Introduction of Integrative Health and Acupuncture to Pre-Clerkship Medical Students

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ABSTRACT

Background: Pain is a common diagnosis in both the civilian and military community. Integrative health practices, such as acupuncture, are often used to treat pain as well as other medical conditions. Medical schools must ensure that their students are aware of what patients are using and how the tools of Integrative Health can be used together with the conventional medical model.

Methods: The Uniformed Services University of the Health Sciences (USUHS), The United States' military medical school, is heeding this call in innovative ways. The USUHS uses several means to teach Integrative Health throughout the 4-year medical school experience. A new component, Battlefield Acupuncture, was introduced into the second-year curriculum and was particularly relevant to service personnel.

Conclusions: Integrative health modalities introduced to medical students early in their education has been well-received and will prepare them for their medical careers.

Key Words: Integrative Health, Battlefield Acupuncture, Auriculotherapy

INTRODUCTION

ACCORDING TO THE National Center for Complementary and Alternative Medicine, nearly 40% of people in the United States use complementary and alternative medicine (CAM) approaches for their healthcare needs.¹ The 2007 National Health Interview Survey (NHIS) estimated that 3.1 million U.S. adults and 150,000 children had used acupuncture in the previous year for a variety of health care needs.² Between the 2002 and the 2007 NHIS reports, acupuncture use among adults increased by ~1 million people. Pain was one of the most common diagnoses seen in outpatients in the United States and remains one of the main conditions for which CAM is sought.²

Whether caused by injuries incurred during the deployed environment or simply the result of the physical requirements of military service, the Department of Defense (DoD) likewise grapples with care of patients with chronic pain. To

avoid the morbidity, mortality, and exorbitant cost of medicines and procedures, the 2010 National Defense Authorization Act and a 2011 Assistant Secretary of Defense for Health Affairs memorandum directed that the military health system (MHS) ensure access to standardized comprehensive pain management for all beneficiaries, including CAM. To accomplish these directives, the Defense and Veteran's Center for Integrated Pain Management—charged with developing consensus recommendations for the Air Force, Army, Navy, MHS, and Veteran's Health Administration (VA) in pain medicine policies and practices—endorsed and began to integrate acupuncture as an adjunct to conventional medicine practice, creating a multimodal pain plan.³ Likewise, the Bureau of Medicine and Surgery for the United States Navy published BUMEDINST 6320.100 detailing how acupuncture can be used throughout Navy Medicine.⁴ In addition, VA/DoD Clinical Practice Guidelines for Chronic Pain state that clinicians must:

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Provide, and document in the medical record, patient education on the following topics:...Discussion of an individualized comprehensive care plan that may include... acupuncture, manipulation, complementary and alternative medicine, other non-pharmacologic therapies, and other non-opioid agents.⁵

Coupled with these changes, it becomes imperative that all medical providers caring for service members and Veterans be educated about the various CAM modalities available for their patients. The Uniformed Services University of the Health Sciences (USUHS), the United States' medical school for the uniformed services, until now, has met this need by offering electives in CAM during the clerkship years of medical school. Only small subsets of students chose to take advantage of these offerings. There was no process to ensure that all students had at least a baseline understanding of CAM and/or integrative health. Two recent opportunities arose that provided a forum to set the baseline knowledge. These opportunities are discussed in this article.

CURRICULUM CHANGES

As part of the musculoskeletal module curriculum for first-year medical students, pain management needed to be covered. It was suggested that a lecture on acupuncture be given. After further discussion and reflection, an introductory lecture on integrative health was presented instead. The lecture covered the following topics: definition of integrative health with examples of complementary and alternative disciplines used to achieve integrative health; an expansive discussion on the patient-centered medical home (the DoD's model of primary care); and the evidence in support of integrative health. The highlight of the lecture was a panel discussion comprised of a certified art therapist, a psychiatric nurse practitioner who utilizes pet therapy, an internal medicine and a family physician who are both medical acupuncturists, a nurse case manager, a perioperative clinical nurse specialist, certified nurse anesthetists, and a family nurse-practitioner. The panel members discussed what integrative health meant to them and how their specialties assist in helping patients obtain optimal health. The intent was to introduce first-year medical students to the idea of a collaborative health care team that uses many interventions to improve a patient's health.

Because of a cancellation, an opportunity arose to engage second-year medical students in actual integrative health/CAM modalities. Unfortunately, these second-year students were not part of the class that received the integrative health lecture detailed above. Thus, a brief overview of acupuncture focused on the biochemical and physiologic evidence for acupuncture (i.e., endorphin-, neurohormone-, and neurotransmitter-release, and functional magnetic resonance imaging evidence of action). Clinical trials and case

series were presented to demonstrate to students that there is a plausible, biologic explanation for the efficacy of acupuncture. Evidence-based recommendations (i.e., Cochrane Reviews) were reviewed with regard to conditions for which acupuncture has been shown to benefit: migraine prophylaxis; tension headache treatment; fibromyalgia; neck pain; back pain; and nausea and vomiting. Furthermore, there was a discussion of the placebo effect. It was readily acknowledged that patients who believed that their treatments would work were more likely to obtain a positive response from their treatment.⁶ The above was done to try to show the students that, despite not knowing the exact reasons why acupuncture is helpful, there is a scientific basis for its effects.

Following the introduction, a discussion and demonstration of Battlefield Acupuncture (BFA) was given. Richard C. Niemtzow, MD, PhD, MPH, a co-inventor of BFA, was gracious enough to participate as a preceptor for two of the four groups. The students were provided with a copy of Dr. Niemtzow's article detailing the BFA technique.⁷ BFA, a form of auricular acupuncture, was chosen for demonstration purposes as it is fast, easy, safe, and effective. In addition, its training, credentialing, and privileging is now standardized within the DoD, and BFA is also a recommended pain-management treatment in the Defense and Veterans Center for Integrative Pain Management.^{3,4}

As is typical of much of medical college's academic experience, the hands-on demonstration and student practice was the most fulfilling for the preceptors and the students. The added benefit of this practicum is the possibility that there will be students who have acute or chronic pain that will be reduced with the BFA. This occurred as expected. Each small group invariably had someone with either an acute or chronic pain problem that was at least reduced 50% if not completely relieved. These improvements provided the best evidence of the efficacy of BFA and acupuncture in general.

RESULTS OF THE CHANGES

Lectures at the USUHS are not mandatory, but the integrative health introduction with a panel discussion was filled to capacity with a robust question-and-answer session. Ten students remained to engage in discussion with the panel after the class.

The acupuncture session for the second-year class was a 2-hour block of a 2-week course, which was entitled Advanced Military Medical Skills. It was only a small portion of the overall course. A survey of the students after the course was solicited (see Box 1). The survey demonstrated that 75% of the students wanted to learn more about integrative health and 60% wanted to learn more about acupuncture. Furthermore, 3 students in the first-year class and 2 students in the second-year year class have sought out mentors to participate in research opportunities in integrative

Box 1: Results of the Student Survey

The Acupuncture Overview and Introduction to Battlefield Acupuncture sessions was helpful:

Strongly Disagree (01)	3	2.61%
Somewhat Disagree (02)	8	6.96%
Neutral (03)	18	15.65%
Somewhat Agree (04)	29	25.22%
Strongly Agree (05)	31	26.96%
N/A - Did not attend (06)	26	22.61%*

*The 26 students who did not attend were teaching assistants who were offered the session at a later date. Twenty-two of the 26 attended the later session. This question was not applicable to them. The fact that they asked for an extra training session for nontestable material would lead one to believe they were enthusiastic about their BFA experience.

NA, not applicable.

I am interested in learning more acupuncture skills:

Strongly Disagree (01)	8	6.96%
Somewhat Disagree (02)	16	13.91%
Neutral (03)	16	13.91%
Somewhat Agree (04)	30	26.09%
Strongly Agree (05)	37	32.17%
N/A - Did not attend (06)	8	6.96%

NA, not applicable.

I am interested in learning more about integrative medicine:

Strongly Disagree (01)	2	1.74%
Somewhat Disagree (02)	1	0.87%
Neutral (03)	21	18.26%
Somewhat Agree (04)	34	29.57%
Strongly Agree (05)	52	45.22%
N/A - Did not attend (06)	5	4.35%

NA, not applicable

*The most valuable session(s) of the course was:** _____.

*Of the 52 responses received, 7 stated the acupuncture course was the most valuable course.

health. One student in the second-year class is pursuing additional summer training in CAM modalities prior to actual clinical rotations.

DISCUSSION

The goals of the first- and second-year sessions were different but complementary. The first-year class was introduced to integrative health in general. The second-year class was introduced to the practice of acupuncture in

general and the specific subclass of BFA. Both year groups were encouraged to be aware of are the therapies their patients were pursuing. These groups learned that there is evidence for acupuncture as well as for other complementary medicine modalities. The groups also learned that integrative health is defined as “[t]he practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.”⁸ A small

minority of students was not interested and did not believe in the efficacy of acupuncture. Despite this relatively small minority, more than 50% of the students wanted more training. Despite having less than 1 week to prepare for the second-year session, it was successful in achieving its goals reaffirming the sentiment that “success equals opportunity meeting preparation.”

CONCLUSIONS

One of the best ways to ensure that integrative health—for which acupuncture is one of the tools—is used in medical practice is to educate the next generation of physicians about integrative health’s existence. Knowledge of alternative techniques will ensure that there is a cadre of doctors who are trained at the outset of their education in all of the medical skills, be they conventional or integrative. Successful medical schools will ensure that they have curricula in integrative health that lays the foundation in the preclinical years and hones those skills in the clinical years. This will require foresight, planning, commitment, and, ultimately, leadership.

DISCLOSURE STATEMENT

No competing financial interests exist.

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