Effectiveness of acupuncture-type interventions versus expectant management to correct breech presentation: a systematic review
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CRD summary
This review concluded that acupuncture-type interventions which stimulate BL 67 significantly reduced breech presentations compared to expectant management, however, further high-quality RCTs were required. It was unclear if the primary studies should have been statistically pooled. The results should be considered with caution.

Authors’ objectives
To evaluate the effectiveness of acupuncture-type interventions on acupuncture point BL 67 compared with expectant management to correct breech presentation.

Searching
MEDLINE, EMBASE, AMED, Cochrane Central Register of Controlled Trials, NCCAM and MIDIRS were searched (articles were eligible if published between 1980 and May 2007). Reference lists of retrieved articles were checked for additional citations. Search terms were reported. No language limitations were applied.

Study selection
Eligible studies were either randomised controlled trials (RCTs) or cohort studies with a control group. The intervention was stimulation of BL 67 (an acupoint on the Bladder meridian) via acupuncture, moxibustion or electro-acupuncture. Patients were required to have breech presentation confirmed by ultrasound. Relevant outcomes were defined as: position of foetus after treatment according to ultrasound; position of the baby at delivery; and number of caesarean sections performed in each treatment group.

Included studies were RCTs or cohort studies comparing expectant management with acupuncture-type stimulation of BL 67. Most studies used moxibustion, one combined moxibustion with needling and two studies used electro-acupuncture. One study combined stimulation on BL 67 with five other acupoints. Treatment duration and frequency varied across studies. Where reported, participant ages ranged from 20 to 37 years in the intervention groups and from 22 to 36 years in the control groups. Gestational age ranged from 28 to 34 weeks. Follow-up periods were not reported.

Three reviewers independently selected studies for inclusion. Disagreements were resolved by discussion.

Assessment of study quality
Although the article mentioned assessing relevant methodological aspects, this was not reported further.

Data extraction
Data were extracted from each primary study on the proportion of breech presentations following the treatment period. All data were extracted by three independent reviewers and any disagreements were resolved by discussion.

Methods of synthesis
Pooled odds ratios (OR) and associated 95% confidence intervals (CI) were calculated using a random-effects model for RCTs, cohort studies and all studies combined. Publication bias was assessed by visual inspection of a funnel plot. Statistical heterogeneity was checked using the $\chi^2$ and $I^2$ tests.

Results of the review
Nine trials were included based on seven publications (total n=1,624). No publication bias was noted. Significant heterogeneity was reported overall ($\chi^2 = 9.3$, p=0.001; $I^2=96.2\%$) and a random effect model was used for the meta-analyses.

Seven RCTs (intervention n=421, control n=397) demonstrated a significant effect of acupuncture-type interventions to
reduce breech presentation, OR 0.25 (95% CI: 0.11, 0.58). Two cohort studies (intervention n=347, control n=459) demonstrated similar results, OR 0.29 (95% CI: 0.19, 0.43).

Pooling both RCTs and cohort studies gave an overall OR 0.27 (95% CI: 0.15, 0.46) translating to 28 per cent breech presentation in the intervention group versus 56 per cent breech presentation in the expectant management control group.

No significant harmful effects were reported during or immediately after the intervention. Five cases of pre-term delivery due to pre-term premature rupture of the membrane were reported in the intervention groups across trials.

**Authors’ conclusions**
Acupuncture-type interventions that stimulated BL 67 significantly reduced breech presentations compared to expectant management, however, further high-quality RCTs were required.

**CRD commentary**
This review addressed a clear clinical question with appropriate searches and inclusion criteria. A lack of searches for unpublished material may have introduced some bias into the review. Language bias was minimised by the inclusion of all languages. In general, the methodology was reported clearly and the use of multiple independent reviewers for each stage of the review was likely to have reduced opportunities for reviewer error/bias to influence the results. The authors reported that methodological quality was assessed, but since no details were reported it was difficult to interpret the reliability of the results. It was unclear whether the primary studies recorded their outcomes at the same or similar time points and unclear what the duration of follow-up was. Very high levels of heterogeneity were reported. Merely using a random-effects model may not have been sufficient to take this heterogeneity into account. It was unclear if the studies should have been statistically pooled. The results should be considered with caution.

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

Research: the authors recommended that large-scale RCTs comparing moxibustion with expectant management should be carried out. Moxibustion should be explored because it is inexpensive, can be performed at home by the partner and is safe. Future research should explore participant characteristics and impact on the trial outcomes.

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