

CAHE JC Critically Appraised Article Summary

Journal Club Details

Date of submission	February 2009
Journal Club location	Southern Cross Care
JC Discipline/s	Multi-disciplinary
JC Facilitator	Jane Campbell

Clinical Scenario

Is there evidence for the effectiveness of thera-band strengthening exercises program over other forms of exercise in patients with rotator cuff tendinopathies?

Review Question/PICO/PACO

- P** People with rotator cuff tendinopathies / age related degeneration of the rotator cuff
- I** Thera-band rotator cuff strengthening exercise program
- C** No intervention / therapy
- O** Pain scale, functional scale, range of motion

Article/Paper:

Senbursa et al 2007 'Comparison of conservative treatment with and without manual physical therapy for patients with shoulder impingement syndrome: a prospective, randomised clinical trial', *Knee Surgery Sports Traumatology Arthroscopy*, vol 15, pp. 915-921.

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Article Methodology:	Randomised clinical trial
Returned JC on:	20 February 2009
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Ques No.	Yes	Can't Tell	No	Comments
1	✓			Asked a clearly focussed question: Clear inclusion and exclusion criteria for population, clear report of assessment and intervention procedures. Used a range of outcomes including pain, range of movement and function.
2	✓			Randomised clinical trial was an appropriate approach to address this research question, because the underlying question is whether the manual therapy adds anything to a conservative treatment program (exercise).
3		✓		Selection was randomised by taking 30 consecutive patients. Randomisation procedure not reported – assumed that first 15 went to first group. If this is the case then the timing of their attendance for treatment is a form of randomisation. Groups were similar in terms of age, but no other baseline characteristics of groups were reported –risk of sample bias.
4		✓		It was not possible to blind therapists or participants to their allocated intervention. Authors reported blinding assessors to participants group for ROM measurements only. No reporting of blinding for pain or function measurements. Considering the intervention of interest is the manual therapy and the study used experienced manual therapists, blinding of all assessors is essential to ensure that results are valid.
5	✓			No drop outs were reported. No contamination was reported. NB: Co-intervention: Group 2 also received ice and patient education along with their exercise program and manual therapy. Therefore it is difficult to attribute their larger improvements to just the addition of manual therapy. However this may improve the external validity of the findings, as Physiotherapists often provide education and ice routines along with manual therapy

Ques No.	Yes	Can't Tell	No	Comments
6	✓			<p>Followed a routine protocol for</p> <p>1) providing a brochure and demonstrating the exercises or 2) hands-on rehabilitation, exercise, advise.</p> <p>Unclear whether both groups received the same strengthening prescription (time and frequency), but program duration and type were identical.</p> <p>Measurement and collection of data identical between groups.</p>
7		✓		No power calculation reported. N=30.
8		NA		<p>Results presented as means and standard deviations for pain, as raw data for functional questionnaire results and graphically for ROM results.</p> <p>Statistical software was used to establish statistical significance</p> <p>Pain: No between group statistical significance reported , but statistically significant improvements reported for both groups pre-post.</p> <p>Function: Significant improvements for both groups pre-post, but no statistically significant difference between groups –i.e. they were both effective in improving function.</p> <p>ROM: Presented graphically –manual therapy group improved more with their ROM, but statistical significance for these results were not reported.</p> <p>Overall, it appears both interventions are effective. The addition of manual therapy, ice therapy and education to a strengthening program may be more effective again, but an effect size calculation would have given the reader a better idea of the size of the effect and whether it is <i>clinically</i> significant.</p>
9		NA		Precision of results: As above. Confidence intervals and between group measures of variance for all outcomes would have strengthened the presentation of the results.



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Ques No.	Yes	Can't Tell	No	Comments
10	✓			<p>Outcomes:</p> <p>1) Patient orientated: Pain (night, movement and at rest) and function.</p> <p>2) Clinician orientated: ROM and function</p> <p>Participants in study were of working age, so outcomes on work/return to work or other financial impact could have been of value. Eg. improved function was reported, but did this improved function lead to improved outcomes at work or socially.</p> <p>Internal validity: A lack of reporting of assessor blinding is of concern.</p> <p>External validity: More baseline characteristics of participants would have helped the reader judge the external validity of the findings.</p> <p>Overall, both combinations of conservative treatment appear effective and their results were statistically significant in terms of pain and function. The results and conclusions match the aims of the study.</p>