

[OS2-100] Effectiveness of Acupuncture in Prevention of Postoperative Nausea, Vomiting, and Abdominal Discomfort in Pediatric Patients Undergoing EGD with pH Probe Placement: Does Complementary Alternative Medicine Have its Place in Modern Pediatric Anesthesia Practice?

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Intro

As part of the workup for GERD in pediatric patients, a pH probe is placed, under general anesthesia, via an EGD. This procedure carries a risk of nausea, vomiting, and retching, which can result in probe dislodgement along with patient discomfort. The standard of care for prevention and treatment of PONV includes the use of 5-HT₃ antagonists and steroids, but these are avoided during the pH probe placement due to fear of altering the pH data. It has been reported that acupuncture may be an effective way to treat nausea and vomiting for patients undergoing chemotherapy, suffering from motion sickness, or pregnancy(1) . We postulated that acupuncture could be an alternative form of PONV prevention in this setting.

Methods

After obtaining IRB approval, patients age 4-18, scheduled to undergo pH probe placement were offered to participate in the study. Parental consent and patient assent were obtained. 23 patients were randomized to two groups, the acupuncture treatment group and control group (no acupuncture). Both groups received a standardized anesthetic prior to the study intervention. The treatment group received electro-acupuncture for twenty minutes with needles placed by a trained acupuncturist physician at 7 specific acupoints. Both treatment and control patients had band-aids placed at the acupoint sites. The recovery room nurses were thus blinded and recorded nausea/vomiting incidents and pain (FLACC or VAS) at 15, 45, and 90 minutes and patient satisfaction (scale of 0-2) at 90 minutes. Wilcoxon rank sum tests were used for age, vomiting incidents, pain, and patient satisfaction. Chi-square tests were used for sex and presence of nausea.

Results

There was no statistical difference between groups for patient age and sex or any of the outcomes. The number of vomiting incidents at 15, 45, and 90 minutes had a Mean (SE) of 0.17 (0.17), 0.42 (0.29), and 0.67 (0.45), respectively, in the treatment group and 0.11 (0.11), 0.11 (0.11), and 0.22 (0.22), respectively, in the control group, with p-values of 0.94, 0.68, and 0.68, respectively. Nausea within 15, 45, and 90 minutes had an N (%) of 1 (8%), 3 (25%), and 3 (25%), respectively, in the treatment group and 1 (11%), 1 (11%), and 1 (11%), respectively, in the control group, with p-values of 0.83, 0.42, and 0.42, respectively. The pain scores at 15, 45, and 90 minutes had a Mean (SE) of 0.17 (0.17), 1.33 (0.56), and 0.67 (0.43), respectively, in the treatment group, and 0.22 (0.22), 1.89 (0.70), and 0.67 (0.44), respectively, in the control group, with p-values of 0.89, 0.57, and 1.00, respectively. Patient satisfaction at 90 minutes had a Mean (SE) of 1.75 (0.13) in the treatment group and 1.67 (0.17) in the control group with a p-value of 0.72.

Conclusion

At this time in patient recruitment, our results show no statistical benefit in the use of acupuncture in this patient population for the prevention of nausea, vomiting, or pain and patient satisfaction. We are still actively enrolling patients and will update the results once completed. We are also going to evaluate the information from the pH probes as to what effect, if any, the acupuncture may have on the data collected.

1. "Acupuncture: NIH Consensus Statement" 1997 Nov 3-5; 15(5): 1-3
