Austerity and the Cadaver

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The presence of increasing numbers of allied health students at colleges and universities across the nation is having a great effect on curriculum development, distribution of resources, and use of physical facilities. Expanded student enrollment, coupled with decreased funding for higher education, leads to concern that valuable experiences necessary for adequate training of allied health students may be compromised or eliminated. As an anatomist who teaches occupational therapy students, I am convinced of the value of human gross anatomy as taught with human cadavers in preparing students to be successful clinical practitioners. Charts and models can never take the place of the cadaver in developing a true understanding of the intricacies of human systems and a deep respect for the uniqueness of life.

Realizing, however, that provision for meaningful cadaver experience can be costly in terms of curriculum time, laboratory facilities, and staffing, I am concerned that the cadaver may fall victim to the cost-cutting zeal of pragmatic administrators. In times of austerity, it is difficult to predict where the ax will fall. Must we abandon the cadaver in an attempt to save time and money? I certainly hope not. If this marvelous pedagogical experience is to be maintained, the current economic climate mandates that educators and clinicians consider ways to make cadaver use increasingly cost-effective without sacrificing the educational value of the experience. Interdisciplinary faculty, multidisciplinary courses, institutional cooperation, and unique teaching methods may provide successful options.

Recently, as part of a curriculum study at Towson State University, Towson, Maryland, occupational therapy department chairpersons and involved occupational therapy faculty at 20 institutions were surveyed to determine how instruction in gross anatomy is accomplished in professional-level programs across the country. Laboratory instruction in gross anatomy for occupational therapy students includes some form of student observation of human cadaverous specimens in 15 of 20 institutions surveyed. The degree of student access to cadavers, however, varies greatly in these programs. At the University of Kansas, for example, occupational and physical therapy students participate in a six-credit gross anatomy course that includes student dissection of head and neck, thorax, and upper and lower extremities (Palmiter-Thom- as, summer 1992, personal communication), whereas at some institutions, the opportunity for work with cadavers is limited to occasional observation of isolated parts or preserved central nervous system preparations. Of greatest concern is the finding that, at 5 of the 20 institutions surveyed, no cadaverous material is available for study. Faculty members in these institutions, most of which are not part of university medical or allied health centers, state that human bodies are not used because funding is not available for securing and housing cadavers or providing an adequate number of staff members for their use. How can this great disparity in opportunity be reconciled so that all occupational therapy programs across the country can provide meaningful, affordable cadaverous experience in gross anatomy?

Admittedly, programs associated with university medical and allied health centers have more options. Interdisciplinary faculty and courses shared by several programs offer major cost-saving possibilities. At the University of Pittsburgh, for example, an anatomy position is shared by occupational therapy, anthropology, and the dental school (Brayley, summer 1992, personal communication). In other institutions, anatomy lecture or laboratory courses taken by occupational therapy students are the same as those required for physical therapy, nursing, or other allied health students. Acknowledging the financial expediency of such situations, some educators surveyed expressed concern that, because of the combination of disciplines among students in certain courses, the specific needs of the occupational therapy student may be overlooked. In several such institutions, plans are underway to modify the anatomy curriculum to more adequately reflect the needs of the occupational therapy student. At Temple University in Philadelphia, a curriculum revision will provide common anatomy lectures for occupational and physical therapy students but laboratory sections will be separate to allow for a more program-oriented experience (Perinchief, summer 1992, personal communication).

How can a meaningful cadaver experience be provided at smaller, non-medically affiliated institutions? If close to a university center, occupational therapy students may be able to view cadavers dissected by medical or dental students. Occupational therapy students from Quinnipiac College in Hamden, Connecticut, for example, travel to Yale University for a weekly cadaver laboratory session with specimens available at the medical school (Sladyk, summer 1992, personal communication). At Towson State University, a carefully selected group of students, supervised by a faculty member with graduate training in gross anatomy, prepares prosections (cadavers dissected in advance) during the January mini-semester (Peterson, 1993). The prosected cadavers are examined the following semester by occupational therapy students studying neuromuscular mechanisms of the extremities. A prosection guide was specifically designed for their use (Peterson, 1987).
The use of prosections is efficient in time and cost. In one semester, as many as 80 students have successfully observed two prosected specimens in great detail. Personal observation, clinical feedback, and student evaluation support the findings of Alexander (1970) and Nnodim (1990) that prosections compare favorably with dissection as a technique for studying gross anatomy. Increased interest and motivation in studying gross anatomy similar to that reported by Stencel and Moore (1989) have also been observed.

Although availability, cost, and distribution of human bodies vary from state to state (Morgan, 1990), a student-generated prosection plan may offer a cost-effective way for occupational therapy programs in smaller, non-medically affiliated institutions to include a cadaver experience in the anatomy curriculum. Such a program is of benefit not only to the occupational therapy student, but also to students from a variety of disciplines who are selected to do the dissections. Biology majors, pre-medical and predental students, art majors interested in medical illustration, and students in the athletic training program have all been successful dissectors. They report that the dissection experience enhances their understanding of anatomically related concepts in other disciplines and is beneficial in preparing them for gross anatomy in medical and dental school. The prosections are often used to supplement discussion of human anatomy in other biology courses. In these ways, the use of cadavers for the occupational therapy program at our institution has added a new dimension to other offerings within the biology department and the university.

We must remain vigilant and creative when, in the name of cost effectiveness, we are urged to consider or perpetuate laboratory experiences for the occupational therapy student that preclude meaningful use of cadavers. For many of these students, the bachelor's degree will be the terminal degree. Can occupational therapists truly understand the clinical demands of their professional lives without having observed the cranial nerves, the carpal tunnel, the brachial plexus, or the intricacies of the human hand? I do not think so. We must not let the axe of austerity destroy these opportunities.

References


