Name of journal: World Journal of Orthopedics

Manuscript NO: 67502

Title: Comparative study of intertrochanteric fracture fixation using proximal femoral nail with and without distal interlocking screws

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 05208471

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer’s Country/Territory: Netherlands

Author’s Country/Territory: India

Manuscript submission date: 2021-04-26

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-06-30 08:52

Reviewer performed review: 2021-07-01 10:49

Review time: 1 Day and 1 Hour

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<th>Scientific quality</th>
<th>[ ] Grade A: Excellent</th>
<th>[ ] Grade B: Very good</th>
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| Re-review          | [ ] Yes                    | [ ] No                     |


SPECIFIC COMMENTS TO AUTHORS

- 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? + implanting intramedullary nails without a distal locking screw is an interesting technique, it is however not new. Your study concludes that using a locking screw leads to a higher complication rate, however such a strong conclusion cannot be drawn from a retrospective 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? + The study has interesting results, but would benefit greatly of some more information. How many surgeons were involved? Why is the complication rate in the distal locking group this high? What was the rationale for using a long nail in these cases? What was the rationale for using a bi-screw nail instead of a regular PFN with a single femoral neck screw as most surgeons do, and could this be a cause for the high complication rate? - 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? + there are many questions left unanswered in this study, which makes the suspicion of serious bias high,
see also the previous remark. Secondly, this is not a new technique and should not be presented that way. As it is a retrospective cohort, this study can only be hypothesis-forming. It is not the right type of study to draw hard conclusions on. It would however be interesting to study the subject prospectively.
PEER-REVIEW REPORT

Name of journal: *World Journal of Orthopedics*

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Title: Comparative study of intertrochanteric fracture fixation using proximal femoral nail with and without distal interlocking screws

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 05098908

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor

Reviewer’s Country/Territory: Italy

Author’s Country/Territory: India

Manuscript submission date: 2021-04-26

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-07-04 18:36

Reviewer performed review: 2021-07-07 10:37

Review time: 2 Days and 16 Hours

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SPECIFIC COMMENTS TO AUTHORS

The manuscript is a retrospective study aimed to compare the outcomes of intertrochanteric fractures (AO/OTA 31-A1 and A2) treated by PFN with and without distal interlocking. The authors carried out retrospective study of 140 patients having AO/OTA TYPE 31-A1 and 31-A2 in tertiary care center, divided into two groups in which one of the groups had distal interlocking done (Group -1) and the other group was without distal interlocking (Group -2). The subjects were followed up for a mean period of 14 months and assessed for radiological union time, fracture site collapse, and mechanical stability of implant and complications associated in proximal femoral nail with distal interlocking and without distal interlocking and results were compared. I read the article with interest, the title is well thought out and faithfully reflects the content of the study. A) The abstract is sufficiently developed, and it is useful to frame the purpose and characteristic of the study, but a few concerns are present: Comment 1 The background of the abstract is too similar to the introduction, it would be appropriate to diversify a little. B) In the introduction, the characteristics of the fractures in the trochanteric area have been accurately described, even if a little too synthetic. Comment 2: Some references should be added regarding the traumatic mechanism, diagnosis, treatment, and prognosis that can occur after this type of fracture, for example: (Tani T, et al (2019) "Incidence and Clinical Outcomes of Hip Fractures Involving Both the Subcapital Area and the Trochanteric or Subtrochanteric Area"). Comment 3: "The incidence of fractures in the trochanteric area has risen with the increasing numbers of elderly persons with osteoporosis.” Please, adding some bibliographic references. Comment 4: “Distal locking screws of the intramedullary nail
were designed for preventing longitudinal or rotational instability as well as movement of the nail distal tip in cases of a wide canal for the intertrochanteric fracture.” Please, adding some bibliographic references. C) In materials and methods, the evaluation methods have been adequately developed. Comment 4: It would be advisable to specify the experience of the operator who performed the interventions, and to specify whether it was always the same. Comment 5: why did you use the long anatomical designed PFN for 31-A1 and 31-A2 fracture pattern? D) In the results some numeric data are unclear: Comment 6: Why did you not assess the age in the two patient groups? Was it or was it not statistically significant? I think it was an important parameter in the analysis of your results Comment 7: Would it be appropriate to refer to the rehabilitation protocol used in patients? was it the same in both groups? E) The discussion is sufficiently developed, even if a little too synthetic. Comment 8: The discussion is poorly elaborated, with few bibliographical references on the topic, with little attention to the different type of surgical techniques and type of intramedullary nail. Please add some references, for example: (Hoffmann MF, et al (2019) "Outcome of intramedullary nailing treatment for intertrochanteric femoral fractures"). Comment 9: It would be worth referring to the limitations of your study, in particular the fact that you only used one type of intramedullary nail (PFN). Finally, English language editing is needed. Nevertheless, some major changes are needed to be considered suitable for publication.
RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Reviewer’s code: 05208471

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer’s Country/Territory: Netherlands

Author’s Country/Territory: India

Manuscript submission date: 2021-04-26

Reviewer chosen by: Jing-Jie Wang (Online Science Editor)

Reviewer accepted review: 2021-12-16 15:14

Reviewer performed review: 2021-12-16 15:32

Review time: 1 Hour

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SPECIFIC COMMENTS TO AUTHORS
Thank you for your effort adjusting your manuscript. However, some of the remarks have not been altered. - Some of the results are still mentioned in the introduction - determining strategy for each patient (distal interlocking or not) is not described in the methods, this introduces a big risk of selection bias. - the conclusion it too strong for a retrospective study. - the manuscript needs english language editing.