Reviewer's report

Title: Physical therapies for Achilles tendinopathy: systematic review and meta-analysis

Version: 1 Date: 23 January 2012

Reviewer: Shannon Munteanu

Reviewer's report:

The manuscript is a systematic review and meta-analysis of physical therapy interventions for Achilles tendinopathy (AT). Given the limitations of previous reviews in this area, the study is timely.

The study is relevant to readers of ‘Journal of Foot and Ankle Research’. There is a clear rationale for the study. The manuscript is well-written. The aims of the study are clearly described. There are some aspects requiring revision before the manuscript can be accepted for publication. These will be discussed below.

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

General comments:

The manuscript has not been presented using the journal template. The template can found at: http://biomedcentral.com/download/templates/BMC154d.dot.

Heading hierarchy: JFAR only accepts TWO levels of heading hierarchy. The first level should be indicated with bold Arial 16-point font, and the second level with bold Arial 11-point font (no italics). If you require a third level, this should be indicated by italics in the standard font used in the main text, followed by a colon and no carriage return.

Please ensure that the square bracket references are inserted, eg: There have been several previous studies in this area [1, 2-5].

Please review manuscript and replace ‘et al’ with ‘et al.’.

There are some areas with errors in spacing between words/references.

Rather than referring to Appendix 1 and 2, the authors should refer to ‘Additional file 1’ etc.

Abstract:

I agree that meta-analysis supports laser therapy, individual studies support eccentric exercise and one study supports microcurrent therapy. However, I believe more caution needs to be expressed when recommending shock wave therapy as this intervention was not effective when compared against a sham. In studies where it was effective the comparator group received eccentric exercise
or a wait and see approach. Factors such as ‘resentful demoralisation’ or placebo may be responsible in these studies?

The abstract and perhaps title, need to be more explicit that insertional and mid-portion AT were studied.

Literature review/Introduction/Background:
The literature review is well written and well structured. The rationale for the study is provided.

The initial paragraph of the introduction may be improved if there is elaboration that AT can be classified as insertional and midportion.

Are pharmacological interventions (e.g. NSAIDs, topical rubefacients) used only when physical therapy interventions fail? This needs to be rewritten.

For the reader’s benefit, can the authors elaborate in more detail on the types of physical therapies that have been reported for AT rather than stating ‘…to name a few…’. Perhaps the interventions used as subtitles in the results could be included here.

Methods:
It is acknowledged by the authors that insertional and midportion AT may represent distinct clinical entities (and is also acknowledged as a limitation). Is it valid to pool analyses for an intervention that may be reported for these two conditions? Would a more valid approach be for the results to be presented for midportion and insertional AT separately and studies that do not specify the location of symptoms excluded?

Quality Assessment: The PEDro criteria were used to assess study quality. Is the first item normally considered in the cumulative score? Can the authors provide more elaboration on the score given for each criterion, as well as the total possible score?

Data extraction and analysis: There is some inconsistency in the number of decimal points (i.e. 0 should be 0.0). The authors used a fixed-effect analysis in their meta-analysis. Can they please elaborate/justify this approach and was any statistical approach (such as I squared statistic) used to determine statistical heterogeneity amongst studies included in the analyses?

The authors state that if insufficient data were presented then the corresponding author of the study was calculated. Did any authors respond to the emails? Did any studies present dichotomous data for pain and function that were excluded from the analysis and could this be analysed/presented?

How did the authors deal with any studies that may present multiple outcomes for pain and function?

Results:
Eccentric exercise:

It is unclear why the individual quality score of the Silbernagel et al. paper is included in the text, but not for the other included studies. Please review this.

Please review the in-text referencing on line 4 of paragraph 2 (page 12).

Please capitalise ‘F’ in Figure (i.e. Figure 2) (and review entire manuscript).

Page 13, paragraph 3: should ‘or’ be ‘versus/compared to’.

Page 15: When referring to the ‘two studies evaluating SWT...’ can the authors include references.

Discussion:

As stated previously, I believe more caution needs to be expressed when recommending shock wave therapy as an effective intervention (in paragraph 1) as this intervention was not effective when compared against a sham. In studies where it was effective the comparator group received eccentric exercise or a wait and see approach. These two groups were not treated the same. Factors such as ‘resentful demoralisation’ or placebo may be responsible in these studies? The studies of laser did at least use a sham/placebo. Please also apply this to the Conclusions section.

Page 21: Can the authors include foot orthoses as another recommended intervention for AT that need investigation.

Page 22: Please remove the ‘}’ symbol.

References:

Please review and ensure all journal titles have been abbreviated. There are some small typing errors.

Tables:

Table 1: The PDF version that I have access to doesn’t show any highlighting of cells for which the item for each study has been satisfied. In addition, can the authors check that the table confirms with the journal guidelines (i.e. no vertical lines or shading)? Can the word ‘papers’ be changed to ‘studies’ within the title?

Figures:

Figure 2: There is an asterisk next to the word ‘loading’ but I am unsure if it is meant to be there?

Forest Plots (Figures 2 to 4): Can the authors add a caption at the top of each figure showing the direction of effect (e.g. ‘Favours intervention of interest’ against ‘Favours alternative intervention’)?

Is it possible to add a reference [number] beside each author’s name so that the reader can cross-match to the reference list number?
Appendix 1:
Is the ‘3’ beside ‘orth*’ a typographical error?

Appendix 2:
Should ‘inter-reliability’ be ‘inter-rater reliability’?

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests