Reviewer's report

Title: The effectiveness of land based exercise compared to decompressive surgery in the management of lumbar spinal-canal stenosis: a systematic review

Version: 1 Date: 22 October 2011

Reviewer: Steve Milanese

Reviewer's report:

- Major Compulsory Revisions

Methods

Search of Literature

Studies were excluded if they were published in languages other than English and were not accessible to the authors. This accessibility issue adds a potent source of publication bias and so needs to be acknowledged at the onset.

Results

Excluded Studies

I think more information needs to be provided for some of the excluded studies i.e. maybe in a table format. You reported that inclusion criteria related to outcome measures within 2 years of the program, however in the fifth reason for exclusion you excluded studies for ‘recording variables at variable time frames or at greater than 2 years’. This needs to be explained.

Also you found 55 studies, however only 42 papers are listed under the reasons for exclusion. This leaves 13 papers for inclusion, not 12. Can you check and revise.

Results

Effect of exercise, Para 2

“Effect sizes for the exercise and ultrasound arm and the exercise and sham ultrasound arm were calculated as 0.04 and 0.44, respectively”. Is this correct???? Is the effect size for the exercise and ultrasound arm that much lower than for the exercise and sham ultrasound arm, or am I misreading it????

Discussion

I think a major point of discussion needs to be the fact that the two subject samples were heterogenic, representing, I would suggest a significant clinical spectrum bias. The exercise group was aged 59.4 (6.1SD) and the surgical subjects were (65.9 (4.24SD). If we assume degenerative LSS, gets worse with time, this study really looked at the effect of land-based exercise in ‘earlier’ LSS, compared with surgery in ‘later’ stage LSS. This is potentially reflected in the fact that the exercise effects decreased over the 2 years (as the condition
progressed). This suggests the review was not comparing “Apples with Apples”, and reflects a limitation of the research literature.

- Minor Essential Revisions

Methods

Study Design

Systematic reviews were excluded, however the authors identified that two had already been done. Were the reference lists of these SR’s searched for any relevant studies not located by the electronic search? Were any found? It is not clear. Given that this review was looking at any study involving exercise for LSS it would appear, in one sense to be an update of the previous SR’s, and as the last one was done in 2010 (Iversen et al), it raises the question, why bother with a systematic search of the literature related to exercise for LSS, i.e. why not just use Iversen et al’s and update it?? I think a statement clarifying this may help.

- Discretionary Revisions

Background, Para 1

The first sentence refers to LSS (lumbar spinal stenosis) however the second part of the paragraph deals with spinal surgery in general. Is it possible to make the statements regarding waiting times and results of surgical opinions relevant to the condition the study is focused on (i.e. LSS)?

Background, Para 2

Once again the authors are jumping between conditions. The middle part of the paragraph deals with exercise approaches for LSS, however the last sentence suggests that exercise is relevant for spinal conditions (which I assume includes LSS, which raises the relevance of this SR if it has already been shown to be cost effective etc). Maybe if they clarified which spinal conditions exercise has been shown to be helpful for (which looking at the reference list is mainly chronic low back pain)

Methods

Exposure, Para 1

Given the current focus in physiotherapy on trunk stability, were core stability exercises included in the list of included exercise approaches?

Results

Effect of exercise, paragraph 1

“At 6 months only one occasion was reported….”. What do you mean by ‘occasion”? do you mean ‘instance’ as you describe it in the preceding sentence? Please clarify.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

Yes

I have previously worked with one of the authors (KGS), and I currently hold an adjunct position at the University of South Australia (where the article originated). I currently work at a different university (James Cook University) in a different state (Queensland).