Reviewer's report

Title: Reducing the extent of facetectomy may decrease morbidity in failed back surgery syndrome

Version: 0 Date: 16 Feb 2019

Reviewer: Simon Tiziani

Reviewer's report:

The authors present a finite element analysis comparing complete to partial facetectomy when performing PTED. The manuscript requires EXTENSIVE language editing by a native speaker. I have stopped correcting grammatical errors half way through the introduction. The research topic is interesting and potentially relevant, I have some ethical concerns as stated below.

Background:

Introduction is too long --reduce by one third

page 5, line 31: please rephrase the sentence "... shortly connected...". Language editing
page 5, line 53: inevitable --> inevitably
page 5, line 59: previous --> previously, have --> has
page 6, line 1: ommit "the" --> "... in degenerative..."
page 6, line 1: "performance" seems to be wrong --> rephrase
page 6, line 28: What do the authors mean by "biomechanical degeneration"?
page 6, line 28: "and... and... and..." --> Please rephrase
page 6, line 34: What do you mean by "contradictory results"? You list studies showing negative outcomes of both procedures, why is this contradictory?
page 6, line 37: Which biomechanical "characteristics" do you mean? Be precise.
page 6, line 45: change to: "... to provide adequate field of view,....

page 7, line 45: It remains unclear why the authors chose to do a finite element analysis. What was the authors' hypothesis?

Methods:

page 8, line 20: Why did you perform a CT scan of a healthy young volunteer? Was it not possible to acquire a CT scan (e.g. abdominal CT) of a patient that underwent computed-tomography for a different indication other than the spine? Was this volunteer compensated? Was any statistics performed on the data?
Discussion:

Overall the discussion, the same as the introduction are too long. Moreover the authors repeat themselves on multiple occasions. Please move the whole discussion open with percutaneous down to the discussion.

Conclusion: Your data does not allow for the conclusion drawn in this manuscript. The authors present a biomechanical finite element study. The question whether a patient develops FBSS, cannot be answered biomechanically! Only a prospective clinical study with an adequate sample size would allow for such a conclusion. Please revise your statement.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

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

No

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.

I recommend additional statistical review

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

Not suitable for publication unless extensively edited
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