QUESTION: Is acupuncture effective for the treatment of chronic pain?

Data sources
Studies were identified by searching Medline (1966–99), the Cochrane Complementary Medicine Field trials registry, and the University of Maryland Complementary and Alternative Medicine in Pain (CAMPAIN) databases using the terms acupuncture; alternative medicine; electroacupuncture; moxibustion; injections, intramuscular; medicine, traditional chinese; trigger point therapy; and auriculotherapy. Conference proceedings and bibliographies of relevant articles were also searched.

Study selection
English language randomised trials were selected if they included patients who had had pain for >3 months, used needles rather than surface electrodes, and had a measurement for pain relief.

Data extraction
Data were extracted on acupuncture and control method, study and patient characteristics, methodological quality (low quality was defined as a score < 3 on a 5 point scale; high quality was defined as a score ≥3), and outcomes.

Main results
51 studies (2423 patients with chronic pain, median sample size 18 patients per group) met the inclusion criteria. Follow up duration ranged from 1 day to 1 month. Because of clinical heterogeneity, studies were not statistically pooled (meta-analysed). 21 studies showed acupuncture to be more effective than the reference group (a positive outcome), 3 showed acupuncture to be less effective (a negative outcome), and 27 showed no difference (a neutral outcome). 34 studies (67%) had low quality; these studies were associated with positive outcomes (p = 0.05). 5 studies compared acupuncture with no treatment (waiting list); all had low quality and had positive outcomes. 11 studies compared acupuncture with a physiologically inert control; 7 had low quality, 4 had high quality, 5 had positive outcomes, and 6 had neutral outcomes. 22 studies compared real with sham acupuncture; 10 had low quality, 12 had high quality, 7 had positive outcomes, and 15 had neutral outcomes. 12 studies compared acupuncture with standard care; 11 had low quality, 1 had high quality, 3 had positive outcomes, 3 had negative outcomes, and 6 had neutral outcomes. Having ≥6 acupuncture treatments was associated with a higher rate of positive outcomes (p = 0.03).

Conclusions
For patients with chronic pain, limited evidence exists that acupuncture is more effective than no treatment and inconclusive evidence exists that acupuncture is more effective than placebo, sham acupuncture, or standard care.

COMMENTARY
Acupuncture is one of the oldest forms of treatment. Although its mechanisms of action are still unclear, it has been postulated that the principles of acupuncture for pain relief are allied to those of the gate control theory.1 It has also been suggested that acupuncture stimulation can promote the production of endorphins, thereby producing an analgesic effect. Acupuncture has come to be accepted as a treatment for chronic pain that the Association of Anaesthetists of Great Britain and Ireland has recommended it as a fundamental part of chronic pain management.2 It is therefore appropriate that a review of the effectiveness of acupuncture has been done.

An acknowledged challenge in using acupuncture techniques in a randomised trial is the problem of blinding. Although Ezzo et al note that many of the trials they examined used “sham acupuncture,” it has long been accepted that such an approach often initiates an analgesic response.1 A most important finding was the correlation between low quality trials and positive outcomes. A weakness of the review was the decision to include only English language trials, which may have excluded some rich data.

When compared with no treatment, 5 studies, all of low quality, had positive outcomes. Van Tulder et al did a systematic review of the effectiveness of acupuncture specifically for low back pain.3 3 trials comparing acupuncture with no treatment were found, and all of low quality, but in this case with conflicting findings. Given the association between low quality studies and positive outcomes, further high quality research is needed to definitively address this question.

The reviews by Ezzo et al may help nurses who practise pain management to answer patient questions about the effectiveness of acupuncture as a treatment option for their chronic pain.

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