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PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 66831

Title: Selection of internal fixation of femoral intertrochanteric fractures using a finite element method

Reviewer's code: 05317022
Position: Peer Reviewer
Academic degree:MD
Professional title: Doctor
Reviewer's Country/Territory: Netherlands
Author's Country/Territory: China

Manuscript submission date: 2021-04-07
Reviewer chosen by: AI Technique
Reviewer accepted review: 2021-04-07 12:14
Reviewer performed review: 2021-04-07 12:49
Review time: 1 Hour

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

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SPECIFIC COMMENTS TO AUTHORS

The present study aimed to evaluate different internal fixation methods of unstable proximal femoral fractures using finite element method. The subject is interesting and can contribute to the scientific literature. However, some corrections are still necessary to improve the text quality: Abstract: - Remove the software name from the abstract; - Describe the number of models simulated in the present study; - Insert more information about the meshing process and boundary conditions; Introduction: - Correct the sentence "…the intramedullary nail system has become a new favorite in the treatment"; - Avoid the use of personal pronouns in a scientific text, such as "We hope to find a biomechanical answer."; Methods: - Describe the CAD software and the modelling process properly; - Describe the meshing process, number of elements and nodes for each model, the element type and aspect ratio applied in the numerical model; - Describe where the fixation support was defined in the models; - What kind of analysis was performed? Quasi-static? Describe it. - The mechanical properties should be followed by the references that have calculated these values. Please insert them in the table 1. - Describe the contact type between different metallic structures and between metallic structures and bone. - What kind of stress criteria was selected to obtain the results? Results: - Instead just explore the stress peaks and maximum displacements, the authors should provide the colorimetric stress maps. The qualitative view of the results will improve the interpretation and is one of the major advantages when performing a finite element analysis. - How the maximum stress and maximum displacement were recorded? Describe it in the results section. - In table 3, remove the unities from the table and insert them only in the table heading, such as "Maximum stress at the main nail (MPa)" and "Maximum displacement of proximal femur (mm)". Discussion: - Discuss how easy is to individualize an interlocking

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plate model; - Discuss the MPa limits values to the bone tissue and its relation with the stress peaks that you calculated. Conclusion - Shorten it your conclusion section. There are redundant information already discussed and results repetition there. In this section, the authors should select the highlight information with a clear clinical significance.