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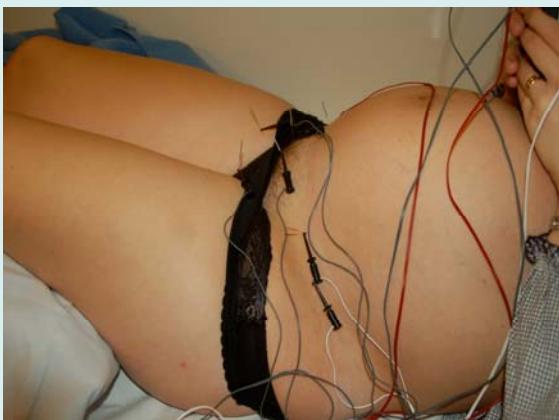
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Acupuncture with manual and electrical stimulation for labour pain: A longitudinal randomised controlled trial

Linda Vixner (1,2) Erica Schytt (1,3) Elisabet Stener-Victorin (4) Ulla Waldenström (1) Hans Pettersson (5) Lena Mårtensson (6) 1: Karolinska Institutet, 2: Dalarna University, 3: Centre for Clinical Research Dalarna, 4: University of Gothenburg, 5: Karolinska Institutet, Södersjukhuset, 6: University of Skövde.



Background

Acupuncture using manual stimulation (MA) of the needles is commonly used to reduce labour pain despite contradictory results from studies of its effectiveness. A combination of manual and electrical stimulation (EA) could reduce labour pain more effectively than MA alone, by a higher treatment intensity.

Aim and Hypotheses

The aim was to evaluate the effectiveness of MA and EA compared with standard care without any acupuncture (SC) in reducing labour pain. Our hypothesis was that both acupuncture stimulation techniques were more effective than SC, and that EA was the most effective.

Methods

Nulliparous women ($n=303$) with a normal pregnancy were equally randomized to three groups receiving 40 minutes of either MA, EA or to SC.

The primary outcome was women's assessment of labour pain; before and after the first treatment, every 30 minutes for five hours, and thereafter every hour until birth, or until epidural analgesia was administered.

For the primary outcome, a linear mixed model for repeated measures was performed to investigate associations between treatment (MA, EA, SC) and pain scores on VAS over time. A difference of 15 mm on the visual analogue scale (VAS) was regarded as clinically relevant, and this required 41 women per group, and compensating for dropouts, in total 101 women in each group.

Data on the primary outcome were obtained from 253 women: MA $n=83$, EA $n=87$, and SC $n=83$.

Conclusion

Acupuncture does not reduce women's experience of labour pain, however, women receiving a combination of manual and electro-acupuncture (EA) used less additional pain relief, including epidural analgesia, and had shorter labour than women in the standard care group (SC). Despite the lower use of other pain relief, a majority of the women who used EA were equally satisfied with their pain relief as the women receiving manual acupuncture alone (MA) or SC. They were also equally satisfied with the support from the midwife.

Results

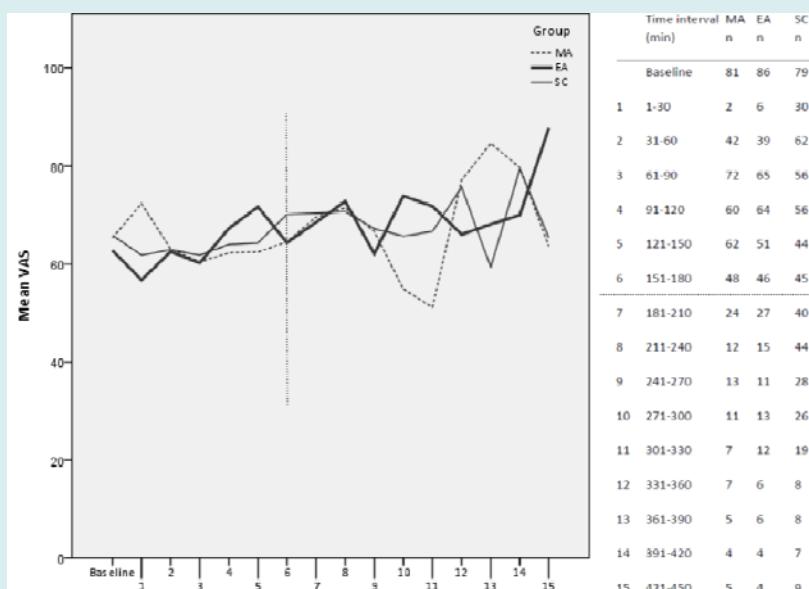


Figure 1. Mean estimated pain scores during labour

MA= Manual acupuncture, EA= combination manual and electro-acupuncture, SC= Standard Care. VAS=Visual Analogue Scale. After time interval 6, $n < 41$ in MA and EA. After time interval 8, $n < 41$ in SC

Mean estimated pain scores on VAS

MA: 66.4, EA: 68.5 and SC: 69.0 (Figure 1).

SC vs MA: mean difference 2.6, 95% confidence interval (CI) -1.7-6.9.

SC vs EA: mean difference 0.6 (95% CI) -3.6-4.8.

Secondary outcomes

Use of epidural analgesia: MA 61%, EA 46%, SC 70%.

EA vs SC: odds ratio (OR) 0.35; (95% CI) 0.19-0.67.

EA vs MA: OR 0.57 (95% CI) 0.31-1.06.

Duration of labour (min): MA 619, EA 500, SC 615.

EA vs SC: Hazard Ratio (HR) 1.44; (95% CI) 1.06-1.97.

EA vs MA: HR 1.41; (95% CI) 1.03-1.91.

Sufficient pain relief: MA 77%, EA 81%, SC 74% (ns).

Positive experience of the midwife: MA 100%, EA 97.5%, and SC 98.7% (ns).

Support from the midwife to a high extent: MA 77.2%, EA 83.5%, and SC 80% (ns).

