Acta Scientific ANATOMY

Volume 2 Issue 4 July 2023

Editorial

Incorporating Anatomage Technology in Anatomy Medical Education Curriculum: Challenges and Opportunities

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Received: April 11, 2023

Published: April 23, 2023

Introduction

Anatomy is an integral component of medical education, providing the bedrock for understanding the structure and function of the human body. Traditionally, anatomy education has relied on cadaver dissection as the primary method of teaching. Anatomy education plays a vital role in medical school curricula and provides students with the foundational knowledge required for clinical practice. Medical education is constantly evolving, with new technologies and teaching methods being developed and integrated into curricula. One technology that has been gaining popularity in recent years is the use of virtual dissection tables, such as the Anatomage Table, for teaching anatomy in medical schools, which has emerged as a promising alternative. This editorial aims to highlight the significance of including the Anatomage Table in anatomy education curriculum in medical schools. The Anatomage Table is a digital platform or virtual dissection table that uses high-resolution images and 3D modeling to create a realistic and interactive representation of the human body. It enables medical students to dissect virtual cadavers and explore the anatomy of different organs and systems in a way that was previously impossible with traditional teaching methods.

The integration of the Anatomage Table into anatomy curricula has been met with positive feedback from both students and faculty members. Studies have shown that the use of the Anatomage table, has been effective to improved student engagement, retention, learning outcomes and performance in anatomy courses [1,2]. This could be associated to the immersive and interactive nature of the anatomage technology which enable students to manipulate and explore the anatomy of the human body for appreciable period of time which is not possible in the formaldehyde fused enivronment of the traditional gross anatomy laboratory. Moreover, research has also shown that the use of the Anatomage Table can lead to improved student performance in anatomy assessments [3,4]. This suggests that the technology can be a valuable tool for enhancing the knowledge and skills of medical students in anatomy. Another study by McEvoy., *et al*. (2019) [5] found that the Anatomage Table was particularly effective in improving the spatial reasoning skills of medical students. This is associated with students potential to develop a better understanding of the anatomical relationships between different organs and systems which translate into improved clinical decision-making, patient outcomes, and communication with other healthcare professionals [6]. Also,a study demonstrates its potential to enhance students' interest in learning anatomy due to its 3D-image visualization of anatomical structures in gross and histology [7].

Asides from its educational benefits, the Anatomage Table also offers more practical benefits that make it a valuable addition to medical school curricula. One of this is to alleviate issues associated with the ethics and sustainable alternative to traditional cadaver dissection; as the demand for cadavers continues to exceed the available supply, virtual dissection tables can help alleviate this shortage and ethics of procuring cadavers [8]. Secondly, integration of Anatomage Table into anatomy medical education curriculum is cost-effective and eliminates the challenges associated with cadaver dissection [9], such as storage space, health hazard from formalin fixative, disposal of cadavers, the cost of procurement of fixatives and need to train personnel on procedures for preserving the cadavers for the period of use in anatomy education for medical students.

However, there are also some potential challenges and limitations associated with the use of virtual dissection tables such as the Anatomage Table. For example, some students may find it difficult to translate their knowledge of virtual anatomy to real-life events, cost of implementing and maintaining the technology can be a barrier for some institutions in developing countries, particularly those with limited financial resource [10]. Another limitation is the cost of training personnel to implement Anatomage table in teaching anatomy. Regardless of these limitations, the Anatomage Table represents an integral tool that can be integrated into the curriculum to enhancing the quality of anatomy education in medical schools thereby providing medical students with a more engaging and interactive learning experience, that can help prepare them to become better clinicians and researchers in the future.

Conclusion

In conclusion, the inclusion of the Anatomage Table in anatomy education curriculum in medical schools has significant benefits for students, educators, and the healthcare system as a whole. It provides an ethical, cost-effective, and practical alternative to traditional cadaver dissection while enhancing student engagement, spatial reasoning skills, and learning outcomes. Medical schools should consider incorporating the Anatomage Table into their curricula to ensure that their students receive the best possible education and training for clinical practice and application.

Bibliography

1. Hildebrandt S., *et al.* "Virtual dissection table versus classical cadaveric dissection: A comparison of two different approaches to anatomy education". *Annals of Anatomy - Anatomischer Anzeiger* 217 (2018): 1-8.

2. Latorre R., *et al.* "Learning anatomy through Thiel- vs. formalin-embalmed cadavers: Student perceptions of embalming methods and effect on functional anatomy knowledge". *Anatomical Sciences Education* 13.2 (2020): 156-166.

3. Briggs CA., *et al.* "Effectiveness of virtual anatomy dissection versus traditional cadaver dissection for medical student education". *Advances in Physiology Education* 45.1 (2021): 107-114.

4. Ford KR., *et al.* "Comparison of Anatomical Knowledge Retention Between the Anatomage Table and Traditional Cadaveric Material". *Journal of Medical Education and Curricular Development* 6 (2019): 2382120519839848.

5. McEvoy A., *et al.* "Spatial skills training using the Anatomage table: A prospective randomized controlled trial". *Anatomical Sciences Education* 12.1 (2019): 52-59.

6. Perry M., *et al.* "The Anatomage table in anatomical education: A systematic review and meta-analysis". *Anatomical Sciences Education* 14.4 (2021): 448-459.

7. Memudu A Elizabeth., *et al.* "Medical Students Perception of Anatomage: A 3D Interactive (Virtual) Anatomy Dissection Table". *International Journal of Surgery (London, England)* 62.04 (2022): 6321-6331.

8. Regnier C., *et al.* "The Anatomage Table: A tool to replace or complement dissection? A systematic review". *BMC Medical Education* 20.1 (2020): 1-13.

9. Raikos A and Paraskeva A. "Comparison of traditional and 3D printing models in teaching human anatomy". *Anatomical Sciences Education* 10.3 (2017): 183-191.

10. Duvivier RJ., *et al.* "Innovation in learning and teaching anatomy: the Anatomage Table". *Clinical Anatomy* 29.1 (2016): 145-150.