## **Recent Advances in the Anatomical Sciences Education**

B.V. Murlimanju<sup>1</sup>, Ebtesam Abdulla<sup>2</sup>, Rakesh Mishra<sup>3</sup>, Amit Agrawal<sup>4</sup>

Disclose and conflicts of interest: none to be declared by all authors

## Dear Editor,

Anatomy is a subject that is better learned by dissection of cadavers, as it follows the concept 'seeing is believing'. The students are choosing practical in preference to the didactic lectures. It was opined that modifications have to be made in the anatomy curriculum by increasing the practical hours<sup>1</sup>. Advanced technology and digital media need to be added as a major component in the curriculum. It is interesting to know that the students are losing interest in the textbooks and become more dependent on their notes<sup>1</sup>. This may be because of the reason that textbooks have become harder in these new editions. The information given in the textbooks is higher than the recommended knowledge, which is expected from the undergraduate students. In contrst, the teacher needs to be more prepared for the class, and the quality of the teaching material should be great enough to replace a book. It is good to know that the students appreciate the importance of anatomy in understanding the basic sciences subjects and their future clinical courses. In this regard, a thorough understanding of clinical anatomy is required for the effective medical practice diagnosis<sup>2</sup>. The concept of interprofessional education into anatomy teaching, which we believe is fundamental. The medical education, including teaching of anatomy, must consider this change as the current healthcare scheme shifts to the interdisciplinary care<sup>3</sup>. The interprofessional approach seeks to enhance the students' motivation and improve medical comprehension by integrating related anatomy subjects, such as radiology and surgery, in a team-based and problem-based teaching environment<sup>4</sup>. Thus, it allows medical students to build resilience, gain a functional and clinical understanding of anatomy, and appreciate interprofessional collaboration.

Due to the recent advances, the time allotted to the anatomy subject is reduced in the medical curriculum<sup>5</sup>. Earlier, in the Indian medical curriculum, anatomy was taught for 18 months in the first year of medicine. However in 1998, this was revised to one year. Further, a new method for teaching anatomy has emerged as a result of the implementation of competency-based medical education (CBME) in 2019. CBME includes early clinical exposure and extracurricular activities. It involves outcome-based teaching methods, where the scholar studies a set of calculable competencies for the early clinical exposure<sup>6</sup>. Why should a medical student learn human anatomy on preserved cadavers<sup>7</sup>, if they can study human anatomy on living subjects. Teaching living anatomy is becoming more important than traditional cadaveric dissection<sup>8</sup>. In this context, the CBME method can produce better doctors in the competencies of living anatomy.

## References

- 1. Yousuf MS, Harvey HL, Ramzy AR, Sharei ASA, Al-Zboun WaQ, Badran DH. The attitude of medical students towards the teaching of Anatomy. Eur J Anat. 2020;24: 449-58.
- 2. Sinclair D. The two anatomies. Lancet. 1975;1:875-8.
- 3. Shakhman LM, Al Omari O, Arulappan J, Wynaden D. Interprofessional education and collaboration: strategies for implementation. Oman Med J. 2020;35:e160.
- 4. Meyer JJ, Obmann MM, Gießler M, *et al.* Interprofessional approach for teaching functional knee joint anatomy. Ann Anat. 2017;210:155-9. 5. Tong G. Is anatomy dead? Eur J Anat. 2019;23:77-9.
- 6. Pandit S, Thomas MR, Banerjee A, et al. A crossover comparative study to assess efficacy of competency based medical education (CBME) and the traditional structured (TS) method in selected competencies of living anatomy of first year MBBS curriculum: A pilot study. Med J Armed Forces India. 2019;75:259-65.
- 7. Aziz MA, McKenzie JC, Wilson JS, Cowie RJ, Ayeni SA, Dunn BK. The human cadaver in the age of biomedical informatics. Anat Rec. 2002;269:20-32.
- 8. McLachlan JC, Regan De Bere S. How we teach anatomy without cadavers. Clin Teach 2004;1:49-52.

Received: April 4, 2022 Accepted: April 25, 2022 Corresponding author BV Murlimanju E-mail: flutemist@gmail.com

Department of Anatomy, Kasturba Medical College, Mangalore, Manipal Academy of Higher Education, Manipal, Karnataka, India

<sup>&</sup>lt;sup>2</sup>Neurosurgery Resident, STRP (Arab Board), Department of Neurosurgery, Salmaniya Medical Complex, Manama, Bahrain

<sup>&</sup>lt;sup>3</sup>Department of Neurosurgery, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India

<sup>&</sup>lt;sup>4</sup>Department of Neurosurgery, All India Institute of Medical Sciences, Saket Nagar, Bhopal, Madhya Pradesh, India