Reviewer’s report

Title: Prognostic Factors for Recovery Following Acute Lateral Ankle Ligament Sprain: A Systematic Review

Version: 1 Date: 22 Mar 2017

Reviewer: Simon Steib

Reviewer's report:

General comments:

This systematic review deals with an important topic in sports injury research, summarizing evidence on prognostic factors for recovery after an acute ankle sprain. With this, the topic is novel and of interest to the readers of BMC Musculoskeletal Disorders. The review is properly conducted with a sound and sophisticated methodological approach. The manuscript is well written, rigorously following accepted reporting standards (PRISMA).

Specific comments:

- There are several strong limitations in the studies included: i) poor trial quality ii) very low sample size iii) short follow-up periods (≤ 14day) iv) lack of consideration of confounders in analysis, … This is correctly addressed by the authors at the end of the discussion. However, I feel that the authors could be more careful with summarizing and interpreting the findings from this very inconsistent and mostly low-quality data basis throughout the discussion - at the current point, the factors identified cannot serve for more than a hint towards factors to be considered in future trials.

- Page 6 Line 130: The authors should clarify what they mean by „baseline" prognostic factors. It appears as if prognostic factors assessed late after injury were also considered. E.g. in the results, factors such as re-sprain within 3-mo is mentioned, which is not really a baseline factor.

- Page 6 Line 129: "at least one follow-up time point" - was there a minimum length for the follow-up period? If not, why? This is an important fact when looking at prognostic factors

- Page 10, 1st chapter: please include references of excluded trials

- Page 10 Line 206: "attempts were made to contact the original authors" - please provide more details. How were the authors contacted? Did you also gather information relevant for the quality rating?
- Page 11 Line 218-219: "time frame ranging from one day to 12 months" - this sentence is somewhat misleading since it suggests that one study had a follow-up of one day (and only one day, which is not the case). Please rephrase.

- Page 18 Line 313-315: What was the criterion for judging that samples were representative for the general population? Please clarify!

- Page 18 Line 322-325: This is an interesting fact. However, these factors are interrelated, since e.g. more severe injuries typically go along with more pain and swelling… Maybe one could clarify this here or speculate about the importance of individual factors vs. interrelations.

- Page 18 paragraph 2: Do the prognostic factors reported here refer to short- or long-term recovery? Please clarify.

- Page 18 Line 325: "These factors showed inconclusive evidence…". This reads contradictory to the sentence above (lines 321-322) that these factors demonstrated some consistency. Please be concise and rephrase.

- Page 19 Table 5: It would be helpful to categorize the prognostic factors in this table according to their level of evidence.

- Page 19 Line 336: I cannot follow this statement. How do the before stated factors refer to activities? Please clarify which ones you refer to.

- Page 19 Lines 337 - 344: This study investigates long-term (12-24 months) follow-up. Thus I feel this is somewhat misplaced here since the above mentioned factors correspond to short-term recovery.

- Page 20 Line 356-357: "may be confounded by psychosocial factors" - Which ones? How? This is important and should be specified!

- Page 20 Line 372 - 377: This is a very important aspect, particularly from a clinical/diagnostic point of view. This would suggest emphasizing different types of assessments at different periods after the initial sprain. I would recommend elaborating further on this issue in the discussion.

- Pages 23 - 24: The discussion of the included studies' weaknesses is important, but I felt this section could be shortened and written a bit more concise.

- Pages 18 - 24: Since the discussion is very extensive and covers many different facets I would recommend to include subheadings - this would increase orientation and readability.
- Page 26 Line 503: "Factors that predict poor recovery" - please be a bit more cautious with this statement since it implies sufficient evidence, which is not the case. Also include the recovery time frame that is associated with these factors

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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