

iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	FMC
JC Facilitator	Heather B
JC Discipline	OT

Question

The effectiveness of acupuncture on spasticity following stroke.

Review Question/PICO/PACO

- P** Adults with spasticity following stroke
- I** acupuncture or electroacupuncture
- C** control

Article/Paper

Min Lim, S, Yoo, J, Lee, E, Jung Kim, H, Shin, S, Han, G & Sik Ahn H 2015, 'Acupuncture for Spasticity after Stroke: A Systematic Review and Meta-Analysis of Randomized Controlled Trials', Evidence-Based Complementary and Alternative Medicine, Volume 2015, 12 pages.

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Article Methodology: Systematic Review

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Did the review address a clearly focused question?</p> <p>The aim of this systematic review was to determine how effective acupuncture or electroacupuncture (acupuncture with electrical stimulation) is in treating post-stroke patients with spasticity.</p>
2	✓			<p>Did the authors look for the appropriate sort of papers?</p> <p>The search was performed without restriction with respect to language or year of publication. We searched Medline, EMBASE, and the Cochrane Central Register of Controlled Trials from database start through to July 30, 2013, combining medical subject headings and keyword terms for stroke, acupuncture, and muscle spasticity outcomes. For Korean publications, we manually searched 19 traditional medicine journals, which were accredited or chosen as candidates for accreditation by the National Research Foundation of Korea for relevant articles and The China Integrated Knowledge Resources Database was also included to search related articles in Chinese.</p> <p>Pearling /hand searching of relevant references from previous systematic reviews was conducted.</p> <p>Finally, we also searched an international database for trial registrations to identify ongoing or recently completed trials.</p> <p>Is it worth continuing? YES</p>
3	✓			<p>Do you think the important, relevant studies were included?</p> <p>Relevant clinical trials were manually selected based on the following criteria: (1) patients were diagnosed with stroke, (2) acupuncture was compared to placebo or other conventional therapy, and (3) the study was a randomized controlled trial (RCT).RCTs were included if acupuncture was used at acupoints as the sole treatment or as an adjunct to other treatments for spasticity after stroke.</p>
4	✓			<p>Did the review's authors do enough to assess the quality of the included studies?</p> <p>The two reviewers independently assessed the methodological quality and the risk of bias of the included studies by means of the risk of bias tool in the Cochrane Handbook for Systematic Reviews of Interventions.</p>

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5	✓		<p>If the results of the review have been combined, was it reasonable to do so?</p> <p>Results were combined using meta-analysis. The process for assessing the appropriateness of meta-analysis was outlined in the methods section – statistical analysis on page 2. The pooled meta-analysis of the data showed a weighted mean difference of 0.72 and 95% confidence intervals of 0.29 to 1.14 on the MAS, indicating that acupuncture or electroacupuncture had a significant effect on decreasing poststroke spasticity ($P < 0.001$, $n = 268$; Figure 3, p5).</p>
6			<p>What are the overall results of the reviews?</p> <p><i>Bottom line result:</i> Meta-analysis showed that acupuncture or electroacupuncture significantly decreased spasticity after stroke. A subgroup analysis showed that acupuncture significantly decreased wrist, knee, and elbow spasticity in poststroke patients. Heterogeneity could be explained by the differences in control, acupoints, and the duration after stroke occurrence. In conclusion, acupuncture could be effective in decreasing spasticity after stroke, but long-term studies are needed to determine the longevity of treatment effects.</p>
7			<p>How precise are the results?</p> <p>Precision of the results can be determined by the confidence intervals.</p> <p><i>*Notes on confidence intervals [can determine precision of results]</i></p> <p>Confidence intervals (CI) describe the uncertainty inherent in the observed effect (e.g. risk of falling), and describe a range of values within which one can be reasonably confident that the true effect actually lies. If the CI is relatively narrow, the effect size is known precisely. If the interval is wider the uncertainty is greater, although there may still be enough precision to make decisions about the utility of the intervention. Intervals that are very wide indicate that we have little knowledge about the effect, and that further information is needed.</p> <p>The width of the CI for an individual study depends to a large extent on the sample size. Larger studies tend to give more precise estimates of effects (and hence have narrower CI) than smaller studies. For continuous outcomes (e.g. scores on functional scales), precision depends also on the variability of measurements across individuals; for dichotomous outcomes (e.g. fallers versus non fallers) it depends on the risk of the event.</p> <p>The width of a CI for a meta-analysis depends on the precision of the individual study estimates and on the number of studies combined. Precision may decrease with increasing heterogeneity of included studies and CI will widen correspondingly.</p>

8	Journal Club to discuss	<p>Can the results be applied to the local population?</p> <p><i>Consider whether</i></p> <ul style="list-style-type: none"> - the patients covered by the review could be sufficiently different to your population to cause concern - your local setting is likely to differ much from that of the review
9		<p>Were all important outcomes considered?</p>
10		<p>Are the benefits worth the harms and costs?</p>
10		<p>What do the study findings mean to practice (i.e. clinical practice, systems or processes)?</p>
11		<p>What are your next steps? (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)</p>
12		<p>What is required to implement these next steps?</p>

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