An Innovative Approach to Anatomy in Medical School
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Introduction
Anatomy is a core subject in medical education. At the University of Central Florida College of Medicine (UCF COM), the goal of the anatomy curriculum is to enhance long-term understanding of anatomical content, while integrating other subjects simultaneously to give students a broader understanding of the relevance of the material. To do this, UCF COM utilizes three main tools: state-of-the-art resources, community clinicians, and innovative opportunities for students to learn anatomy.

Several studies indicate that the anatomy curriculum varies across medical schools. It is unclear how using multiple learning and teaching modalities combined with an integrated curriculum will help with long-term retention of anatomy knowledge. We want to assess the student perceptions of the anatomy curriculum at UCF COM in order to determine which methods the students preferred and believed contributed to retention of the content.

Materials & Methods

- Participants: 63 total students including 43 second-year medical students and 20 third-year medical students at UCF COM
- Deployed an 8 question survey to assess student perceptions of the UCF COM anatomy curriculum and laboratory resources
- Features of the UCF COM anatomy curriculum:
  - Community Physicians: clinical faculty from the community volunteer in the anatomy lab when students dissect in their area of specialty.
  - Key resources in the anatomy lab: See Figure 1
  - Innovative curriculum: includes autopsy lab, case of the week, peer teaching, integrated teaching, and more.

Results

- Figure 1: Of the following resources in the UCF COM anatomy laboratory, which ones did you use? (check all that apply)
- Figure 2: Which resource did you feel was the MOST important in your anatomy studies?
- Figure 3: Please rate the extent that the ‘case of the week’ was helpful in improving your understanding of anatomy.
- Figure 4: Please rate the extent to which you agree that interacting with community physicians was helpful in improving your understanding of anatomy.
- Figure 5: Please rate the extent that the integration of radiology with anatomy was helpful in improving your understanding of anatomy.
- Figure 6: Please rate the extent to which you agree that working with peers and exchanging information in anatomy lab teams was helpful in improving your understanding of anatomy.

Student Comments

- “The integration of anatomy with histology, physiology, radiology, and embryology greatly facilitated the HB2 learning experience. I was able to integrate and apply what I learned in these disciplines to our weekly case presentations in order to solidify my knowledge base.”
- “Community physicians are an irreplaceable resource.”
- “It seemed like having the cadaver’s CT scan available was helpful for picking out pathologies to look for while dissecting.”
- “The integration of CT scans and other imaging modalities in the anatomy lab has helped me tremendously to be able to identify the structures and interpret findings when I look at patients’ CT scans during my clerkships.”

Conclusion

In general, the anatomy curriculum seems to be highly regarded at UCF COM. As an overall rating, of the resources in the anatomy lab, over 95% of the participants agreed that these resources contributed to their overall understanding of anatomy.

One of the most important aspects of the anatomy curriculum that students value is the community physicians. In addition, the students feel that integrating subjects such as physiology, radiology, and histology is key to their long-term understanding of anatomy. Figure 2 shows that many students rated physical dissection as the most important resource in the anatomy lab, which parallels a similar study showing dissection deepened their knowledge of anatomy in many ways² and is an argument to those who oppose dissection in favor of replacing it with imaging³.

It seems there are many features of the UCF COM anatomy curriculum that can contribute to long-term retention of the material for future clerkships and residencies.

References