Reviewer's report

Title: High-intensity mechanical therapy for loss of knee extension for worker's compensation and non-compensation patients

Version: 1 Date: 11 May 2010

Reviewer number: 2

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Overall, the manuscript was poorly organized, lacked cohesiveness and a limited interpretation of their own results. However, with significant changes, this paper could be substantially improved.

- Major Compulsory Revisions

1. The abstract will need to be re-worked based on the below comments.
2. Paragraph 2 needs to be re-worked. Should separate into several paragraphs into surgical outcomes, conservative outcomes, and then outcomes related to workers' compensation. This paragraph lacks cohesiveness and confuses the reader about how flexion contractures are treated and related outcomes.
3. Paragraph 3 does not provide adequate theoretical or empirical evidence how mechanical therapy works.
4. Paragraph 3, line 7: Should mechanical therapy be categorized based on load and duration. Most literature recommends a low load through either a static progressive load or dynamic splints.
5. Paragraph 7, line 6: How do you find a significant decrease from 3 months to 13 months (0.7 degrees) when the SD is larger than the measurement value? I would recheck your stats.
6. Paragraph 8 should be in the introduction section. This is the background information that establishes why you should study worker's compensation patients. The discussion section should be used to compare your results with the literature.

7. Paragraph 10: A major shortcoming of this manuscript is that the authors do not address the significant findings. As a clinician, the most important finding was a change of almost 8 degrees in 3 months with daily six 10-min bouts. This needs to be addressed.

- Minor Essential Revisions

1. Findings: paragraph 1, line 3: should mention motion loss after several types of knee surgeries (i.e. ACLR) which also have poor function.
2. Paragraph 1, line 10: Don't ipsilateral and other joints degenerate because of postop extension loss
3. Paragraph 3, line 10: Unsure, why a force similar to a PT or a HEP is relevant? Is there any literature to say that the force a PT uses is better or worse than HEP or why is it relevant to what force the device provides? These are two separate issues and I don’t think this statement is needed.

4. Paragraph 6, line 1: How long was mechanical therapy prescribed for? Was there a Total End Range Time (TERT) prescribed?

5. Paragraph 6, line 1: What is the range or standard deviation of the follow-up (at 3 months and 13 month follow-up).

6. Paragraph 6, line 2: Define plateau; Lack of change of ROM by what degrees?

7. Paragraph 6, line 3: Are all measurements in degrees + SD or + SE? Clarify?

8. Paragraph 6, line 3: Why was six 10-min bouts prescribed?


10. Paragraph 6, line 4: Who measured passive knee extension? If multiple people measured, what was your reliability between raters?

11. Paragraph 6, line 4: Was passive knee extension measured in the contralateral knee? If not, why? Contralateral knee ROM is usually the standard, not zero degrees, esp. in ACLR patients.

12. Paragraph 6, line 7: What post-hoc tests were used?

13. Paragraph 7, line 4: If you found a significant decrease between 3 and 13 months, how is this maintained? I would say this was an improvement.

14. Paragraph 10, line 8: Can you speculate any further why patient compliance was improved? Is there any research that demonstrates shorter bouts of exercise increases compliance?

15. Figure 2 description: Don’t rewrite what’s in your results section. Example what the figure is.

16. Figure 3 is unnecessary. Don’t need a visual description of non-significant finding.

17. Figure 2: Need graph significance on figure, such as an asterisk to indicate p < .05.

- Discretionary Revisions

1. Because of wide diagnoses but majority were TKA and ACLR, authors could run secondary analysis on TKA and ACLR.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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