Can acupuncture have specific effects on health: a systematic review of acupuncture antiemesis trials

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Authors' objectives
To examine whether P6 acupuncture point stimulation has specific effects on the control of nausea and vomiting associated with surgery, cancer chemotherapy and morning sickness.

Searching
The Research Council for Complementary Medicine's CISCOM database was searched using the keywords 'clinical trials', with 'acupuncture', and 'nausea', 'vomiting' or 'hyperemesis gravidarum', and 'transcutaneous electronic nerve stimulation'. The same terms were used for searching MEDLINE from 1966 to March 1995, and EMBASE from 1985 to March 1995. Citations were tracked and leading researchers were contacted for any additional material.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials and controlled trials were included.

Specific interventions included in the review
Manual or electric acupuncture, manual acupressure, acupressure applied by a commercially-available elasticated wrist band, transcutaneous electric nerve stimulation and acupoint injection.

Participants included in the review
Patients who were undergoing either surgery or cancer chemotherapy, and pregnant women, were included.

Outcomes assessed in the review
The outcomes were vomiting, nausea, emesis and morning sickness.

How were decisions on the relevance of primary studies made?
The author does not state how the papers were selected for the review, but they had to meet the following criteria: stimulation of the P6 acupuncture point by needling, manual pressure or electricity; a condition of nausea and/or vomiting resulting from surgery, cancer chemotherapy or pregnancy.

Assessment of study quality
A methodological checklist, based on the following criteria, was used: the population had to be adequately described; experimental and control groups should come from the same population; the sampling method should not introduce bias or confounding variables; a list of eligibility and exclusion criteria should be given; the sample size should be sufficient to ensure positive results were not due to chance and negative results to insufficient power; random allocation; all relevant prognostic variables should be assessed; no major differences in groups at baseline; intervention should be described in full; no differences in treatment for those in the intervention group; a placebo should be used where possible; outcome measures should be appropriate; withdrawals and non-responders should constitute less than 20%; appropriate statistics should be used; the main outcome measure should be predefined; multiple testing should be avoided; and intention to treat analysis should be used. Each paper was ranked good, fair or poor for each criterion. Validity was judged by one reviewer, with a selection of the papers being assessed by a second reviewer.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.
Methods of synthesis
How were the studies combined?
The studies were combined by a narrative review, with tables of studies grouped according to procedure (surgery or cancer chemotherapy) or diagnosis (pregnancy).

How were differences between studies investigated?
The studies were scored according to their methodological quality, but this does not appear to have been used in synthesising the results.

Results of the review
Thirty-three trials in total were included:

21 on post-operative nausea or vomiting (n=2,305);
5 on cancer chemotherapy (n=151); and
7 on morning sickness (n=667).

P6 acupuncture was equal or inferior to the control in all 4 trials in which it was administered under anaesthesia. In 27 of the remaining 29 trials, acupuncture was statistically superior.

In an analysis including only good-quality placebo-controlled trials, in which P6 acupuncture point stimulation was not administered under anaesthesia, P6 showed an effect.

Authors' conclusions
P6 acupuncture seems to be an effective antiemetic technique except when administered under anaesthesia. The studies included in this review are not methodologically perfect, and the reader may decide that the P6 research does not constitute acceptable proof that acupuncture has specific effects on health; if so, it will become necessary to decide the type of research that will settle this question.

CRD commentary
The trials are presented in tables according to patient groups, but the results are presented for all types of patients together. It would have been more appropriate to synthesise the results separately for different groups of patients. The methodological quality of each trial was assessed but the findings are presented for all studies together, except for a separate analysis of 12 high-quality randomised placebo-controlled trials.

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