PEER-REVIEW REPORT

Name of journal: World Journal of Orthopedics

Manuscript NO: 69330

Title: Direct Anterior approach hip arthroplasty: how to reduce complications. A 10-years single center experience and literature review.

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 03067067

Position: Editorial Board

Academic degree: MD

Professional title: Assistant Professor

Reviewer’s Country/Territory: Austria

Author’s Country/Territory: Italy

Manuscript submission date: 2021-06-26

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-07-20 11:15

Reviewer performed review: 2021-07-26 21:23

Review time: 6 Days and 10 Hours

<table>
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<tr>
<th>Scientific quality</th>
<th>[ ] Grade A: Excellent</th>
<th>[ ] Grade B: Very good</th>
<th>[ ] Grade C: Good</th>
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<td></td>
<td>[ ] Grade D: Fair</td>
<td>[ ] Grade E: Do not publish</td>
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<tr>
<th>Language quality</th>
<th>[ ] Grade A: Priority publishing</th>
<th>[ ] Grade B: Minor language polishing</th>
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<td>[ ] Grade C: A great deal of language polishing</td>
<td>[ ] Grade D: Rejection</td>
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<tr>
<th>Conclusion</th>
<th>[ ] Accept (High priority)</th>
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<td>[ ] Minor revision</td>
<td>[ ] Major revision</td>
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<th>[ ] Yes</th>
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SPECIFIC COMMENTS TO AUTHORS

Dear Authors, the direct anterior approach for total hip arthroplasty (DAA-THA) is already an established approach, but still increasing in popularity due to some advantages such as less surgical trauma, minimal dissection of soft tissues, shorter rehabilitation times, faster return to daily activities, lower incidence of dislocation. On the other hand, the literature reports a high rate of intraoperative complications, with many different rates and complication types in the published papers. The aim of the study was to analyze the complications in the authors institute comparing results with the literature and report measures that have taken to reduce complication rates.

Specific comments:
1. The title reflects the main subject/hypothesis of the manuscript.
2. The abstract summarizes and reflects the work described in the manuscript.
3. The key words reflect the focus of the manuscript.
4. The manuscript adequately describes the background, present status and significance of the study.
5. The manuscript describes the methods, but there are some important details missing. Although the authors describe their institute as a single high-volume centre, the number of the different surgeons is not mentioned and furthermore we get no information, if the surgeons are experienced and/or how many of them are experienced! The exclusion criteria for the use of DAA is not clear; Can you please clarify that paragraph; "The exclusion criteria for the use of DAA were: age less than 80 years.....?"
6. Results. The authors retrospectively reviewed a group of 394 consecutive patients, who underwent DAA total hip arthroplasty between 2010 and 2019 and conclude that direct anterior approach is associated to less surgical trauma, minimal dissection of soft tissues, lower blood loss, shorter rehabilitation times and lower incidence of dislocation in their study.
group, which is supported by the recent literature. Furthermore they conclude that complication rate can be reduced by mindful patient selection, preoperative planning with proper implant choice, sufficient learning curve and the use of intraoperative imaging. So, the study contributes to an already quite well known area in this field.

Discussion. The manuscript interprets the findings adequately and appropriately, highlighting the key points concisely, clearly and logically. The findings and their applicability to the literature is stated in a clear manner. The discussion is accurate and it discusses the paper’s scientific relevance to clinical practice sufficiently. The figures and tables are sufficient, of good quality and appropriately illustrative of the paper contents.

The manuscript meets the requirements of biostatistics. The manuscript meets the requirements of use of SI units. The manuscript cites the latest, important and authoritative references in the introduction and discussion sections appropriately.

Quality of manuscript organization and presentation. The manuscript is concisely and coherently organized and presented. The style, language and grammar is accurate and appropriate. Please correct the following mistakes in the discussion section; ..., but only manual techniques of measurement. and in the conclusion section; .., lower blood loss,...

Research methods and reporting. The mean weakness of the study is the retrospective design of the study, which is adequately described in the discussion section by the authors. Another limitation is the heterogenous study group. First of all, there are different operating tables and leg positioners used for the patients. Secondly there are different implants used in the study group, finally decided by the orthopaedic surgeons.

Ethics statements. The manuscript meets the requirements of ethics. After considering this specific comments and performing this minor revisions, the manuscript is worth to be published.
RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Author’s Country/Territory: Italy
Manuscript submission date: 2021-06-26
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Reviewer accepted review: 2021-12-26 11:13
Reviewer performed review: 2021-12-26 22:45
Review time: 11 Hours

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<td>Peer-reviewer</td>
<td>Peer-Review: [Y] Anonymous</td>
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SPECIFIC COMMENTS TO AUTHORS

1 Title. Does the title reflect the main subject/hypothesis of the manuscript? yes

2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? yes

3 Key words. Do the key words reflect the focus of the manuscript? yes

4 Background. Does the manuscript adequately describe the background, present status and significance of the study? yes

5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? The methods are described in adequate detail, but I would mention the exclusion criteria of the age of more than 80 years as an selection bias and you have to mention that in the limitations of the study.

6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? The complications are analysed and compared with the literature; measures are reported, that they have taken to reduce complications rate, like mindful patient selection, thorough preoperative planning, sufficient learning curve and use of intraoperative imaging.

7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper’s scientific significance and/or relevance to clinical practice sufficiently? yes

8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? yes Do figures require labeling with arrows, asterisks etc., better legends? no

9 Biostatistics. Does the manuscript meet the requirements of biostatistics? Yes, as far as I can rate that

10 Units. Does the manuscript meet the requirements of use of SI units? yes

11 References. Does the
manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? yes Does the author self-cite, omit, incorrectly cite and/or over-cite references? yes 12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? Quality of manuscript is well organized and presented. There are still some grammar mistakes, I highlighted in yellow, which should be corrected before publication. 13 Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? yes 14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? Yes, as far as I can rate that. First, what are the original findings of this manuscript? What are the new hypotheses that this study proposed? What are the new phenomena that were found through experiments in this study? What are the hypotheses that were confirmed through experiments in this study? Second, what are the quality and importance of this manuscript? What are the new findings of this study? What are the new concepts that this study proposes? What are the new methods that this study proposed? Do the conclusions appropriately summarize the data that this study provided? What are the unique insights that this study presented? What are the key problems in this field that
this study has solved? Third, what are the limitations of the study and its findings? What are the future directions of the topic described in this manuscript? What are the questions/issues that remain to be solved? What are the questions that this study prompts for the authors to do next? How might this publication impact basic science and/or clinical practice? The study could prove, the DAA is associated with good outcomes and lower incidence of dislocation, but is associated with a higher complication rate, which can be reduced by mindful patient selection, thorough preoperative planning, sufficient learning curve and use of intraoperative imaging. This is confirmed by the data in the study and in the literature. The limitations are well described, but I would mention the exclusion of ages of more than 80 as a limitation, because this is a selection bias, improving clinical outcome and reducing the revision rate in my experience. After performing that and correcting some grammar mistakes, which are highlighted in the revised text, I would recommend to publish that manuscript.