**Reviewer’s report**

**Title:** Degeneration of three or more lumbar discs significantly decreases lumbar spine/hip ROM ratio during position change from standing to sitting in AVN patients before THA

**Version:** 0 **Date:** 17 Nov 2019

**Reviewer:** Yawara Eguchi

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The author investigated the influence of lumbar intervertebral disc degeneration (LDD) on the spinofemoral movement from standing to sitting on AVN patients. Patients with LDD leaned more forward and larger pelvic posterior tilt angle, and less spine flexion and more hip joint flexion than patient without LDD indicating more risks for posterior dislocation.

This is interesting paper but I feel that there are many issues and questions not addressed yet by the manuscript.

1) Please indicate how many cases each affected side, single or both sides of AVN FH. How about coronal alignment (Cobb angle)?

2) A side X-ray of the standing and sitting positions of the LDD and Control groups should be added.

3) Please provide any literature or self-reported cases that evaluated spino pelvic alignment of THA dislocation.

4) In many cases of actual THA recurrent dislocation, spinal flexibility is lost after spine fusion surgery. In this study, patients with previous spine surgery is exclusion criteria, but rather it is thought to influence spinofemoral movement rather than flexible spine. Please mention this also in discussion.
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.

Unable to assess

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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