Reviewer's report

Title: Effect of a 6-week dynamic neuromuscular training programme on ankle joint function: A Case report

Version: 1 Date: 1 December 2010

Reviewer number: 1

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General Comments
This is a clearly written manuscript that addresses appropriate clinical questions. Overall, there is a need to improve the purpose and describe a few more details in the Methods and Discussion.

Specific Comments

Background: The authors have summarized appropriate literature. However, a logical argument for only creating a case study rather than an expanded, randomized control trial is not evident. The authors address the limitation that a case study has at the end of the manuscript, however, it would help the reader to understand the rationale that a single case is presented instead of perhaps waiting to compile a larger data set.

Background, 3rd paragraph, line 6: Suggest replacing “are now required” to “should”. I think the way its worded may be a bit strong.

Methods: Please provide demographic information for your case subject. All that is known is that this was a 19 yr old male.

Methods, 2nd paragraph, line 8: Add “exercises” after “postural stability”

Methods, 3rd and 5th paragraphs: How many times did the subject report a giving way or rolling? How frequent were the episodes?

Methods, 6th paragraph: The novelty of the case study is presented here with the primary purpose centered on jump landing. If this is the focus, then why were the SEBT, gait parameters and subjective measures included? The manuscript would benefit from a more defined purpose.

Methods, “Walking”, 2nd paragraph: I don’t believe the use of reference #27 at the end of this paragraph appropriately supports this statement. Please check this.

Methods, “Treatment/Intervention”: Why was a 6-week intervention period employed? Please provide a rationale for this.

Methods: In general, the manuscript could benefit from more detail on the processing of data. I.e., how were kinematic and GRF data filtered and
processed? Because SD are provided in Table 2, I’m assuming that the scores represent a mean of the trials by the subject, but that would be helpful to see that stated specifically.

Results: In the SEBT data, there is a reference made that effect sizes are presented in Table 2. These don’t appear to be in the table, but I think this would greatly improve the data presentation. Ideally, effect sizes would be calculated using a the pooled standard deviations. However, with an n of 1, this becomes problematic. Therefore, I would encourage the authors to state in the Methods that a modified effect size calculation was used. Perhaps you could use the average of the two SD’s from the pre- and post-test?

Results, “Walking”: I’m not sure you can say that a “significant” change in rear-foot angular displacement was not observed. Perhaps with the inclusion of the effect sizes, you can make this statement. Also, why did the authors not include the data for rear-foot angular displacement in Table 2?

Discussion, 1st paragraph: I don’t feel that the authors can say that the sensorimotor insufficiencies “contribute to the development of CAI”. To my knowledge, there has not been a comprehensive, prospective study to examine the development from acute to chronic ankle injury. Perhaps changing the wording to “are associated with CAI” would be more appropriate?

Discussion, 3rd paragraph: I would suggest eliminating the last sentence that begins “The greatest improvement on the SEBT…” I don’t think there evidence exists that has quantified the center of pressure distribution during each of the reaches of the SEBT to support the statement that post-lat direction requires more lateral weight-bearing. Plus, I’m not sure that it adds much to the discussion of the finding.

Discussion, 4th paragraph: At the end of the paragraph, I’m not sure that the use of reference #28 appropriate for this statement. Please check this.

Discussion, 5th paragraph: At the end of the paragraph, I’m not sure that the use of reference #29 appropriate for this statement. Please check this.

Discussion, 6th paragraph: In the 5th sentence of this paragraph, reference #30 is use. However, #30 does not exist in the reference list I received. Please check this.

Discussion: Do the authors have any follow-up information regarding when and to what intensity desired activity was resumed? How many additional episodes of giving way were experienced? This would really strengthen the manuscript to show what clinical cross-over benefit may have been gleamed from this intervention. The outcome measures were clinical in nature, but because they were controlled laboratory measures, outcomes related to the patient’s function and activity would be interesting to note. Also, if enough time has elapsed, has the subject had any additional injury in the last 6 months? 12 months?
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable