bulgarian is not translated – “индивидуални лъжици” and it is borrowed in its synonym – “капи” which is a Russian borrowing.
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 хипоминерализация (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 – e.g. дигитална фиброоптична трансилуминация (DIFOTI), количествена лазерна флуоресценция (QLF). The fact worth mentioning is that abbreviations are most commonly used with their English abbreviations and not their Bulgarian equivalents which may be explained by the specialists’ ‘habit’ of using the abbreviations in the language they communicate with international colleagues or reading specialized literature in English.

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’.

## REFERENCES

- Cabré-Castellvi, M.T., *Theories of Terminology. Their description, prescription and explanation, in Terminology*, John Benjamins Publishing Company, 9(2)/2003, p. 163–199.
- Cabré Castellví M. T., *Terminology: Theory, methods and applications*, John Benjamin’s publishing company, 1999, p.2
- Faber P. (ed.). *A Cognitive Linguistics View of Terminology and Specialized Language*. Berlin, Boston: De Gruyter Mouton. – 2012.-p. 17
- Džuganova, B. *English medical terminology – different ways of forming medical terms. JAHR*, 4(7), 55-69. Available at <https://hrcak.srce.hr/110259> (2013).
- Mathewson, R. Primosch R. *Fundamentals of Pediatric Dentistry- Quintessence Publishing* , 1995
- Vutov M., *Paediatric dentistry, MF*, Sofia, 1998
- Wulff, H. R.. *The language of medicine*. *Journal of the Royal Society of Medicine*, 97(4), 187–188. (2004)