**Reviewer’s report**

**Title:** Effects of multilevel posterior ligament dissection after spinal instrumentation on adjacent segment biomechanics as a potential risk factor for proximal junctional kyphosis: a biomechanical study.

**Version:** 1  **Date:** 21 Oct 2017

**Reviewer:** Chee Kidd Chiu

**Reviewer's report:**

The manuscript is adequately written. The methodology and result are presented adequately. However, the major flaw of this study is the research idea, inference and conclusion. The authors concluded that the progressive dissection of the posterior ligaments as a potential risk factor for proximal junctional kyphosis, but the study only can prove that there is more absolute ROM and not the risk of PJK. Moreover, the amount degree increase is minuscule of about 1-2 degrees. This may mislead readers of such conclusions. Therefore, I think the author cannot conclude that the dissection of PL will lead PJK but only can prove that there is significant increase in degree of ROM of about 1-2 degrees. I would also suggest that the authors to provide more evidence e.g. to include data on the changes in the angle of disc spaces and changes in the pressure/stress on the disc/vertebra if they are still keen to for the publication of this study.

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

Yes

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

Yes

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

Yes

**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 am able to assess the statistics

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

Needs some language corrections before being published

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