Reviewer's report

Title: Effects of Soft Bracing or Taping on a Lateral Ankle Sprain in a Controlled Trial: Recurrence Rates and Residual Symptoms at one year

Version: 1  Date: 1 December 2014

Reviewer: Claire Hiller

Reviewer's report:

This is an interesting study of the effects of a 4 week taping or soft brace program on recurrent ankle sprain rates and residual symptoms one year post acute lateral ankle sprain. Overall the study is clearly written but some points need clarification. The discussion was unable to be fully reviewed due to missing information in the methods that may affect interpretation of the results.

Major compulsory revisions

1. Material and methods
   Please describe in more detail how an ALALS was diagnosed.

2. Line 113: What sort of compression was used and did all participants receive the same type of compression?

3. Line 121: Did all participants receive the same brace? What brand/s and manufacturer/s?

4. Line 129: What type of athletic tape was used and did all participants have the same type? Was any underwrap used?

5. State whether the outcome assessors were blinded or not in the data collection section.

6. Line 148: Please provide the questionnaires used for determining recurrences as an appendix.

7. Was any information gathered after the end of the intervention period, about whether participants used bracing or taping during activities? This may have had more effect on the long-term results than the intervention.

8. Line 152: Please provide more information about the secondary outcome measures: how was the level of swelling determined, how was the amount of dorsifexion determined, what is a dynamic anterior ankle test and how was it scored?

9. Line 171: Please provide more information about how you collected the compliance data. Was this a once only questionnaire at 5 weeks, or a daily/weekly questionnaire over 5 weeks?

10. Line 181 ff Statistical analyses.

11. This section is quite difficult to follow. From the results it appears you compared the baseline characteristics of the groups but it is unclear how this was
done. Were your data tested for normality of distribution? A number of different test outcomes are reported in the results sections and it would be useful to have them placed within the stats section with the appropriate statistical method employed ie RR, HR, OR. Was Chi-Square used to compare the RR between groups or another method? Was the logistic regression performed to adjust for potential confounders, given there were none reported to be different at baseline? How were the statistical results for compliance determined?

12. Line 268: The statement ‘ multivariate analysis did not change the effect estimates’ is difficult to assess as these have not been reported in the paper.

Minor essential revisions
1. Line 103: Which medical ethics committee approved the protocol?
2. Line 107: What do you mean by ‘ on the order of presentation’?
3. Line 274: What is a ‘power approach paradox’?
4. Line 276: Can you say your study lacked power when you have just stated that a power analysis was not performed?
5. Line 234ff. Consider comparing your results with others that examined ligament laxity prospectively following an ankle sprain eg Hubbard Tj and Cordova M 2009 Mechanical Instability After an Acute Lateral Ankle Sprain Arch Phys Med Rehabil 90: 1142–1146

6. Line 246ff. For the paragraph comparing the results of the soft brace with other braces, there should be more discussion around whether the soft brace fits more with other functional treatment types rather than other braces. From the figure there does not appear to be any rigidity in the soft brace and its difficult to compare the support compared with a lace-up brace. Have there been any studies comparing the type of brace used in this study with other brace types?

Discretionary revisions
1. Line 59: Place the references by the relevant country.
2. Line 59: Reword to ‘Ankle injury rates are high in both….’
3. Line 92: Delete ‘in’ before ‘which’
4. Line 138: Replace ‘anamnesis’ with ‘clinical history’
5. Line 182: Change risk ratio to relative risk (RR)

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

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