

iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club	Hampstead
JC Facilitator	Danielle Gyss
JC Discipline	Occupational therapy

Clinical Scenario

What interventions are effective in reducing edema and improving function in patients with hand swelling or oedema?

Review Question/PICO/PECO

- P patients with hand swelling/oedema
- I oedema reduction techniques
- C other intervention
- O oedema or function

Article/Paper

Knygsand-Roehoej, K, Maribo, T 2011 'A randomized clinical controlled study comparing the effect of modified manual edema mobilization treatment with traditional edema technique in patients with a fracture of the distal radius', *Journal of Hand Therapy*, vol. 24, pp. 184-194.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the [DOHSA librarian](#).

Article Methodology: Randomised controlled trial

Journal Club Meeting on: 6 March 2012



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iCAHE

University of South Australia
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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Did the study ask a clearly focused question?</p> <p><i>Participants:</i> individuals 18 years and older with unilateral postdistal radius fracture treated with plaster cast, presence of subacute edema four to ten weeks after trauma/surgery, and a 60 ml or more volume difference between the extremities</p> <p><i>Intervention:</i> Group A: MEM (manual edema mobilisation); Group B: traditional edema treatment</p> <p>***All patients underwent regular therapy for ROM and strengthening according to need, in addition to edema treatment. They also received instructions for home exercises to improve hand and wrist mobility.</p> <p><i>Outcomes:</i> edema, active range of motion, pain, ADL level</p>
2	✓			<p>Was this a randomised controlled trial and was it appropriately so?</p> <p>This study was a randomised controlled trial which was an appropriate study design to determine effectiveness of MEM. Is it worth continuing: YES</p>
3	✓			<p>Were participants appropriately allocated to intervention and control groups?</p> <p>The method of randomisation was not reported in the paper. The groups were well matched at baseline, which may suggest that randomisation was successful.</p>
4	✓			<p>Were participants, staff and study personnel 'blind' to participants study group?</p> <p>Only the assessors were blind to treatment, which was one of the strengths of this study. It would not have been possible to blind the patients nor the therapists who administered the edema treatment.</p>
5				<p>Were all of the participants who entered the trial accounted for at its conclusion?</p> <p>A total of 30 participants were allocated, 15 each for the intervention and control group. Only one from the MEM group was not included in the analysis-- not very likely to affect the findings of the study.</p>
6	✓			<p>Were the participants in all groups followed and data collected in the same way?</p> <p>Outcomes were measured and collected in the same way for all participants. All participants were examined at one, three, six, nine and 26 weeks after receiving the intervention.</p>

7	✓			<p>Did the study have enough participants to minimise the play of chance?</p> <p>Power calculation was carried out; 13 individuals were required in each group. To allow for drop-outs, 15 patients were allocated to the intervention and control groups.</p>
8				<p>How are the results presented and what is the main result?</p> <p>Results were presented using means, p-values and confidence intervals.</p> <p><i>Bottom line result</i></p> <p>While both the traditional and modified MEM treatment for edema is effective, fewer sessions are required for MEM to achieve the same outcomes.</p>
9				<p>How precise are these results?</p> <p>The precision of results can be determined based on confidence intervals.</p> <p><i>* The confidence interval describes the uncertainty inherent in the effect estimate, and describes a range of values within which one can be reasonably sure that the true effect actually lies. If the confidence interval is relatively narrow (e.g. 0.70 to 0.80), the effect size is known precisely. If the interval is wider (e.g. 0.60 to 0.93) 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 (e.g. 0.50 to 1.10) indicate that we have little knowledge about the effect, and that further information is needed.</i></p>
10				<p>Were all important outcomes considered so the results can be applied?</p> <p>Journal club to provide answers</p>

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