SHORT-TERM ACUPRESSURE DOES NOT PREVENT LONG-TERM POST-OPERATIVE NAUSEA AND VOMITING

Primary Investigator: Rebecca T. Gilbert, RN, MSN, CCRN
University of Virginia Health System, Charlottesville Virginia
Co-Investigators: Eleanor Bergland, RN, BSN, CPAN; Sandra Davis, RN; Nancy Farish, RN BSN; Jill Hance, RN, BSN, CPAN; Camille Kaplan, RN, MSN, CAPA; Susan Ketcham, RN, BSN, CPAN; Lisa Letzkus, RN, MSN, CPNP-AC, CCRN; Marie Manz, RN, BSN; Linda May, RN, BSN; Therese McGrath, RN, BSN; Kathy Podgorski, RN, BSN; Beth Quatrata, DNP, RN, CMSRN, ACNS-BC; Ruth Ryman, RN; Anika Thurston, RN; Rebecca Wolfe, RN, BSN

Introduction: Post-operative nausea vomiting (PONV) is a serious surgical complication. Acupressure at the P6 pressure point prevents nausea and vomiting caused by motion sickness, pregnancy, and chemotherapy.

Identification of the problem: Complications of PONV include dehydration, risk of pulmonary aspiration, metabolic imbalance, surgical site stress, and bleeding, all of which affect surgical outcomes. Furthermore, PONV is associated with extended Post-anesthesia Care Unit (PACU) and hospital stays.

Purpose of the Study: Several studies have evaluated the use of acupressure to prevent PONV with varying results. PACU staff hypothesized that manual acupressure to one wrist during the immediate post-operative period would decrease overall PONV. No previous study had evaluated such a hypothesis.

Methodology: The double blind, randomized study utilized a convenience sample of 270 PACU patients (power=0.8, α=0.05). Subjects were randomized into experimental or control groups. The experimental group (N=134) wore an acupressure wristband which placed pressure at the P6 pressure point. The control group (N=136) wore a wristband without the application of acupressure at P6. The bands were wrapped with gauze to blind the nurses from placement. The band was removed after being worn for 2 hours, or when the patient left the PACU, whichever came first. Data on the incidences of nausea, vomiting and 24 hour post-op antiemetic use was obtained.

Results: Based on Mann-Whitney U analysis, there was no statistically significant difference in nausea, vomiting, or antiemetic use between the two groups:
Episodes of nausea- Control (Mean 1.54, SD 2.65), Experimental (Mean 1.68, SD 2.90). P=0.77;
Episodes of vomiting- Control (Mean 0.16, SD 0.57), Experimental (Mean 0.19, SD 0.58), P= 0.35;
Doses of antiemetic - Control (Mean 0.75, SD 1.13), Experimental (Mean 0.77, SD 1.29), P= 0.48.

Discussion: Acupressure has been shown to reduce nausea and vomiting in certain scenarios. A decrease in PONV would improve surgical outcomes and healthcare costs. However, the short-term use of acupressure was not associated with a difference in overall episodes of nausea, vomiting, or antiemetic use.

Conclusion: Short term acupressure does not make a difference in 24-hour PONV.

Implications for perianesthesia nurses and future research: Future research should focus on acupressure administration for a longer period of time and also consider adding a third group (no band) to evaluate for placebo effect.