



Scientific Review Report



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Peer Reviewer's Comments

Note from the Peer Reviewer, Jane Doe

Dear author,

My name is Jane Doe, and it has been a pleasure reviewing your manuscript. I have an MS degree in orthopedics, and my areas of expertise include musculoskeletal trauma, spine diseases, sports injuries, and degenerative diseases. I have 8 years of peer review experience, and I have reviewed for The American Journal of Sports Medicine (IF: 6.2), Bone & Joint Research (IF: 5.8), and Journal of Orthopaedic & Sports Physical Therapy (IF: 4.75) among others.

I have carefully read and evaluated your manuscript and provided suggestions to strengthen the presentation of your research and highlight its relevance and originality. This report also includes comments on the manuscript's language, structure, and submission readiness from the Senior Science Editor and Managing Editor that I hope you will find useful.

I wish you the very best with the submission of your manuscript!

Summary

- Is the paper ready for submission in its current form?

No; please check my comments in this report and in the manuscript.

- Major issues – Likely to cause journal rejection

- ◆ It is mentioned that the outcomes of THA with the studied stem have been reported to be good in Caucasian patients. Although the authors state that the outcomes may not be the same in Japanese patients, the rationale behind this is not stated. Are there physiological differences that would lead you to expect a difference? Are the types of osteoarthritis that require THA different in Caucasian patients? Please elaborate on the reasoning for carrying out the study.
- ◆ Please clearly describe the study design; I would suggest that this is a longitudinal study.
- ◆ The number of patients mentioned in the different groups does not add up in the methods section, and the process of exclusion with the number of hips remaining at each stage is unclear.
- ◆ The one area which could benefit from further elaboration is the other implications of poor metaphyseal fit. Although you report that this does not affect the stability at follow-up, are there other possible effects of poor fit?

- Minor issues – Likely to cause delays in journal acceptance

- ◆ In the abstract, numerical data to support the statement on differences in stem fixation and bone reaction are required.

- ◆ In the first paragraph of the Discussion, you state that "...this fit of stem is good for 8 to 12 years after surgery..."; however, it is unclear why you mention this period. The range of follow-up for your study was 5-16 years. Please explain how you derived the period.
- ◆ There are significant omissions in the Results section, where you discuss the JOA and CFR values. Please add the JOA scores before surgery and at the follow-up and the mean CFR values.

- Does the paper present novel ideas/a novel direction with regard to the field of research?

It is stated that the stem investigated in the study was designed to achieve stable fixation by metaphyseal fit, but is it difficult to achieve stable fixation using other stems? Is the Anatomic Fiber Metal plus stem considered superior to other stems? Commenting on these aspects will highlight the importance of your study among studies that discuss other femoral components.

- Is the research rationale sound? (is the reason for conducting the research explained clearly in the paper?)

As mentioned previously, are there physiological differences that would lead you to expect a difference in THA outcomes in Japanese patients? Are the types of osteoarthritis that require THA different in Caucasian patients? Discussing these aspects will help readers understand the rationale of the study better.

- Does the journal accept this article type?

The BMJ accepts original research studies. Your manuscript is an original research article, but its structure needs to be revised to meet the journal requirements. Further details are mentioned below.

- Does the research in this article lie within the target journal's scope?

The journal accepts original research studies that improve decision making in clinical medicine, public health, health care policy, medical education, or biomedical research. Your paper will fit this broad scope.

- Does the paper present novel ideas or build on the research published in the target journal?

The target journal has not published too many similar papers in the past.

Assessment by paper section

Title and Abstract

- Are the Title and Abstract representative of the study? How can they be made more compelling?

As per the journal's guidelines, for research papers, the title must mention the study design; I would suggest that this is a longitudinal study. The title of the manuscript is well in line with the manuscript content. The abstract has been revised to follow the journal-recommended structure and include essential information. Further, please include numerical data to support the statement on differences in stem fixation and bone reaction.

- Can a wide readership understand the Title and Abstract independent of the main text? Can they be made more accessible to readers across disciplines?

The title and abstract are easy to follow for healthcare professionals and researchers, who form the readership of BMJ. I believe the content would be a tad difficult to follow for those from other fields of study; however, once the abstract further highlights the rationale for the study (I have mentioned under “Major issues” what further details are needed) and its implications, the content will be more accessible to a wider audience.

Introduction

- **Is the literature review complete and which other papers can the author cite?**

Previous studies on the press-fit and outcomes of total hip arthroplasty using the Anatomic Fiber Metal plus stem need to be discussed in more detail so that what is known and unknown about the research topic is clearly presented. The following papers can be referred to as well for information on the favorable outcomes of THA using anatomically shaped stems:

- ◆ Mai KT et al. Cementless femoral fixation in total hip arthroplasty. *Am J Orthop.* 2010;39(3):126-130.
- ◆ Harada Y et al. Anatomically designed prosthesis without cement for the treatment of osteoarthritis due to developmental dysplasia of the hip: 6- to 13-year follow-up study. *J Orthop Sci.* 2007; 12 (2): 127-133.

- **Are the study objectives clearly stated and do they align with the methods and results?**

The study objective is stated, but it should specify what patient outcomes (clinical, radiological, etc.) are going to be evaluated. The methods and results align with the study objective, but I have indicated in the following responses the gaps in information in the methods and results (JOA scores before surgery and at the follow-up, mean CFR values, number of patients in each group, the process of exclusion at each stage, etc.) that need to be addressed.

Methods

- **Is the research design appropriate? What are the gaps, and what should be done to fill the gaps?**

In the Methods, please clearly describe the study design (e.g., retrospective, single-center, case-series), so the reader does not have to guess it. The process of exclusion with the number of hips remaining at each stage is unclear. Please refer to the individual comments in the manuscript for further information.

- **Is the research methodology sound and relevant to the field? Are the methods detailed enough to be reproduced by a skilled researcher?**

The research methodology is acceptable and widely used in the field. However, as mentioned in response to previous questions, some information regarding the number of patients in each group and the process of exclusion is unclear.

- **Has the manuscript been prepared in accordance with the [EQUATOR Network's](#) research reporting guidelines? What are the gaps, and what should be done to fill the gaps?**

Considering the study design, the manuscript must be prepared in accordance with the STROBE guidelines. The gaps have been highlighted in response to previous questions. To summarize:

- ◆ Indicate the study's design with a commonly used term in the title or the abstract.
- ◆ Explain how the study size was arrived at and describe any efforts to address potential sources of bias.
- ◆ To clarify the process of exclusion with the number of hips remaining at each stage, a flow diagram may be used.
- ◆ Discuss the generalizability (external validity) of the study results

Results and Discussion

- Does the data appear accurate, and has it been interpreted appropriately? Flag cases of insufficient or insignificant data with the author.

Although statistical analyses are described in the Methodology, no p values are included in the results. The journal requires that exact levels of statistical significance be included. Please add the JOA scores before surgery and at the follow-up and the mean CFR values as well.

- Do the tables and figures clearly present the data, and do they align with the description of key results in the text? Flag inconsistencies and inaccuracies with the author.

I am unable to comment on the figures and tables, since they have not been provided for review.

- Should the author get their data verified by a statistician or submit analyzed datasets to the journal?

Although the study describes the statistical approaches used to determine significance, there is no indication of how significant the sample size was. It would strengthen the impact of the study to calculate the minimum significant sample size to confirm that your sample size meets this.

- Are the research implications clearly mentioned? If they are mentioned, are they sound? If they are not mentioned, what tips should the author follow?

Other implications of poor metaphyseal fit need to be mentioned in the Discussion. Although you report that this does not affect the stability at follow-up, are there other possible effects of poor fit?

- Are the concluding statements clear, and do they mention the contributions, limitations, and next steps for other researchers in the field?

The conclusion section is very succinct and simply summarizes the findings of the study. The conclusion must elaborate on the meaning of the results, their significance and implications, and the possible avenues for future research.

Senior Science Editor's Comments on Language and Paper Structure

- How was the paper's overall language quality prior to editing?

(Discuss language quality across a 3-point scale: Needed Few Improvements, Needed Several Improvements, Needed Major Improvements)

Overall, the language of the manuscript needed several improvements to make it submission-ready.

- What were the top 3 recurring grammar and language issues found and edited for native tone?

Sentence construction: The intended meaning did not come through very clearly in some sentences.

Original: The majority of the hips with osteoarthritis are dysplastic hips in Japanese patients

Revised: Dysplastic hips in Japanese patients represent the majority of cases of hip osteoarthritis

Tense: References to past studies should be in the present or present perfect tense. Changes made in this regard are presented in italics in the following examples:

Example 1: The press-fit and outcomes of THA using this stem *have been reported* to be good for primary osteoarthritis in Caucasian patients.

Example 2: However, there *are* few reports available regarding the outcomes of THA using this stem in Japanese patients.

Article use: Definite and indefinite articles were added wherever missing in the file. Changes made in this regard are presented in italics in the following examples.

Example 1: We studied the fixation of the components and *the* bone reaction on an AP radiograph at the final follow-up

- Does the edited paper adhere to the target journal's language preference?

(American v British, formal/technical v accessible, use of tense, use of first person, etc.)

As the BMJ does not provide details regarding language preference, the document has been edited as per your language preference.

- What types of changes were made for improvements to paper flow and how has the paper's readability improved because of these?

Abstract: In the abstract, the gap in existing knowledge on the research topic, which was originally missing, was presented.

Introduction: The context for the study was set, and the research objective and significance of the study were stated.

Methods: The Methods section in the main text was subdivided for clarity.

Results: The results do not mention any *p* values although the methods section includes statistical analysis; please include these values.

Discussion: Per journal requirements, please structure the Discussion section will need to include the following points:

- Statement of principal findings
- Strengths and weaknesses of the study

- Strengths and weaknesses in relation to other studies, discussing important differences in results
- Meaning of the study: possible explanations and implications for clinicians and policymakers
- Unanswered questions and future research

Conclusion: The conclusion section of the abstract was rephrased to better convey the significance.

Senior Science Editor's and Managing Editor's Comments on the Paper's Journal Readiness

- What details or documents are missing in the paper submission package based on the target journal's formatting and submission requirements?
- Title page information and references need to be added.
- The BMJ requires that a subtitle including the study design be included.
- Information needs to be added to the abstract to meet the journal's requirements with respect to structure and word count. Therefore, please add information on the Design, Setting, and Interventions, as required by the journal.
- A transparency statement, funding statement, and a patient and public involvement statement are required.
- The journal requires the use of certain terms to describe statistical results based on the study design. Please check the detailed comment in the manuscript regarding this.
- As mentioned in the previous section, the Discussion needs to be restructured according to the journal requirements.
- Summary boxes stating, "What is already known on this topic" and "What this study adds" need to be included as well.
- List out the journal's author preferences and formatting instructions (including the right file formats) that could not be followed and why.

As Figures and Tables were not provided for editing, I could not confirm this. Please adhere to the following instructions: Figures and images must be provided separately from the word file, preferably as PDF or JPEG files. Images may also be submitted as TIFF, GIF, EPS, MPEG, AVI, MOV, and WAV files. Tables need to be submitted as separate Word files.

- Does the target journal have a word count limit, and does the paper adhere to this limit after editing?

To encourage full and transparent reporting of research, BMJ does not set fixed word count limits for research articles.

- Does the paper need to be split for submission?

The manuscript file should contain your main document; images, supplementary files, and tables need to be provided separately.

- Does the paper need to be blinded for review, and has it been blinded?

The paper does not need to be blinded for review.

- Have ethical and financial declarations been provided? If not, alert the author to do so and explain why.

A statement has been provided confirming that the study was approved by the institutional ethics committee and conforms to the standards of the Declaration of Helsinki.

Please include a statement giving the details of all sources of funding for the study. As appropriate, the statement must include a description of the role of the study sponsor(s) or funder(s), if any, in the study design; in the collection, analysis, and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. In addition, the statement must confirm the independence of researchers from funders and that all authors, external and internal, had full access to all the data (including statistical reports and tables) in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis.

- Is a conflict-of-interest statement provided? If not, alert the author to do so and explain why.

A declaration of interests for all authors must be provided before an article can be reviewed and accepted for publication by the journal.

- Has a data availability statement been provided? If not, alert the author to do so and explain why.

A data availability statement has not been provided. The journal requires a data sharing statement for all research papers. For papers that do not report a trial, the journal does not require that the authors agree to share the data; the authors just need to state whether they will.

- Has the corresponding author been identified for journal interaction?

Please identify the corresponding author and provide the contact address.

- Are all the references, tables, and figures present?

In-text citations have been provided appropriately in most instances, except one instance where a citation needs to be included in the Introduction. This has been flagged for your perusal. Figures and tables were not included.

- Are the references in the right format and the figures and tables labelled appropriately?

In-text citations were appropriately presented in Vancouver style. The reference list was not included. Please be sure to include a reference list in Vancouver style.