CAHE JC Critically Appraised Article Summary

Journal Club Details

Date of submission	April 2009
Journal Club location	Southern Cross
JC Discipline/s	Physiotherapy
JC Facilitator	Jane Campbell

Clinical Scenario

Is there evidence for the effectiveness and safety of TENS in relieving musculo-skeletal pain for aged patients?

Review Question/PICO/PACO

P People with musculo-skeletal pain living in aged care facilities

I TENS

C No intervention

O Pain scale, functional scale

Article/Paper:

Bjordal JM et al. Short-term efficacy of physical interventions in osteoarthritic knee pain. A systematic review and meta-analysis of randomised placebo-controlled trials. *BMC Musculoskeletal Disorders* 2007; 8:51.

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Article Methodology:	Systematic review
Returned JC on:	8 April 2009
By CAHE staff member:	Lucylynn Lizarondo

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			The review asked a clearly focused question: explicit inclusion criteria for population, intervention, and outcomes.
2	✓			Randomised blinded placebo-controlled parallel and cross over group designs were included. Is it worth continuing? YES
3	✓			The bibliographic search has included a wide range of electronic databases and printed journals and conference abstracts. Experts in the field were contacted for advice on further studies. Other languages such as German and Scandinavian were also included.
4	✓			The methodological quality of the included articles was assessed Using JADAD scale. The quality rating was performed by two independent assessors.
5	✓			Results were pooled to calculate the weighted mean difference between the intervention and the control group (placebo). Where there is heterogeneity, trials were sub-grouped according to pain, methodological quality, dosage and procedural recommendations.
6	✓			The results were presented using weighted mean difference between the intervention and the control group with 95% confidence interval. Results: Short effects (within 4 weeks of commencement of treatment) • Manual acupuncture, static magnets and ultrasound therapies did not offer statistically significant pain relief when compared to placebo. • ***TENS***, electro-acupuncture and low level laser therapy offered clinically relevant pain relief when compared to placebo. Long term effects (follow data up to 12 weeks) • Positive effects seem to be maintained for at last 4 weeks after the course of laser, electro-acupuncture and ***TENS treatment*** was discontinued. In terms of safety, one trial reported occurrence of mild skin reactions after treatment with TENS. Other trials did not specifically report what adverse reactions were experienced by patients.
7		✓		The results for TENS do not seem precise, as shown in the wide confidence intervals. A reduction of 9.6mm (lower limit of the interval), whilst minimal, is still reflective of improvement in symptoms.

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Ques No.	Yes	Can't Tell	No	Comments
8	✓			The population sample covered by the review does not seem to be any different from the characteristics of patients in the local setting, to make the results inappropriate for them. However, the extent to which the results can be applied to the local setting is a decision that is best made by those dealing with each individual setting.
9		✓		The aim of the study was to evaluate the effectiveness of physical agents in osteoarthritis knee pain. Although pain outcomes were limited to VAS and WOMAC score, VAS is widely used in rheumatology and has been considered a robust, sensitive and reproducible method of expressing pain severity.
10	✓			Whilst there were adverse effects reported for TENS, its safety seems good as no serious events were demonstrated. The biological rationale for the observed effects of TENS seems acceptable. The total number of participants (sample size) in the TENS trials met the criteria stated by the Oxford group.