

**Editorial****ANATOMICAL NOMENCLATURE AND CLINICAL ANATOMY****David Kachlik***Institute of Anatomy, Third Faculty of Medicine, Charles University in Prague, Czech Republic**Department of Health Care Studies, College of Polytechnics Jihlava, Czech Republic*

Clinical anatomy is a special field of anatomy, comprising both the education and research. It is useful to differentiate between systemic anatomy, topographic anatomy, functional and applied anatomy (function of anatomical structures) and clinical anatomy (relationship of anatomical structures and certain methods of diagnostic and treatment). The anatomical terminology serves for all the subbranches but the anatomical nomenclature is lags behind, although it is a crucial base for every medical discipline. The anatomical terminology origins were laid more than two thousand five hundred years ago and date back to the ancient period which used Greek and later Latin. In last two hundred years the medical progress has accelerated and the terminological body was substantially extended and reached the number of 50,000. Therefore, Anatomische Gesellschaft (the society of German

speaking anatomists) issued the first anatomical nomenclature in Latin, which was approved in 1895 in Basel (Switzerland) and termed the *Basiliensia Nomina Anatomica (BNA)*. From then, several revisions were published (*Birmingham Revision (BR)* in 1933; *Jenaiensia Nomina Anatomica (INA)* in 1935; *Parisiensia Nomina Anatomica (PNA)* in 1955, which were firstly acknowledged worldwide; repetitively *Nomina Anatomica (NA)* in 1961, 1966, 1977, 1983 and 1989). The last version of the Latin anatomical nomenclature (*Terminologia Anatomica (TA)*) was created by the Federative Committee on Anatomical Terminology (FCAT 2008), approved by the International Federation of Associations of Anatomists (IFAA) and issued in 1998. It contains more than 7600 terms and is completed with the most preferred English synonyms, which are unfortunately considered as recommended terms only (Kachlik 2008; Kachlik 2009).

The weak points of the *Terminologia Anatomica* are several: unofficial list of English terms, unbalanced ratio of terms in locomotor system and central nervous system, and list of eponyms. First, the problem of English terms is principal: English is now the preferred language of science and majority of important journals and books are written in (or translated into) English. But in some case more synonyms exist and possible confusion and misunderstanding can appear or during searching in medical databases some important articles may be skipped when not all used existing synonyms are searched for. These reasons should lead to a solution – approving and claiming the first official version of the English Anatomical Nomenclature, based on TA (or its extensions).

Second, the TA is unbalanced. As the scientific

progress in central nervous system has outrun the other fields, consequently the chapter reached unbelievable number of 1947 items, mainly describing tiny structures (nuclei and subnuclei) in the depth of brain. On the other hand, the skeletal system comprises 993 items, almost all visible by naked eye. The increase of skeletal system term pool from PNA to TA is only 112% and many terms used in applied and clinical anatomy are missing in TA. Fortunately, first steps of changing this unhappy delay of incorporation of practically used terms were performed by phlebologists, concerning the veins of lower limb and pelvis. In 2001, at the 14<sup>th</sup> World Congress of the International Union of Phlebology (and under the auspices of International Federation of Associations of Anatomists and Federative International Committee on Anatomical Terminology), a consensus document was issued to complete the Latin and English anatomical nomenclature of the lower limb superficial and deep venous system. Some insufficient terms have been changed and sixteen new terms have been added, in relation to their clinical relevance and topography (Caggiati 2002, Kachlik 2010a) Consequently, in 2004 at the 21<sup>st</sup> World Congress of the International Union of Angiology, a second consensus document was issued to complete the Latin and English anatomical nomenclature of the pelvic venous system and terms used in the everyday clinical practice; the insufficient terms have been changed and six new ones were added (Caggiati, 2005; Kachlik, 2010b; Kachlik 2012).

Third, the role of eponyms in both education and science is controversial. Officially, no eponyms were incorporated in the PNA. But their usage in clinical practice and in articles of scientific journals is relatively wide and favourite. This discrepancy evokes a question of adopting an attitude to the role of eponyms in education. A list of 392 "randomly" selected eponyms is added as appendix to the Terminologia Anatomica. But this list does not reflect both the needs of clinicians and field specialist and the regional particularities. The consensus documents in phlebology have revoked the question of eponyms, recommending some of them as preferred terms to the Latin ones (Cockett's perforators, Santorini's plexus and Giacomini's vein). Such precedence can elicit an avalanche of similar proposals which could probably lead to doubled and unclear nomenclature in future. A possible solution lies in detailed discussion between anatomists and clinicians throughout the medical fields and world regions to adopt a list of basic,

facultative and historical ("useless") eponyms which would stay outside the official Latin nomenclature but should be approved by authorities as a recommended list due to their practical usage.

Last but not the least problem is usage of national nomenclatures in non-English speaking countries. Some nations and their national anatomical societies are active and have issued revised national anatomical nomenclatures based on the Terminologia Anatomica, such as Japan, Spain, Brasil, Russia and several small nations as well. But this effort would be worldwide and other scientific nations, such as Germans and French fall behind.

The nomenclature is a powerful instrument in communication and our aim and interest should be a detailed multilingual official version, accessible free at the internet and satisfying both the anatomist and clinicians.

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