Author's response to reviews

Title: Quantitative analysis of the reversibility of knee flexion contractures with time. An experimental study using the rat model.

Authors:

Guy Trudel (gtrudel@toh.on.ca)
Hans K Uhthoff (h_uhthoff@sympatico.ca)
Louis Goudreau (lgoudreau@Ottawahospital.on.ca)
Odette Laneuville (olaneuvi@uottawa.ca)

Version: 3
Date: 26 September 2014

Author's response to reviews:

Reviewer: Peter Nolte

1. Is the question posed by the authors well defined?

Spontaneous recovery of knee function in an experimental flexion contraction model was studied. In this rat model this is well studied. However in the whole manuscript there is a lot of description of the clinical human situation. The authors should stick to the description of the rat model and only briefly discuss the possible human consequences in the Discussion section.

Response 1. Reviewer Nolte is correct, the revised manuscript segregates better between the animal results and the clinical problem. However, the clinical relevance of joint contractures and possible generalization to clinical situations guided the rationale for the experiments, the selection of the model and the design of the study. We did not carry out this study to apply the results to rats but to learn novel concepts about the disease that can later be tested in clinical studies. Most Journals require emphasizing the clinical relevance of animal experiments. The revised manuscript underwent extensive changes in line with Prof Nolte’s comments to re-balance discussing the results of the animal model and indicating to the readers how these results can translate to the clinical realm.

2. Are the methods appropriate and well described?

Yes, clear description of the model and nice illustrations.

3. Are the data sound?

Yes, clear statistical section; table 1 sufficient. No inconsistency of data.
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes, well balanced manuscript with clear paragraphs; figures easy to interpret.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
No, the main problem with the discussion and the whole manuscript is that this animal experiment and human clinical data are mixed. The authors should stick to their animal experiment and report the consequences with other experiments with rats (immobilization and fracture healing f.i.). Only briefly in the discussion section they could discuss the possible clinical human consequences.

Response 5. As per Response 1, the revised manuscript attempts a better segregation and re-balancing between discussing the animal experimental results, and highlighting the clinical relevance of the results for potential clinical applications, partly by decreasing the clinical discussion, as suggested by Prof. Nolte.

6. Are limitations of the work clearly stated?
Yes, but more emphasis on the rat experiment and much less on humans.

Response 6. As per Responses 1 and 5., more emphasis put on rat experiments but clinical relevance still highlighted in the revised manuscript.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes, very little is known on this subject.

8. Do the title and abstract accurately convey what has been found?
No, the introduction is completely about the human situation and not the rat experiment.

Response 8. As per Responses 1, 5. and 6., Introduction has been revised to rebalance the rat experiments and the clinical relevance of these experiments.
9. Is the writing acceptable?

No, Major Compulsory Revision is warranted.

PA Nolte

Response 9. We hope the above responses and changes to manuscript are acceptable, thank you Professor Nolte for the review and the suggestions.

Reviewer: Perajit Eamsobhana

Minor essentials revision

1. About title of the paper, the temporal analysis seem to be a difficult term for the reader, I suggest the word kinetic analysis is more easy for the reader to understand.

Response 1. Thank you for the comment. We agree that temporal may be a little difficult for the reader. This definition of kinetic in Webster: “of or relating to the motion of material bodies and the forces and energy associated therewith”. What we want to convey is the response of knee joint contracture over time. This definition of temporal in Webster: “of or relating to the sequence of time or to a particular time”. We removed the word temporal from the title and replaced with “with time” in the revised manuscript.