Reviewer’s report

Title: Horizontal jumping biomechanics among elite female handball players with and without anterior cruciate ligament reconstruction. An ISU based study

Version: 1 Date: 12 Jun 2019

Reviewer: Mario Lamontagne

Reviewer's report:

Clinical application of the study. This case-study report has major issues in the study design having only 6 ACL-D participants compared to 15 uninjured participants. Among the 6 ACL-D participants, two have bilateral ACL-R. The statistical power of this study is somewhat weak. The study does not advance the information in rehabilitation sciences or biomechanics. The methodology of using only one IMU to identify the overall motion of the athletes provides little information about the joint mechanics, however it gives some information about handball specific information. The methods to estimate jumping force from only one IMU is not strongly reliable. The authors would have a great advantage to present the validity and reliability of their instrumentation.

The intent was to better understand the rehabilitation program which it was not described and no strong discussion of the effect of the rehabilitation program on the jumping performance.

The author must revise the manuscript by including the instrument validation and thereafter enrolled more participants in order to increase the statistical power.

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.

No

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 recommend additional statistical review

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

Acceptable

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