Reviewer’s report

Title: Biomechanical comparison between single-bundle and double-bundle anterior cruciate ligament reconstruction with hamstring tendon under cyclic loading condition

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Reviewer number: 1

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This article compared single-bundle and double-bundle ACL reconstruction regarding the anterior tibial translation and laxity increase under cyclic loading. Although results from this study are interesting as to show another probable advantage of double-bundle reconstruction, there are some concerns.

Major compulsory Revisions

1. First of all, if the authors would like to argue that the main cause of the laxity increase would be deviation of the grafts inside the tunnel, they should prove it. For instance, how much is the center of the graft deviated after cyclic loading, or how much is the tunnel enlarged after cyclic loading. I suspect that the deviation of the graft has already occurred right after the reconstruction, and without tunnel enlargement, degree of the deviation would not be so different enough to make significant difference in laxity increase.

2. As the authors mentioned in the discussion section, the use of the same specimen for SB and DB reconstructions is the biggest limitation of this study. Especially because they focused on the deviation of the graft, septum between AM and PL tunnels is very important for DB reconstruction. If the DB reconstruction is performed after SB reconstruction, septum would not function properly even though bone plug is packed. Likewise, SB reconstruction after DB reconstruction would make bigger deviation inside the tunnel.

Minor essential revisions

Page 2, line 16: Please add company name etc. after Instron 1122.

Page 2, line 25: The authors are supposed to know every article relevant to their study. Please change the sentence ‘As far as we know’.

Page 5, line 19: Please use the word Krackow’s suture instead of baseball glove suture.

Page 11, line 12: Please add the reference.

Over all, language correction by an English-speaking person is required.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.