Frequency of Counterstrain Tender Points in Osteopathic Medical Students: An Osteopathic Educational Research Project


Background

In the world of medical education, the quantity of information that must be taught in the first- and second-year curriculum increases with every new advance in medicine. To make room in the curriculum for new material, each discipline must evaluate what should be taught and what should be left for self-study or clerkships. Within the osteopathic manipulation medicine (OMM) curriculum, a wide variety of diagnosis and manipulative treatment techniques must be taught to prepare students for both practical use and their licensing exams.

Counterstrain is one of the many osteopathic manipulative techniques students must learn, but it encompasses over 120 separate tender points. To maximize the impact of teaching counterstrain in the OMM curriculum, this study aims to identify a core group of high yield tender points to teach for each body region. By maximizing the experiential value of the material, the investigators hope to enhance student learning and improve future use of the technique.

Research Design and Methods

PROCEDURES: First- and second-year osteopathic medical students at 5 different osteopathic medical schools were surveyed during their regularly scheduled OMM laboratory classes about whether they personally had any of the tender points that were covered during the laboratory sessions. Scannable forms were handed out at the beginning of each laboratory session involving those counterstrain tender points; students documented the tender points and returned the forms by the end of class that day. In most cases, each student’s laboratory partner recorded the presence or absence of surveyed tender points on the student’s form as the partner practiced diagnosing and treating the counterstrain tender points that were taught during the laboratory session. The data was collected over 12 months. The number of laboratory sessions dedicated to counterstrain varied by institution, ranging from 6 to 12 separate sessions, and included tender points from the head, cervical, thoracic, lumbar, sacrum, pelvis, rib, upper extremity, and lower extremity body regions. This study was reviewed by the institution review board at each school and student participation was voluntary.

INCLUSION CRITERIA: All medical students in the first- and second-year curriculum at the following osteopathic schools were eligible for participation in this project: ATSU-KCOM, ATSU-SOMA, Touro University– California, Touro University - Nevada, and UNECOM.

EXCLUSION CRITERIA: Students who were not present at the regularly scheduled time period for OMM laboratory periods were not included in the study.

DATA COLLECTION: The survey forms included basic demographic information, such as age, sex, height, weight, race, ethnicity, history of symptomatology in the region (current new symptoms, intermittent or recurrent symptoms, or chronic longstanding problems), and history of significant injury in the region. The information obtained for the various tender points included the relative location of the tender point (right, left, or none) and the severity of the tenderness at the point (mild or significant).

DATA ANALYSIS: Fisher exact tests were used to test for differences between males and females on the prevalence of the tender points.

Preliminary Results

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DATA ANALYSIS: Fisher exact tests were used to test for differences between males and females on the prevalence of the tender points.

With two-thirds of the data analyzed, wide variation in the prevalence of these tender points was observed, ranging from 20% to 95%. When differences were seen between men and women, tender points were more common in women except for certain locations.

Positive tender points offer students the experience of palpating tissue texture abnormalities in their relatively healthy colleagues, while providing an opportunity to assess the physical changes that occur with successful counterstrain treatment. This experience may ultimately reinforce the value of the technique for future clinical practice.

STUDY LIMITATIONS: There were two main limitations to this study. The first limitation is that 6 different counterstrain reference textbooks were used in the OMM courses at the 5 participating osteopathic schools. Different textbooks describe the locations of some of the named tender points slightly differently. The second limitation is that the examiners of the tender points were novice osteopathic medical students who have not been exposed to the tender point locations prior to the date of the surveys. This likely affects overall accuracy and, thus, applicability to outside populations. However, the tender points that were commonly found are likely common tender points that are easy to find, making them ideal for OMM curriculums.

Discussion

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References