Author's response to reviews

Title: Minimally invasive and computer-navigated total hip arthroplasty. A qualitative and systematic review of the literature.

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Author's response to reviews: see over
Dear Editor,

Thank you for your response and for the reviewers' valuable comments and constructive criticism which have enabled us to improve the quality of this resubmitted manuscript.

I hope these revisions are to your satisfaction and enable publication of this paper in BMC Musculoskeletal Disorders.

In the attachment, we have answered the reviewers’ questions and comments point-by-point.

Yours sincerely, on behalf of all co-authors,

Inge Reininga
Title: Minimally invasive and computer-navigated total hip arthroplasty. A qualitative and systematic review of the literature

Response to reviewers’ comments
We would like to thank the reviewers for the care with which they have read our manuscript. The reviewers’ questions and comments will be answered below point-by-point.

Regarding comments from reviewer Flavia Cicuttini

Major Compulsory Revisions
1. Discussion: This is very hard to follow and poorly structured. This needs to be re-written so that it follows a more conventional structure for a discussion. The first paragraph needs to highlight the main findings of this study. These can then be discussed in more detail, including potential limitations. As it is currently written it is very difficult to follow what the main points are. I would suggest that the discussion be re-structured and re-written.

The Discussion section has been restructured and rewritten in accordance with the reviewer’s suggestions. The first paragraph of this section now contains the main findings of the review. In the middle part, these findings are discussed in more detail. In the last part of the Discussion section, some critical remarks are made on the included articles, and some limitations of this review are addressed.

2. When the authors present the results they need to present what they mean more clearly. For example they state on page 7: ‘Hence strong evidence was found for a positive effect of MIS THA on intraoperative blood loss.’ The authors need to clarify what they mean. There are a number of such examples throughout the results section.

In order to present the results more clearly, we restructured both the Methods and Results sections. The “Best evidence synthesis” method has been clarified in more detail at the end of the Statistical analysis section on page 8 (“We therefore chose to summarize the results by means of a qualitative analysis, using a rating system that consists of 5 levels of scientific evidence, taking into account the methodological quality and the outcome of the original studies (best-evidence synthesis)”).

The Results section has been rewritten to focus on the main results. We have added the direction of the results (e.g. decrease or increase, improvement). Furthermore, the Best evidence synthesis is reported as a single section at the end of the Results section (page 15). In this section the evidence for MIS THA and CAS THA is summarized. These revisions have resulted in a reduction of about 400 words.

Minor Essential Revisions
1. The multiple non-standard abbreviations make it hard for the reader to read the text.

In our opinion, the used abbreviations in the text (such as MIS, CAS, THA, WOMAC and SF-36) are fairly common used abbreviations in Orthopedics. If the reviewer may give us more specific information on the abbreviations in question, we are willingly to change them.
Regarding comments from reviewer Ryaz Jinnah

1. There are no major comp. revisions

2. The authors would be well served by simplifying the methods and results part of the paper. It is difficult to read and the numbers are small. Would it be better to combine the results of high and medium quality studies and use them as one.

As suggested by the reviewer, we simplified the Methods and Results sections. In order to present the results more clearly, the direction of the results (e.g. decrease or increase, improvement) is added, and the Best evidence synthesis is reported as a single section at the end of the Results section (page 15). In this section the evidence for MIS THA and CAS THA is summarized. These changes have led to a better focus on the main findings. Additionally it as led to a reduction of about 400 words of the Results section. In our opinion, these changes have made Results section more readable.

The used method for the analysis of the data from the included articles was conducted in line with guidelines for systematic reviews from the Cochrane Collaboration Back Review Group. Furthermore, the results of the assessment of the methodological quality showed that the included articles were all of medium or high quality. We therefore chose not to follow the reviewer’s suggestion to combine the results of high and medium quality studies, since a best-evidence synthesis takes into account the methodological quality and the outcome of the articles.

The introduction and discussion are excellent in this paper and I think it summarizes the controversy over MIS and CAS THA very well and concludes we have no evidence re MIS at this stage. It is very important for practicing ortho surgeons to read this and with the 'stoggy' middle part of the paper I am afraid it will not get the audience it deserves.