

Notes from underground: A letter from an anatomy lab of a dental faculty

Huseyin Avni Balcioglu

Jun Yan makes an excellent point in his editorial “Difficult points in current gross anatomy education and research” [1]. I see his editorial as an opportunity to initiate a forum that is open and accessible to all teaching anatomists about the issue. As an editorial board member, I believe, research studies and reviews in anatomy education would add to Edorium Journal of Anatomy and Embryology. I would be more than grateful if i could point out some other concerns below. As I am a dental faculty, I would emphasize on head and neck anatomy.

CLASSICAL QUARTET AND ANATOMY FOR THE DENTIST

Physical examination is the process of investigating the anatomical state and relations of the various organs in various regions of the body by physical methods. Physical diagnosis refers to the detection of departures from the normal by means of physical examination. An effective physical examination derives from a strong understanding of gross anatomy which provides a rational scientific basis for the selection of specific sites for the examination through the classical quartet, inspection, palpation, percussion, and auscultation, and, also a framework for formulating an accurate diagnosis from physical findings. Physician’s ability to perform a superior physical examination might be curtailed due to the lack

of understanding of anatomy. This might compromise both diagnostic and therapeutic effectiveness, and result in an unfruitful research. Dentist should perform excellent physical examination particularly in cases such as temporomandibular joint diseases, maxillofacial swellings, orofacial pain, etc. to be able to overcome challenging situations.

VARIATIONAL ASPECT OF THE RESEARCH STUDIES

Anatomical Variations: Interpretation of the anatomical variations particularly compels the limits of the anatomical knowledge in both surgical procedures and research studies. Despite the fact that every maxillofacial surgeon is entirely aware of the anatomy of the head and neck region, he or she might face difficulties due to many and various anatomical variations. Even though these variations consist of only a low percentage of the normal human anatomy, a practitioner will finally face some of them. Knowledge of variational anatomy and awareness of the existence of variations, on behalf of the oral surgeon, helps him or her to avoid pitfalls and complications during operative procedures. Moreover, variational aspect provides an additional dimension to the research or experimental studies in maxillofacial surgery or dental prosthetic rehabilitations. Take an example of a research about oral implants; morphological variations of the bone or soft tissue might be a valuable data while discussing the placement, prognosis, complications or biocompatibility of oral implants.

Imaging: As far as we are concerned, radiology is an anatomical discipline. The growing varieties of new diagnostic technologies including the innovations in the way the body can be imaged need a specific level of anatomic knowledge in order that images and data can be interpreted. Several sectional planes are available for organ-specific images, so the investigator must have a solid knowledge of the appropriate topographic anatomy of the head and neck.

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SURGICAL TECHNIQUES AND CLINICAL ANATOMY

For surgical operations, excellent topographic knowledge, especially about the relations of neurovascular structures and organs to each other, is vital for successful maneuvers and for patient safety. Clinical anatomy can be helpful in the development of new surgical methods and approaches. By taking advantage of the whole spectrum of anatomical methods, an essential contribution to the solution of clinical problems is possible. Besides, during an incision or an injection, a three-dimensional image of the anatomy of the related site must guide the clinician in contemplation of the surgical blade or needle advanced into the deeper regions.

As an epilogue; anatomy laboratories are usually at the underground levels of the faculty buildings, however, i believe higher levels of internal discussions about our beloved discipline would produce higher scientific outcomes.

Keywords: Anatomy education, Anatomical variations, Clinical anatomy, Dental education

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Authors declare no conflict of interest.

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