

# Wrist Acupuncture Reduces Incidence of Post-Op Nausea and Vomiting

REVIEW FINDS TREATMENT WORKS AS WELL AS ANTI-NAUSEA MEDICATIONS

Editorial Staff

Postoperative nausea and vomiting, or PONV, is an extremely common disorder that occurs in people who have been subjected to general or local anesthesia due to surgery. Depending on the age of the patient being operated on, the type of surgical procedure performed and the way anesthesia is delivered, up to 80 percent of people given an anesthetic may suffer from nausea or vomiting after their operation.<sup>1,2</sup>

Because most episodes of postoperative nausea and vomiting resolve within 24 hours, physicians are often hesitant to treat it. Nevertheless, there are legitimate reasons for doing so. Many patients consider PONV to be as bad as, if not worse than, the surgical procedure itself. In addition, PONV can occasionally cause potential complications, including stress, dehydration and, in extreme cases, tearing or reopening of a surgical incision. These complications can prevent patients from being released from the hospital on time, leading to delays in discharging patients and increasing the cost of care.<sup>3</sup>

Traditionally, doctors have prescribed a litany of antiemetic drugs and used different anesthetic techniques to reduce the incidence of PONV. However, antiemetics are only partially effective in treating nausea and vomiting; not all of them are cost-effective, and many of them produce unwanted side-effects. As a result, a variety of non-pharmacological methods have been employed to treat PONV, including stimulation of P6, a point on the Pericardium meridian.

In a review published in the latest edition of the *Cochrane Database of Systematic Reviews*, researchers examined the use of P6 in treating PONV in more than two dozen studies involving more than 3,000 patients. The review found that stimulating P6 significantly reduced the incidence of both nausea and vomiting compared to sham treatments, and that it worked just as well as antiemetic drugs in the treatment of PONV, but with less associated costs and far fewer side-effects.<sup>4</sup>

## Study Details

To conduct their analysis, the reviewers searched for randomized acupuncture trials published in the CENTRAL, MEDLINE and EMBASE databases, along with acupuncture studies in the National Library of Medicine's publication list. For a trial to be included in the review, it had to compare stimulation of the P6 point to either a sham treatment or drug therapy in the prevention of PONV. Methods of stimulating the P6 point included acupuncture, electroacupuncture, transcutaneous nerve stimulation, laser stimulation, acustimulation devices and acupressure.

A total of 26 trials comprising 3,347 patients met the criteria for inclusion and were used in the

review. All of the trials were conducted between 1986 and 2002. Most of the trials involved healthy adults undergoing elective surgery. Six trials involved children; three consisted of women undergoing a Caesarean delivery that required spinal anesthesia. Eight types of P6 stimulation were employed (manual rotation of needles, dextrose infiltration, semipermanent needles, electrical stimulation of needles, transcutaneous electrical nerve stimulation, laser stimulation, acustimulation devices, and acupressure; one trial used both acupressure and acupuncture). Antiemetic drugs used in the trials included metoclopramide, cyclizine, prochlorperazine, droperidol and ondansetron.

Analysis of the trials found that patients who received real acupuncture at P6 were 28 percent less likely to feel nauseous than patients given sham acupuncture. They were also 29 percent less likely to have an episode of vomiting, and 24 percent less likely to ask for "rescue antiemetics" to prevent PONV, than sham acupuncture patients. "This systematic review has shown that P6 acupoint stimulation is effective in reducing the risk of PONV compared to sham treatment," the authors observed.

In head-to-head comparisons with individual antiemetics, the investigators found "no evidence of difference in the risk of nausea and vomiting" between subjects given drugs and those treated with real acupuncture. In other words, acupuncture at P6 appeared to be just as effective as a typical antiemetic at preventing PONV. When the results of the antiemetic trials were pooled, however, the researchers found "a more significant reduction in the risk of nausea in the P6 acupoint stimulation group than in the antiemetic group." Pooled analysis showed a 30 percent reduction in the risk of postoperative nausea, and an 8 percent reduction in the risk of postoperative vomiting, for patients receiving stimulation at P6 compared to patients taking antiemetics.

Based on the pooled findings, the authors suggested that stimulating P6 with acupuncture could help lower the costs of care associated with some surgical procedures. "There may be economic savings (antiemetic drug cost, length of stay in hospital) associated with P6 acupoint stimulation," the researchers asserted. "... As these trials were homogenous, it is reasonable to assume that P6 acupoint stimulation confers some benefit to preventing PONV when compared to prophylactic antiemetic management."

In all of the trials, side-effects associated with P6 stimulation were considered "minor." In the trials comparing real acupuncture with sham treatments, only one trial included reported pain at the site where acupuncture was delivered. In the trials comparing acupuncture and antiemetics, no side-effects were reported among patients receiving P6 stimulation.

### Current and Future Implications

After reviewing the studies, the researchers reached a pair of conclusions about the use of acupuncture at P6 - one for its use in practice, the other for future acupuncture trials. With regard to treatment, the authors reiterated their suggestion that acupuncture stimulation at P6 "may be more worthwhile for the prevention of PONV in patients with a high baseline risk who are not given prophylactic antiemetics," and that while relatively few studies compared P6 stimulation with antiemetic drugs, "the risk of nausea (but not vomiting) is lower in patients receiving P6 acupoint stimulation than in patients given prophylactic antiemetic treatment."

As for future research, the authors noted that none of the trials in the analysis looked at the effect a combination of P6 stimulation and antiemetics could have on PONV, nor have there been any studies that have compared P6 acupuncture with multiple drugs. They recommend that future studies be

conducted to "assess the optimal timing of P6 acupoint stimulation (preoperative versus intraoperative versus postoperative)," and to determine "whether bilateral stimulation at the P6 acupoint is more effective than unilateral stimulation." They also suggest that trials "use adequate allocation concealment and include clinically relevant outcomes, such as length of stay, to draw meaningful conclusions."

### *References*

1. Watcha MF, White PF: Postoperative nausea and vomiting. *Anesthesiology* 1992; 77:162-184.
2. Sadhasivam S, Saxena A, Kathirvel S, et al. The safety and efficacy of prophylactic ondansetron in patients undergoing modified radical mastectomy. *Anesthesia and Analgesia* 1999;89:1340-5.
3. Haynes GR, Bailey MK. Postoperative nausea and vomiting: review and clinical approaches. *Southern Medical Journal* October 1996;89(10):
4. Lee A, Done ML. Stimulation of the wrist acupuncture point P6 for preventing postoperative nausea and vomiting. *The Cochrane Database of Systematic Reviews*, Issue 3, 2004. DOI: 10.1002/14651858.CD003281.pub2. Available online at [www.cochrane.org](http://www.cochrane.org).

OCTOBER 2004