

Acupuncture in the ED Cuts Pain, Reduces Stress, Anxiety

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BOSTON — Acupuncture in the emergency department (ED) setting relieves pain, cuts stress and anxiety, and is acceptable to the majority of patients, new research shows.



Dr John Burns

"This is a very important finding," John Burns, DPT, manager of acupuncture, traditional Chinese medicine, and mind-body therapies, Department of Integrative Medicine, Aurora Health Care, Milwaukee, Wisconsin, told *Medscape Medical News*.

"We're in an opioid crisis and pain management crisis, and physicians along with their patients are seeking nonpharmacological options for pain control," he said.

The study was presented here at the Academy of Integrative Pain Management (AIPM) Inaugural Global Pain Clinician Summit 2018.

First Exposure to Opioids

The ED is often the first place patients are exposed to an opioid, said Burns, who has a doctorate in physical therapy, a masters in oriental medicine, and is a certified acupuncturist in the state of Wisconsin.

A person with no history of pain or opioid use might have an accident, break a bone, go to the ED and be prescribed an opioid for pain.

As with other healthcare professionals, Burns and colleagues are keen to do their part in reducing the burden of prescription opioids. They believe that acupuncture may help decrease acute pain in patients seeking ED services.

Originating from traditional Chinese medicine, acupuncture is a nonpharmacologic intervention that involves inserting needles into skin or tissue at specific points in the body.

Research has shown that acupuncture may be useful for treating musculoskeletal conditions, neuropathy, and digestive problems, among others.

Before this study could get under way, the researchers had to get ED staff on board.

"One of our aims was just to see if it was feasible, if people would accept it," said Burns.

"At first, physicians were very skeptical. I had to meet with the emergency room physicians, and I had to explain why we wanted to do this pilot study," he said.

In the end, he won the physicians over.

50% Reduction in Pain

Per the study protocol, if a staff member believed a patient who presented at the ED was an appropriate candidate for acupuncture, and if the attending physician agreed, they asked the patient whether he or she wanted to participate in the study.

Acupuncture was offered free of charge to study participants.

Almost 54% of patients agreed to participate. Reasons for not participating included an aversion to needles, fear the procedure would be painful, and skepticism that it would not offer adequate pain relief.

The study included 379 adult patients who presented at the ED at a single center for a variety of painful ailments. Typical complaints included [headache](#), [back pain](#), and abdominal pain.

The mean age of study participants was 47.5 years, and the mean body mass index (BMI) was 30.8. Participants were predominantly female (68.1%) and white non-Hispanic (77.0%).

The researchers rated patients using the Emergency Severity Index (ESI), which is a five-level triage algorithm in which 1 indicates the highest degree of urgency and 5 the lowest. Most patients had a score of 3 (68.9%) or 4 (24.8%).

To assess pain, researchers used a 10-point visual analogue scale.

For most patients, acupuncture treatment lasted 20 or 30 minutes. The standard for such treatment is a minimum of 20 minutes. For most patients (86.0%), eight to 15 needles were placed.

Results showed that the average pain score went from 6.5 before acupuncture to 3.4 following the treatment ($P < .001$).

"That means that acupuncture reduced pain by approximately 50%," said Burns. He noted that this is better than is often achieved with narcotics.

Anxiety, Stress Lowered

On similar 10-point scales, average stress levels decreased 5.7 to 1.9 points, and anxiety levels decreased from 4.8 to 1.6. These reductions were statistically significant ($P < .001$).

"That stress and anxiety went down didn't really surprise me," because most people who receive acupuncture respond by feeling "very relaxed," said Burns.

Acupuncture also cut nausea levels by almost two thirds.

Results showed that increasing age was associated with improved pain scores ($P < .001$).

During ED admission, 46.4%, 27.4%, and 1.6% of patients received an opioid, a nonsteroidal anti-inflammatory (NSAID), and/or tramadol (a serotonin-norepinephrine reuptake inhibitor that binds to the μ -opioid receptor).

Of the total, 10.6% of patients were admitted to the hospital.

The researchers did not undertake follow-up assessments of those who received medications or were admitted, said Burns. He explained that this was a retrospective observational study of patients in the ED, a main purpose of which was to determine acceptability by the patients and the ED staff.

"Next year, we are hoping to perform a more rigorous study of those who were treated in the ED along with a more detailed follow-up investigation," he said.

The current study was carried out in a suburb of Milwaukee; Burns said he wants to conduct another study in a more underserved urban area of the city.

One of the ED physicians who was initially skeptical later told Burns that he was "now a true believer" in the benefits of acupuncture, said Burns.

"Marvelous Study"

Commenting for *Medscape Medical News*, Clayton Jackson, MD, president, American Academy of Integrative Pain Management, and clinical assistant professor of family medicine and psychiatry, University of Tennessee College of Medicine, Memphis, said this was "a marvelous study."

"Anything we can do to reduce the initial onset of prescription opioids is a positive move," said Jackson, who is palliative care physician as well as a pain medicine specialist.

"If we can reduce the use of opioids overall in terms of opioid starts, if we can control pain in another way, in an integrative way, that's a good thing," he said.

Jackson pointed out that only 1% of patients for whom opioids are initiated go on to receive opioids on a long-term basis.

"It's a myth that everyone who is put on opioids stays on opioids for life, and it's another myth that if you're on chronic opioids for chronic pain, that you automatically turn to abuse or aberrant behavior or even illicit behavior, with respect to illicit drugs," he said.

The study is important not only because it showed that acupuncture reduced pain and opioid use but also because it was carried out in the ED setting, said Jackson.

"It shows that integrated therapies can be delivered even in a setting that involves a rapid revolving door sort of care model," he said.

Most EDs want to "turn their patients around" within an hour, if possible, he said. "The fact that acupuncture can be done within the ED and have beneficial outcomes is a remarkable finding."

Whereas use of opioids, NSAIDs, or neuropathic medications are readily available, integrative therapies are sometimes seen as being complex and difficult to access, said Jackson.

This new study shows that this does not have to be the case, he added.

Dr Burns and Dr Jackson have disclosed no relevant financial relationships.

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