



Autopsy Observation as a Teaching Tool in the PA Curriculum



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► INTRODUCTION

Proponents of traditional cadaver dissection within Physician Associate (PA) curricula propose many advantages of using cadavers to teach human anatomy, including psychosocial benefits like encouragement of student reflection on death and dying, and early development of desensitization as a coping mechanism in response to disturbing medical procedures.^{1,2} However, not all PA programs utilize cadavers, citing prohibitive factors such as decreased space, curricular time, and a decreased supply of cadavers and trained anatomists.^{1,3} Because of this, PA programs have sought innovative methods to teach anatomy without cadavers, including Team-Based Learning (TBL) and body painting.^{1,3,4} To date, there are no published studies evaluating autopsy observation as an anatomy teaching methodology in PA education.

► AIM

This qualitative study sought to evaluate PA students' perceptions of and attitudes towards autopsy observation. It should be noted that this study was conducted by a PA program that does not incorporate cadaver dissection in its curriculum.

► METHODS

The didactic phase begins with Gross Anatomy. During the course, a county medical examiner (ME) delivered an introductory lecture of the history and function of the ME, the autopsy procedure, and the ME's expectations of students during an autopsy observation. Following the completion of Gross Anatomy, each student was given the opportunity to observe one full autopsy at the county ME's office. Students were given an optional, open-ended questionnaire gauging their experiences with the ME, including anticipated and unanticipated emotions and events, as well as perceived value to their education.

► RESULTS

Thirty-five of the 60 students in the cohort responded to the survey (58% response rate). Four common themes were identified (**Table 1**). Theme 1: Anticipated and unanticipated emotions of witnessing an autopsy, including being "nervous" and "scared" leading up to the event, and expecting to faint or become ill. Ten students admitted to developing detachment during the autopsy and commented on the necessity of desensitization. Twelve students were surprised at the methodical way in which the organs were removed from the body and dissected. Theme 2: Identification of a perceived weakness (7 students) or strength (9 students) in anatomical knowledge. Five students perceived increased confidence when answering the ME's questions in front of their peers. Theme 3: An enhanced understanding of pathophysiology (11 students). Nine students felt the experience enabled them to relate the observed pathology to the knowledge gained in other courses. Theme 4: 100% of respondents felt the experience gained was valuable to their education. Eighteen students commented that computer programs and plastic models do not substitute for the human body. Thirteen students wrote about visualizing the body holistically for the first time. Selected narrative statements are provided in **Table 2**.

► CONCLUSIONS

Narratives provide a rich opportunity for students to express their perceptions and attitudes towards the autopsy experience, which was overwhelmingly perceived as valuable. Students perceived improved confidence in their anatomy and pathology knowledge as a result of the experience. Students also reported feelings of detachment and desensitization during the autopsy, which has been previously reported by PA students performing traditional cadaver dissection. One limitation of this study is the use of only qualitative data in a single cohort. In the future, we plan to administer pre- and post-autopsy surveys to our cohorts.

► REFERENCES

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| Table 1: Post-Autopsy Narrative Themes | Number of Students |
|---|--------------------|
| Identification of a perceived weakness or strength in anatomical knowledge | 16 |
| Ability to visualize the body holistically for the first time in the curriculum | 13 |
| Expression of surprise at the methodical way in which the organs were removed from the body and dissected | 12 |
| Experience of detachment during the autopsy; development of desensitization | 10 |
| Ability to relate the observed pathology to the knowledge gained in other courses | 9 |



Table 2: Selected Narrative Statements

- "I learned more anatomy in three hours than I did in a semester, just because it brought all the pieces together."
- "This is a valuable experience for anyone working in medicine, because we often become detached from death – because we are so focused on keeping our patients living."
- "It became easier to watch as I detached myself from the personal element and focused on the organs and educational points being taught."
- "Although I already had a lot of experience with cadavers in undergrad, the autopsy showed the body and the tissues in a much more realistic state."
- "It is incredibly humbling to see the profound, and final impact, that something as small as a tiny piece of plaque within one artery can have upon a human life."
- "I was able to make so many connections based on my knowledge from just a little over a quarter of PA school."
- "The experience definitely reaffirmed to me that I am in the right profession."