Reviewer’s report

Title: Antibiotic Impregnated Articulating Cement Spacer Maintained For 7 years In Situ For Two Stage Primary Total Knee Arthroplasty: A Case Report

Version: 0 Date: 25 Jan 2019

Reviewer: Christian Thomas Pollmann

Reviewer's report:

The authors present an interesting case of a patient in whom an articulating cement spacer was retained for 7 years due to the patient's wish to delay the second stage of a two-stage primary knee arthroplasty for chronic, tuberculous arthritis/osteomyelitis.

Reviewer's comments:

- I would suggest that the authors consider using the services of a professional language editing service.

- Abstract:

Tuberculous arthritis/osteomyelitis differs from other bacterial bone and joint infections. I would therefore suggest that tuberculosis is mentioned in the abstract.

Line 10: 'recurred osteomyelitis' - From the patient's history I would suspect that he had persistent osteomyelitis.

Line 11: 'The second-stage TKA was delayed due to fear of having TKA at young age.' - I cannot really make sense of this reasoning. In that case I would have thought the patient also would have declined the first stage.

- Background:

Lines 35-36: '… , currently available evidence suggests that articulating spacers have similar or better outcomes in infection control compared to static spacers.' - The cited evidence only supports the claim of similar outcomes in infection control.

- Case presentation:
I would suggest that the case presentation could be somewhat shortened.

Line 67: ‘… Mycobacterium tuberculosis bacilli …’ - bacillus is a genus of gram-positive, rod-shaped bacteria. Mycobacterium tuberculosis is not a bacillus.

It would be interesting to know which antibiotics were added to the spacer-cement.

- Discussion:

Line 123: 'Therefore, this is the first study …' - This is a case report and I would suggest avoiding to call it a study.

Lines 126-130: Three sentences that all pretty much make the same statement.

Line 134: ‘… migration or micromotion.’ I would suggest that while micromotion can be the cause of bone loss, migration is a consequence rather than the cause of bone loss.

Lines 156-163 largely repeat what was already stated in lines 116-126.

Lines 185-186: Would the authors recommend that the follow-up for bone loss should be done by CT-scanning?

- Legend to figure 5:

The medial femoral condyle seems to be marked with three white arrows, not a yellow arrow as stated.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Unable to assess

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

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.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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