Reviewer’s report

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

Version: 1 Date: 24 Mar 2017

Reviewer: Ellen Kemler

Reviewer's report:

In this systematic review prognostic factors for outcome following acute lateral ankle ligament sprains are evaluated. As the ankle sprains are still one of the most common musculoskeletal injuries, this review is relevant for the journal.

Abstract:

The abstract gives a clear overview of the article. In the results section several independent predictors of poor recovery are mentioned, but the main conclusion is that there is still insufficient evidence to recommend any factor as independent predictor. I suggest to replace line 49-51 of the conclusions section to the results section and start the conclusions section with: At Present, .... Replacing these lines makes the conclusion stronger.

Minor point abstract: Line 43 space between 3 and months.

Introduction:

The introduction gives a good overview of the main problem and aim of the study, but is a little bit lengthy. In line 86-88 it is stated that "The combination of a high volume injury with poor prognosis in one-third of injuries, suggests that being able to predict those individuals with expected poor outcome would be of considerable value to injured individuals and healthcare providers."

After this statement, several sentences follow before the answer to why this is of considerable value is given in line 95-99. The sentence "However, the prognostic…". in line 93-95 could be an introduction to the aim of your study. Therefore I suggest rewriting this part of the introduction. I doubt the additional value of line 100-105 for this study. In my opinion these lines could be removed.

Furthermore, the lines about the definition of prognostic factors could perhaps be removed or replaced to the methods section (Line 89-93).
Methods:

Do you have any information on the level of agreement for the data extraction and risk of bias assessment between the two reviewers, e.g. Kappa? Edit: regarding your limitation mentioned in the discussion section I guess not.

Line 174-176: Technically, this is a result of your study and should be replaced to the results section. If possible, when performing a systematic review, results of comparable studies should be pooled; otherwise, e.g. narrative synthesis of prognostic factors can be presented.

Minor point methods: line 176 replace the comma after study with a "."

I am interested in the sub-items and criteria used in the Quality In Prognosis Studies (QUIPS) tool. When does a study have a low risk of bias, when moderate or high? I suggest to include a supplement or Appendix on the QUIPS.

Results:

In the results section an extended overview of the prognostic factors in the included studies is given. However, the quality of the evidence for risk factors is only mentioned in the discussion section. I expect that in the results section and therefore suggest to replace sections of the discussion section regarding the quality of the evidence to the results section or at least mention the quality of the evidence in the results section.

Table 1: Why did you include van de Wees et al, as the time since the injury was 8.7 days (±8.9 days)?

Figure 1: The Box : "Records excluded based on title and /or abstract (n = 3360)" should be on the same level as the Box: "Records screened (n = 3396)", whereas the box about the full text article excluded should be on the same level as the box about full text article assessed for eligibility.

Figures 2 and 3: Will these be printed in color? Are they clear when printed in grey tones?

Table 2,3,4: explanation of R2 is missing.
Discussion:

Line 311: "The overall quality of evidence derived was mainly from eight low-quality studies (89%) and one high quality study (11%)." Is this based on the risk assessment? In the results section it is stated that 1 study was of low risk (high quality?), 5 of moderate risk and 3 of high risk (low quality?) If not based on the risk assessment, what was used?

Table 5 is nog absolutely necessary. Could be removed.

You have extensively described the limitations of the included studies in this review (Page 23-24). Based on these limitations I doubt whether the first clinical implication is valid. And your conclusion about age? In the abstract you state that Age was one prognostic factor demonstrating a consistent association with outcome in three studies. In the conclusion section in the article you suggest a cautious interpretation. Based on this remark I suggest to be more cautious in the Abstract conclusion section.

You recommend performing larger studies with adequate sample size and longer follow-up time point. Please be more specific in this recommendation. What follow-up period is absolutely necessary?

Minor points discussion:

Line 338: remove extra space between Recovery. and The.

Line 343: space between 2 and weeks.

Line 356: remove extra space between recovery. and Although.

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.

Yes

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

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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Please complete a declaration of competing interests, considering the following questions:

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