

Peer Review File

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Reviewer Comments

Reviewer A

I have read this review paper about the periprosthetic factors after total hip replacements (epidemiology, outcomes and factors associated with success).

The topic of the paper fits very well into the profile of AOJ. The paper is well structured, the text is clear and well written. The figures and the tables are relevant to the text. The summary and the conclusion are appropriate, and the literature is extensive and up-to-date.

I recommend this paper for publication.

Reviewer B

This is truly an excellent work of synthesis on a topic of current practice for the orthopedic surgeon.

The authors have provided a particularly well detailed work and a complete and exhaustive analysis of the literature. The discussion paper is well constructed and the outline is clear. The research work in the literature is impressive and the authors are to be commended for it.

The article deserves in my opinion to be considered for publication in the journal under the guise of a minor correction.

There are few general remarks.

Comment 1: authors for the next version must reread correctly the journal guidelines available on the website and make adjustments so that the article conforms to the style of the journal. Please review the journal's general guidelines to ensure that the style of the journal is appropriate.

(Example

- In the text, references should be identified with numbers in square brackets.
- In reference, all authors' names must be mentioned. However, if a report has more than three authors, the first three authors should be listed, followed by "et al.
- Reference citations should be placed before periods at the end of sentences. Example:"

Vancouver A, B and C fractures have been shown to occur equally in cemented and uncemented stems [84].”

Reply 1: Thank you for your feedback. We have read the general guidelines and have reflected changes in the manuscript.

Changes in the text: Style of references changed to Vancouver. References more than 3 authors, we listed the first three authors followed by et al.

Comment 2: The list of references is impressive and the authors can be congratulated for that. However, I think that a little cleaning can be done because some articles are old or no longer current or do not include enough patients or too low level of evidence. This will allow to reduce a little bit the list of references to keep only the most relevant ones.

Reply 2: Thank you. We have taken out references that we thought are no longer current or too low evidence.

Changes in the text: Please see our updated reference list.

Comment 3: Epidemology

line 32: “The authors reported a PPF of 0.9% and 4.2%, after primary and revision surgery, respectively at 5-year follow-up and incidence of PPF of 1.7% and 6.2% after primary and revision THA, respectively, at 10-years postoperative.”

In this sentence it misses "an incidence of"

Reply 3: Agreed. Thank you.

Changes in the text: Added “an incidence of” (line 32)

Comment 4: line 42: “In fact, cost of rTHA for an indication of PPF or implant fracture (median: \$27,596) has been shown to be significantly more expensive than for the indications of wear/loosening (median: \$21,176) or dislocation/instability (median: \$16,891).”

It is an interesting information, it could be interesting also to give the country where these figures come from (USA it seems to me) because there are many variations depending on the country.

Reply 4: Agreed

Changes in the text: Added “in the United States (line 43)

Comment 5: line 53: The authors advocated for several methods to improve cost-effectiveness including enhanced recovery programs to reduce LOS, and dual surgeon operating for more complex cases by way of improving surgical efficiency and reducing operating time, while also reducing the risk of complications.”

If you use acronyms, you must announce them before. “to reduce length of stay (LOS)”

Reply 5: Agreed

Changes in the text: Introduced acronym in line 47

Comment 6: line 53: Table 1: In Table 1, the proposition "Presence of contralateral THA in place" is not associated with a reference

Reply 6: Agreed

Changes in the text: added a reference

Comment 7: line 64: “While previous studies have suggested that DAA predisposes patients to post-operative PPFs”

If you use acronyms, you must announce them before

Reply 7: Agreed

Changes in the text: added “direct anterior approach” prior to DAA (lines 82-83)

Comment 8: line 75: “or performing a revision THA whereby the femoral component is exchanged with potential augmentation with cerclage wires”

I don't understand the turn of phrase at the end of the sentence "potential augmentation with cerclage wires"

Reply 8: Thank you. We have rephrased this

Changes in the text: we have changed it to “and the fracture is commonly reduced with cerclage cables”. (line 93)

Comment 9: line 76: “The choice of procedure is in large part determined by the Vancouver Classification, which is a reliable and valid system, that offers a reproducible description of the site of fracture, implant stability and bone stock. [40][41][42][43] (table 2)”

Here the citation of 4 references is not justified. You can keep the two main ones 42

and 43.

Secondly, it is not necessary to use a table to present the Vancouver classification. Either a simple citation is sufficient or a figure is more appropriate to present the classification

Reply 9: Thank you. We have removed some references and table 2.

Changes in text: Table 2 and multiple references removed

Comment 10: line 88: “There is variability among treatment for B2 and B3 fractures regarding revision vs. ORIF”

I don't think there is any real variability in the management of Vancouver B2/B3. The gold standard treatment is still femoral component revision to a stem with diaphyseal fixation and sometimes simple ORIF. You can use this sentence in this sense

Reply 10: Thank you.

Changes in text: The gold standard for treatment for B2 and B3 fractures is femoral component revision to a stem with diaphyseal fixation and sometimes simple ORIF (lines 118-120)

Comment 11: line 93: “Finally, for Vancouver C fractures, the implant is left in place and the treatment is ORIF +/- strut allograft is the standard of care.”

This sentence is not well done

Reply 11: We have changed it.

Changes in text: The standard of care of Vancouver C fractures includes ORIF with potential supplementation with strut allograft. (lines 124-125)

Comment 12: line 103: “Haider et al. [54] found a complication rate of 17.8% at a mean 3.5-year follow-up in 960 rTHAs. Re-fracture, loosening and infection accounted for most complications in their study. Similarly, in a systematic review and meta-analysis that reported on outcomes for patients managed for Vancouver B2 fractures, Lewis et al. [55] reported a complication rate of 18%. The most common complications reported in their rTHA cohort included dislocation (4.8%), infection (3.4%), aseptic loosening + subsidence (3%), and re-fracture (2.3%)”

In the first study you do not give the percentage of each complication, but in the second you do. If you have the percentages you can give them.

Reply 12: We have added percentages

Changes in text: “Re-fracture (2.1%), loosening 3.8%) and infection (4%) accounted for most complications in their study.” (lines 135-136)

Comment 13: line 167: “The authors suggest considering increasing constraint through liner exchange to a dual mobility or constrained liner, where appropriate, to mitigate the risk of dislocation”

This sentence does not belong in this paragraph

Reply 13: Agreed

Changes in text: Removed from text

Comment 14: line 265:” Other studies report a similar rate of dislocation following revision THA. [119,120]”

This sentence is of no interest. These references can be integrated into the first sentence which announces a rate of 5 to 16%.

Reply 14: Agreed

Changes in text: We have removed this sentence and integrated those references into the first sentence.

Comment 15: In the titles of the tables you must give the meanings of the acronyms e.g. Table 1. Factors that have been suggested to increase the risk of periprosthetic fracture (PPF)

Reply 15: Agreed

Changes in text: We have integrated this change into Table 1.

Comment 16: The figures need to be reworked to make them more presentable. When two radios are next to each other, they should be the same size, the small a's and b's in the figures should be more precise, etc.

Reply 16: We agree in regards to the small a's and b's. We have done our best to make the sizes the same

Changes in text: Please see the adjusted figure sizes and the more precise small a's and b's.