



Minireview

Terminologia Anatomica after 17 years: Inconsistencies, mistakes and new proposals

David Kachlik^{a,b}, Vladimir Musil^{c,d,*}, Vaclav Baca^{a,b}^a Department of Anatomy, Third Faculty of Medicine, Charles University in Prague, Prague, Czech Republic^b Department of Health Care Studies, College of Polytechnics Jihlava, Jihlava, Czech Republic^c Centre of Scientific Information, Third Faculty of Medicine, Charles University in Prague, Prague, Czech Republic^d Institute of Information Studies and Librarianship, Faculty of Arts, Charles University in Prague, Prague, Czech Republic

ARTICLE INFO

Article history:

Received 5 February 2015

Received in revised form 20 April 2015

Accepted 21 April 2015

Keywords:

Anatomy

Terminology

Nomenclature

ABSTRACT

The article deals with our experience of Terminologia Anatomica (TA) in fields of education (of systemic and topographic anatomy) and clinical medicine (teaching of clinical anatomy and courses for young physicians in endoscopy). The anatomical nomenclature in Latin has been official for 120 years and its latest version for 17 years. Its main weak points should be discussed in public (or at least the discussion should be provoked), which is the reason for publishing the following findings and ensuing proposals. They are classified with seven groups: mistakes in TA, discrepancies in TA, multiplication of terms, synonyms in TA, identical terms for different structures, too long terms and missing terms in TA. The last group comprises missing terms in systemic anatomy, clinical anatomy, a paucity of terms in variant anatomy, in locomotion system and in topographic anatomy. Several attempts to draw attention to these have been made by the publication of inaccuracies in Nomina Anatomica and TA but this article summarizes and reviews current situation, emphasizing the weak points of the TA and brings several proposals and suggestions for further discussion.

© 2015 Elsevier GmbH. All rights reserved.

1. Introduction

Terminology serves as a unique tool of communication both within and outside any specific scientific field. To enable a clear and unconfused communication, a nomenclature is usually developed in the frame of the terminology. As anatomy can be considered the first exact medical field, its terminology is both very old and serves as a principal for other medical disciplines (theoretical and clinical). Its origin goes back to the ancient period, more than two thousand five hundred years ago, to the Greek and Latin languages. But the current anatomical nomenclature is much younger, dating back to 1895, when the Anatomische Gesellschaft (Society of German-speaking anatomists) issued the first Latin anatomical nomenclature at the Society meeting in Basel in Switzerland, hence termed the Basiliensia Nomina Anatomica (B. N. A., BNA). Although it was not accepted worldwide (mainly not in France and Great

Britain), it served as a basis and an impulse for further extensions and newer editions (His, 1895; Kachlik et al., 2008a).

Finally, the last revision of the Latin anatomical nomenclature was created by the Federative Committee on Anatomical Terminology (FCAT) and then approved by the International Federation of Associations of Anatomists (IFAA) as the only valid Latin official nomenclature of anatomy in 1997. It was issued a year later and named Terminologia Anatomica (TA) (FCAT, 1998). The anatomical nomenclature has been official for 120 years in Latin and in its latest version for 17 years.

The summarized amount of items listed in the Terminologia Anatomica is 7635. Some of them have one (*arteria fibularis*; *arteria peronea* or *valva atrioventricularis dextra*; *valva tricuspidalis*) or rarely two synonyms (*myelencephalon*; *medulla oblongata*; *bulbus*). In such instances, the first one was largely recommended by the FCAT. Comparison of the total amount of Latin items in the older nomenclatures – BNA (4311), INA (4329), PNA (4822), TA (7635) – shows a trend of extension and stabilization of the nomenclature going hand-in-hand with the research progress (Kachlik et al., 2008a).

The article deals with our experience of Terminologia Anatomica in fields of education (of systemic and topographic anatomy) and clinical medicine (teaching of clinical anatomy and courses

* Corresponding author at: Third Faculty of Medicine, Charles University in Prague, Centre of Scientific Information, Ruská 87, 100 00 Prague 10, Czech Republic. Tel.: +420 267102532.

E-mail addresses: david.kachlik@lf3.cuni.cz (D. Kachlik), vladimir.musil@lf3.cuni.cz (V. Musil), vaclav.baca@lf3.cuni.cz (V. Baca).

for young physicians in endoscopy). The weakest point of the whole project was the path of accessibility. Although the book was issued together with a CD, its promotion was very poor, both by Thieme publisher and IFAA. Moreover, if the anatomical nomenclature (and its revision) should be spread to all scientists, the effort has to be maximal, based on free access to the database. This mistake was later corrected with the announcement of a new terminological organ – Federal International Programme on Anatomical Terminology (FIPAT) – in 2009 which is the successor of FCAT (later renamed to Federative International Committee on Anatomical Terminology in 2004 (FICAT)). The effort of FIPAT led to free access to the nomenclature at: <http://www.unifr.ch/ifaa>

The period from 1998 to the present has revealed several other weak points, which resulted in FIPAT's activity to redress the Terminologia Anatomica. Commissions dealing with certain topics were established and TA can be changed and completed by help of all morphologists who feel interest and would like to be involved, at <http://www.ifaa.net/index.php/fipat/change-fipat/fipat-discussion-forum>

The American Association of Clinical Anatomists has also contributed a bit to the Clinical Anatomical Terminology at <https://ilios.ttuhsu.edu/AnatomicalTerminology/>. This website indicates several suggested additions or corrections.

However, some of the main weak points should be also discussed in public (or at least the discussion should be provoked), which is the reason for publishing the following findings and ensuing proposals. The proposals are not usually supported by citations while the authors consider them anatomically clear and well known, often stated in fundamental anatomical or clinical textbooks and atlases. They are classified as mistakes in TA, discrepancies in TA, multiplication of terms, synonyms in TA, identical terms for different structures, too long terms and missing terms in TA.

The official terms of the Terminologia Anatomica, used in this article, are written in *Italics*; the unofficial, old, obsolete or incorrect terms are in normal font and with quotation marks. The suggested changes and proposals for the new edition are written in bold *italics*.

We are dealing with 7 following groups of incorrect or inaccurate terms presented in TA.

2. Group 1—Mistakes in Terminologia Anatomica

Mistakes in the nomenclature can be classified as grammatical and semantic.

2.1. Mistakes in grammar

The proper and correct use of Latin grammar is a fundamental feature of the nomenclature. Several simplifications were introduced to enable the pronunciation for English-speaking users, as mentioned in our previous papers (Kachlik et al., 2008a; Kachlik et al., 2009). Some corrections of typographical and minor grammatical errors in TA have already been noted. A listing of such errors, and their remedies (83 in total), is accessible at IFAA webpage: <http://www.unifr.ch/ifaa/Public/EntryPage/TA98Corrections.html>

One substantial grammar mistake, obviously also an attempt to simplify (shorten) the terminology, was already introduced in PNA in 1955 and should be ameliorated: *facies articularis calcanea posterior, media et anterior* of talus. The term “*calcaneus*” is a substantivised adjective from the substantive “*calx*” (heel) (*os calcaneum* developed into *calcaneus* only). Then, the adjective derived from the substantive “*calcaneus*”, expressing the relationship to the heel bone, is “*calcanearis*” (similarly to “*talus*” and the derived

adjective “*talaris*”). The recommended form of the term is ***facies articularis calcanearis posterior, media et anterior***.

Another example is the Latin term “*psoas*” (derived from former Greek term “*psoa*”, genitive “*psoas*”), a nominative with genitive “*psoatis*”, already complained about by Hyrtl (1880) as inappropriate and causing linguistic difficulties. The term derived for the fascia investing *musculus iliopsoas*, in TA as *fascia iliopsoas*, should be either genitive (“*fascia iliopsoatis*”) or adjective (***fascia iliopsoatica***), which seems to be more consistent with other terms relating to muscle fascia.

The term “*systema conducente cordis*”, a synonym for *complexus stimulans cordis*, is not used correctly. The word “*conducens*” (genitive “*conducentis*”) is a regular participle of the verb “*conducere*”. The correct form of this cardiac structure is ***systema conducens cordis***.

The discrepancy in the position of words in terms of cerebral veins and arteries seems to be an unclear step back in the nomenclature. The PNA featured a similar term for both groups of vessels but TA has brought a different opinion: terms for cerebral arteries are generally arranged as follows—*arteria cerebri* completed with a positional adjective (*anterior, media, posterior*) but terms of cerebral veins are generally arranged in the opposite manner: *vena anterior cerebri, vena media superficialis cerebri, vena magna cerebri*, etc. This discrepancy should be corrected by returning to the former pattern used in PNA, i.e. first the non-concordant adjective “*cerebri*” completed with a concordant positional adjective: ***arteria cerebri media, vena cerebri magna***. Similarly, the terms of cerebellar vessels should be changed according to this general pattern. Such changes should follow the linguistic roots and rules of the Latin language.

Finally, a term of possessive genitive (unique in TA) in the term *sustentaculum tali* can be misleading implying to be a part of calcaneus. A simple change into ***sustentaculum talare*** could be helpful.

2.2. Mistakes in semantics

In TA, we can find some semantic (terminological) mistakes, which take their origin in incorrect use of the terms or in incorrect anatomical description. Following items can serve as examples of such mistakes:

- *synchondroses thoracis* are subdivided into *symphysis manubriosternalis et symphysis xiphosternalis*; the superordinate term for both symphyses should be ***symphyses thoracis***;
- *articulatio sacrococcygea* is in fact a *symphysis* due to the anatomical structure of this juncture between *os sacrum* and *os coccygis*, which is usually arranged as a juncture without a cavity, connected by means of fibrous cartilage, and thus should be called the ***symphysis sacrococcygea***;
- *synarthrosis manubriochondralis* is a *junctura* between the tip of first costal cartilage and the *incisura costalis prima sterni*. It is formed by a synovial joint with fibrocartilaginous articular surfaces on both chondral and sternal aspects, and therefore the term *synchondrosis* should be considered as inappropriate and replaced with a newly created term describing this unusual type of synarthrosis.

3. Group 2—Discrepancies in Terminologia Anatomica

Some terms which are used more times in the nomenclature, usually the specifying adjectives or substantives in genitive, differ in their linguistic form when used for different parts of the human body. We can classify these discrepancies into several groups (see examples in Table 1):

Download English Version:

<https://daneshyari.com/en/article/8460915>

Download Persian Version:

<https://daneshyari.com/article/8460915>

[Daneshyari.com](https://daneshyari.com)