

# March Study of the Month

Effects of ear acupuncture combined with cupping therapy on severity and threshold of chronic back pain and physical disability: A randomized clinical trial

## Summary by Daria Schaff, First Year CCNM student

**Introduction:** Chronic back pain affects a large population of people worldwide and has been found to decrease productivity and quality of life in those suffering. Pain is deemed to be chronic if it persists longer than three months. Both ear acupuncture (EA) and cupping therapy (C) are safe, low cost treatments that stimulate the release of endorphins and neurotransmitters and contribute towards pain and inflammation relief. The purpose of this study was to determine if ear acupuncture combined with cupping therapy is more effective than ear acupuncture alone in treating chronic back pain.

**Study Design:** Open label randomized controlled trial

**Population:** 182 adults between the ages of 18-70 years of age presenting with chronic back pain (cervical, thoracic and/or lumbar). EA group (84% female) 47.87 ± 13.18 years of age. EA + C group: (83% female) 48.20 ± 11.62 years of age.

**Intervention:** Participants were randomly assigned to one of 2 treatment groups by a blinded researcher. Participants in both groups received five therapy sessions delivered once a week over a 6 week period. Week 6 consisted of no further therapy and was only used as a follow up to obtain final measurements.

**Outcome Measures:** Pain severity was measured using the Brief Pain Inventory (BPI) Short form. Using a numeric scale ranging from 0-no pain to 10-most severe pain, each patient's pain was assessed at its worst in the last 24h, its least in the last 24h, on average and at moment of assessment. The median from the results was the recorded measurement. Secondary outcome measures included pain relief, pressure-pain threshold and physical disability.

**Results:** Pain severity was significantly reduced by both types of treatment. From the initial to final session, the EA group reported a ≥30% improvement and the EA + C group reported a ≥50% improvement in pain severity. Improvements in pain relief were also reported by both groups with a 6% greater improvement in the EA + C group by the final and follow-up sessions. Finally, addition of the cupping therapy increased the effects of the ear acupuncture on pain outcomes by 30%.

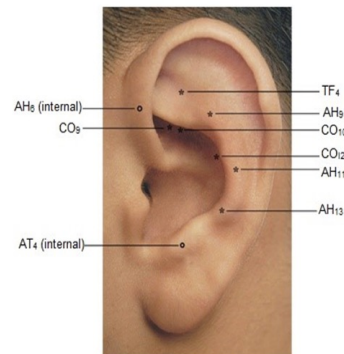


Fig. 1. Location of the acupuncture points for ear anatomy therapy. Abbreviations: TF- Triangular fossa; AH- Antihelix; CO- Conchae; AT- Antitragus; TF<sub>4</sub>- Shenmen; CO<sub>10</sub>- Kidney; AH<sub>6</sub>- Sympathetic nerve; AT<sub>4</sub>- Subcortex; CO<sub>9</sub>- Bladder; CO<sub>12</sub>- Liver; AH<sub>13</sub>- Cervical vertebrae; AH<sub>11</sub>- thoracic Vertebrae; AH<sub>9</sub>- Lumbosacral vertebrae.



Fig. 2. Location of systemic acupoints for cupping therapy used for all participants. Additional localized cupping points were used based on location of back pain. Abbreviations: LR8 – Liver 8; GB30- Gall Bladder 30; GB21- Gall Bladder 21.

**Discussion:** The results of the study showed that EA by itself and EA + C were both effective in treating chronic low back pain. However, patients in the combined therapy group reported a greater decrease in the primary and secondary outcome measures in comparison to the EA group. Therefore, a combined intervention may lead to greater improvements in pain management and quality of life. The lack of male participants can be seen as a limitation of the study due to biological differences between men and women (16% men EA, 16.9% men EA & C).

Can these results be applied to a youth population? If treatment was continued longer than 6 weeks, would we see continued improvement in outcome measures? Future studies should explore treatment periods > 6 weeks.

## Reference:

Moura CC, Chaves ECL, Nogueira DA et. al. Effects of ear acupuncture combined with cupping therapy on severity and threshold of chronic back pain and physical disability: A randomized clinical trial. Journal of Traditional and Complementary Medicine. 2021; <https://doi.org/10.1016/j.jtcm.2021.07.008>

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