

Peer Review File

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Response to reviewer's comments:

Reviewer A: The authors describe their experience in developing and using a unique milling machine that excises the bone spur around the cup during THA.

This method can certainly be unique and effective.

Comment 1: There is no detailed discussion about the safety of using this milling machine.

Please describe what you should do to avoid the surrounding soft tissues (including nerves and blood vessels).

It should also be mentioned that the use of this machine can cause acetabular fractures.

Reply 1: Thank you for your helpful comments. Before milling the acetabular edge osteophytes, three or four Hohmann retractor were placed around the acetabulum, which was general operating process in total hip arthroplasty surgery. Through this way, soft tissues including nerves and vessels could be separated and protected.

Besides, according to your suggestions, we have added this description and mentioned the risk of acetabular fractures using our acetabular edge file in the manuscript.

Changes in the text: We have modified our text as advised (page 6, line 101-104 and page 9, line 161).

Comment 2: Page 8 Line150; "In this study," This paper is not a research paper. It is a presentation of a new surgical method.

It should be "In this method,".

Reply 2: Thank you for your helpful comment and we have amended this expression in our manuscript.

Changes in the text: We have modified our text as advised (page 9, line 154).

Comment 3: Page 9 Line 157-163 The description is emotional and illogical. The authors should prove that the important point of this method is that the osteophyte can

be resected reliably, there is no insufficient resection, and the resection can be performed safely. It is only a merit that the operation time is shortened by this method.

Reply 3: Thank you for your helpful comment and we have amended our manuscript according your advice.

Changes in the text: We have modified our text as advised (page 9, line 159-163).

Reviewer B:

Comment 1: Rationale for selection of patients to use osteotomy or the acetabular edge file techniques. Please clarify.

Reply 1: Thank you for your helpful comment. Patients eligible for primary THA due to hip diseases and a corresponding computed tomography (CT) scanning that identified periacetabular osteophytes preoperatively were included and divided into osteotomy or acetabular edge file techniques randomly.

Comment 2: I suggest to identify operator number and experience level(s) in this study.

Reply 2: Thank you for your helpful comment and we have corrected our manuscript according your comment.

Changes in the text: We have modified our text as advised (page 6, line 94-95).

Comment 3: It would be great to add cost of this new technique or compare overall cost between these two techniques.

Reply 3: Thank you for your helpful comment. We'd like to classified this instrument as a general tool and could be sterilized and used repeatedly, which actually add no additional cost.

Comment 4: For table 1, please add p-value comparing between two groups.

Reply 4: We appreciate your helpful comment and add p-value comparing between two groups in table 1.

Changes in the text: We have modified table 1 as advised.