Reviewer’s report

Title: The effect of cyclic knee motion on the elongation of four-strand hamstring autograft in anterior cruciate ligament reconstruction: an in-situ pilot study

Version: 0 Date: 22 May 2019

Reviewer: Jiying Chen

Reviewer's report:

I had the opportunity to review the manuscript entitled: "The effect of cyclic knee motion on the elongation of four-strand hamstring autograft in anterior cruciate ligament reconstruction: an in-situ pilot study", which has been submitted to BMC Musculoskeletal Disorders for possible publication.

This study was performed with 53 consecutive patients undergoing transtibial ACL reconstruction with four strand hamstring tendon over a 2-year period, seeking to determine (1) the effect of cyclic knee motion on the elongation of the four-strand hamstring tendon autograft in situ and (2) the stable cycle, in which the tendon length achieved a stable level. The pretension of the tendons was operated by cyclical knee motion ranging from 0°-110° after the femoral fixation with Endo-button. The tendon length after 10, 20, 30 and 40 cycles was measured and compared. The main findings reported is that the four-strand hamstring tendon was elongated after cyclic knee motion and the elongation achieved a stable level after 30 cycles for the transtibial technique.

This study is well-written. I like it. The English writing is acceptable. The study design was clear and the results supported the conclusions. Only several minor comments should be settled.

1. Is this a retrospective or prospective study? It needs improved clarify. If it's a prospective study, authors should determine whether the sample size was big enough to get conclusions. Additionally, the author should show how to group patients, randomly or selectively?

2. Authors should compare the patient characteristics among groups.

3. In the multivariate regression model, what factors were considered as confounders?

Due to the description above, I recommend this paper for publication within our journal after appropriate corrections.
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:

Acceptable

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Please complete a declaration of competing interests, considering the following questions:

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None

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