Reviewer's report

Title: Comparison of outcomes between the simultaneous and staged unicompartmental knee arthroplasty (UKA) for bilateral knee medial compartment arthritis

Version: 0 Date: 12 May 2019

Reviewer: Timothy Damron

Reviewer's report:

REVIEW of Manuscript Number BMSD-D-19-00550 (Revision of BMSD-D-19-00311)

Summary: Retrospective single institutional, two surgeon review of 93 non-randomized simultaneous vs staged bilateral unicompartmental partial knee replacements from 2008-2015 to minimum 12 months post-operatively illustrates that simultaneous uni's had significantly lower length of hospital stay (LOS), total anesthesia time, and hospital expenses. Although the simultaneous group had significantly lower POD#3 Hgb levels, there was no difference in volume of drainage or transfusions. KSS scores and complications were NS different. This manuscript is a revision of the earlier manuscript BMSD-D-19-00311 with the authors' responses to the reviewers incorporated.

Strength: No change.

Weaknesses: No change. The authors appear to have been receptive to the critiques and for the most part have provided appropriate responses. However, not everything provided in the response to reviewers has been transferred appropriately to the manuscript.
Specific Comments:

1. LL40-41: As pointed out by reviewer 1, the time of FU remains short for an arthroplasty study, but given that the primary focus here is not on joint survival or patient function but rather on intra-operative, hospitalization, complication, and peri-operative endpoints, I believe this is acceptable.

2. LL75-83: In their response to reviewer 1, the authors state that all patients were required to have failed a minimum of 6 months conservative care, but this was not added to the text. I would encourage the authors to insert that in this paragraph.

3. LL99-100: Comment 3 from reviewer #1 is an excellent question but is unlikely to be able to be answered by this manuscript. However, it would definitely be informative for the authors to tell the readers what percentage of the staged UKA's dropped out before the second UKA. That information should be included if at all possible.

4. L125: Somewhere in this vicinity, the authors should add the information with which they responded to reviewer #1 concerning the regular follow-up system of 1 month, 3, 6, and 12 months and annually thereafter. If that has been added, I could not find it.

5. LL291-293: This was an excellent suggestion by reviewer #1, but the manner in which it was executed seems a bit confusing because the comment addresses weaknesses of the manuscript, which are addressed in the paragraph just preceding the conclusion paragraph. I would suggest moving it back to the next to last paragraph and smoothing the text so that it meshes with the comment regarding the weaknesses of a retrospective study.

6. LL217-219: This appears to be text almost verbatim from my review: "in the US increasingly UKA is being done as an outpatient procedure with admission to the hospital for more than 1 or even 2 days being the exception rather than the rule. Even bilateral UKA is frequently done with either outpatient or 1-2 day stay." This should be restated in the authors' own words as they understand the situation.
7. LL220-221: This statement is fine for a response to reviewer, but it doesn't really read well here in the text and should be eliminated.

8. LL220-229: This text will require English language editing for grammar and style.

9. L85: I am still confused regarding whether there was a condition that would lead the surgeons and their anesthesia team to NOT proceed with simultaneous bilateral UKA. As I said in my initial review, one factor considered here in the US is an upper limit on age of 70 (for TKA), and the authors have indicated that they have no age limit, but they also say that they use "ASA grades 1-2 patients as candidates for simultaneous UKA." In the US, at least in my own practice, ASA grade 1-2 patients are pretty healthy, and we would be more likely to consider them for bilateral simultaneous procedures as well. Am I also to take away from your statement that you would not consider even a young ASA 3 patient for simultaneous UKA?

10. L95: Suggest comment regarding small intramedullary access guide rod on femoral side as instrumental part of the Oxford UKA technique.

11. LL108-109: Suggest statement regarding discharge disposition, as not all readers will be from China and will understand that there are no skilled nursing facilities, rehab facilities, or nursing homes in China.

12. L123: Since estimated blood loss (EBL) is such a universal measure in operative outcomes, suggest making a comment similar to your response to this reviewer as to why that data was not considered necessary.

13. L123: Please clarify that "hospitalization expenses" represent total of direct and indirect expenses.

14. L125: Please indicate—if true—that the hospitalization expenses represent the sum of the two hospitalizations.
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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