Acupuncture for labor pain management: a systematic review
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CRD summary
The aim of the review was to evaluate the analgesic effect of acupuncture during labour. The authors concluded that acupuncture appears to be an effective pain control during labour, but there is limited information available. The authors' conclusions follow from the evidence identified in this well-conducted systematic review.

Authors' objectives
The aim of the review was to evaluate the analgesic effect of acupuncture during labour.

Searching
MEDLINE, EMBASE, AMED, CINAHL, PsycINFO, the British Nursing Index, and the Cochrane Library were searched from inception until December 2003; the search terms were reported. No language restrictions were applied. The reference lists of all identified studies, along with the files of the department where the review was conducted, were manually checked.

Study selection
Study designs of evaluations included in the review
Only prospective randomised controlled trials (RCTs) were eligible for inclusion in the review.

Specific interventions included in the review
Studies of acupuncture, electroacupuncture or auricular acupuncture that involved needle insertion during labour were eligible for inclusion. These interventions had to be compared with usual care or placebo acupuncture. All of the included studies used manual acupuncture.

Participants included in the review
No inclusion criteria were specified. It appears that any study involving women in labour were eligible for inclusion. All of the included studies were conducted in either Sweden or Norway and in a hospital setting.

Outcomes assessed in the review
Studies assessing objective and/or subjective measurements of pain-related outcomes were eligible for inclusion. Such measurements included requests for analgesics or epidural analgesia (EDA), pain intensity, and whether acupuncture would be chosen in future labours.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The studies were assessed using the 5-point Jadad scale. This scale was modified to take the difficulties of blinding those administering acupuncture into consideration. The studies were therefore assessed on the basis of randomisation and appropriateness of randomisation methods, patient and assessor blinding, and description of withdrawals and drop-outs. The maximum quality score was 5; studies receiving a score of 4 or 5 were deemed to be of a high quality. Two reviewers independently assessed the identified articles and any disagreements were resolved by discussion.

Data extraction
Two reviewers independently assessed each study and extracted the data using a standardised form. Any disagreements were resolved by discussion.
Methods of synthesis
How were the studies combined?
The studies were combined with respect to two outcomes only: the percentages of patients using meperidine and EDA. For dichotomous data, the relative risks (RRs) were pooled using a fixed-effect model. Weighted mean differences were calculated for continuous data.

How were differences between studies investigated?
Differences between the studies were sought and mentioned if identified. P-values for heterogeneity were presented where 2 or more studies were combined, although it was not reported how these were calculated.

Results of the review
Three RCTs, comprising 496 participants, were included in the review.

The validity assessment found all 3 studies included in the review to be of a good quality.

The pooled analysis of the RCTs showed that patients receiving acupuncture during labour used significantly less meperidine and EDA than those patients in the control arm: the RRs were 0.36 (95% confidence interval, CI : 0.24, 0.54, P<0.0001) and 0.45 (95% CI: 0.29, 0.69, P<0.0003) for meperidine and EDA, respectively. There was no significant statistical heterogeneity between the studies for either the percentage of patients using meperidine (P=0.63) or the percentage using EDA (P=0.51). The results were significant in favour of acupuncture, regardless of whether the control arm was usual care or placebo acupuncture. No severe adverse events of acupuncture were reported in any of the studies.

Authors' conclusions
The evidence for the use of acupuncture as an additional method for pain control during labour is promising. However, this evidence was not wholly convincing, owing to the limited amount of trial data available.

CRD commentary
The review question was clear in terms of the study design, interventions and outcomes of interest. There were no explicit eligibility criteria relating to the participants included in the review. Several electronic databases were searched without language restrictions and the search terms were reported. Unpublished data were not sought, so any relevant unpublished trials would have been missed. The data extraction and quality assessment were carried out in duplicate, which helps reduce reviewer bias and errors. It was not reported how the study selection was performed, so this stage of the review process cannot be evaluated. The quality assessment was performed using appropriate criteria. A meta-analysis was performed for two outcomes only which, given the study details provided, seems to have been appropriate. This was a well-conducted systematic review and the authors’ conclusions appear to follow from the evidence presented, although there is a possible threat of publication bias.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further rigorous research to clearly evaluate the effect of acupuncture on pain in labour is warranted, owing to the limited amount of data available.

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.