

Anatomic Variation used to Assess Clinical Reasoning

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Abstract

Anatomic variation is considered, by many clinicians and educators, to be an important part of anatomical education, both for the benefit of knowing what common variations are seen and patients and for increasing clinical reasoning skills. A recent study by Buongiorno et al., found that 88.6% of allopathic MD programs in the USA who responded to the survey 'agreed or strongly agreed that pre-clinical medical education is the best time to introduce variation [1]. They also found that almost half of those programs who felt favorably about teaching anatomical variation do not assess their students on the content presented. A review on this topic also found that about half of anatomy faculty formally assess graduate students on anatomical variation, yet in postgraduate training, all clinicians assess trainees on this knowledge [2]. The Anatomy department at RMU provides prosected cadavers for Anatomy labs in all departments. On a semi-regular basis, we identify anatomic variations that can be used in our teaching. We are interested to know if teaching anatomic variations leads to stronger clinical reasoning skills. We identified 4 anatomic variations (2 musculoskeletal and 2 vascular) to use in teaching. Each of these variations were used during the year when we had a cadaver with that specific variation, allowing students to visually see the anatomical structure. When assessed, students performed better on clinical reasoning questions related to the anatomic variation (90.7% accuracy) that was seen in the lab in comparison with clinical reasoning questions from similar regions (84.3% accuracy). In addition, students accurately identified potential clinical concerns with each anatomic variation (99% accuracy). This data leads us to conclude that assessing students' knowledge of anatomical variation through visualizing cadaver dissection is useful to drive learning.

Key Words: *Anatomic Variation*

References

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