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East Meets West: Acupuncture for Pediatric Pain

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Introduction: Acupuncture is a component of health care system of China that can be traced back for at least 2500 years. Acupuncture describes a family of procedures involving stimulation of anatomical locations on the skin by a variety of techniques. There are several approaches to diagnosis and treatment in American acupuncture that incorporates medical traditions from China, Japan and other countries. The most studied mechanism of stimulation of acupuncture point uses penetration of the skin by the insertion of fine, hair-thin, solid, metallic needles for therapeutic or preventive purposes. The National Institute of Health Consensus Development Panel on Acupuncture concluded that acupuncture is effective in the treatment of postoperative and chemotherapy nausea and vomiting, adult postoperative surgery pain, and postoperative dental pain, and showed promising results for headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low back pain, and carpal tunnel syndrome. (Ref. 1) This study reports findings from two years experience in integrating acupuncture into a pediatric pain and symptom management program.

Methods: This study was approved by the Institutional Review Board. We offer inpatient consultation and outpatient clinic visits for pediatric patients. The Visual Analogue Scale (VAS) from 0 to 10 was utilized to conduct pain intensity evaluations of the patients for each visit. The patients received weekly acupuncture treatments for duration of six weeks. At the completion of the six sessions of therapy, the patients may elect to continue their treatments on a schedule of one or two treatments per month. The VAS pain score was obtained from the patient at the start of each visit by an associate other than the acupuncturist. We compared the patients' VAS pain scores from before the first acupuncture treatment with the pain score collected at the conclusion of the therapy. A paired t-test was utilized for statistical analysis.

Results: Three hundred sixty-eight pediatric patients received acupuncture treatments from 1/01 to 12/02. There were 262 females and 106 males. The patients' age ranged from newborn to 18 years of age, with an average of 13.1 ± 4.2 (mean \pm S.D.) years of age. One hundred and seventeen patients were initially seen as inpatient consultations. In average, patients received 7.6 sessions of acupuncture treatment. Regions of the chief complaint at the initial consultation among these patients include: headache (21%); neck, shoulder, arm pain (8%); chest pain (3%); abdominal pain (20%); nausea and vomiting (6%); pelvic pain (2%); low back, hips and lower extremity pain (30%); and others (10%). One hundred and ninety-one patients completed six sessions of treatment, and the mean VAS pain score at the initial consultation was 8.3 ± 1.4 . The mean VAS pain score at the conclusion of the acupuncture treatment was 3.3 ± 1.6 . The overall VAS pain score was significantly reduced by 5.0 ± 1.5 ($p < 0.01$). There were no reported side effects or complications related to the acupuncture treatment. Patients reported attending more school days, having better sleep patterns, and were able to participate in more extracurricular activities.

Discussion: Acupuncture as a therapeutic intervention is widely practiced in the United States. This report indicates that acupuncture can be safely and successfully incorporated into pediatric pain management practice. Pediatric patients experienced a reduction of pain, and overall improvement of well-being while having acupuncture treatments. This report suggests that acupuncture can have a significant positive effect, especially when integrated into a pediatric pain management program. It would be beneficial for pediatric anesthesiologists to be aware of the implications of acupuncture and the possibility of beginning to incorporate acupuncture into more pediatric pain management regimes. Further prospective randomized studies are needed to evaluate the effectiveness of acupuncture pain management in the pediatric population.

Reference

1. JAMA, 1998;280:1518-1524.