Reviewer's report

Title: Comparison between minimally invasive, percutaneous osteosynthesis and locking plate osteosynthesis in 3- and 4-part proximal humerus fractures.

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Reviewer: Yue Xuan

Reviewer's report:

Title: Comparison between minimally invasive, percutaneous osteosynthesis and locking plate osteosynthesis in 3- and 4-part proximal humerus fractures.

In this manuscript, the authors compared the postoperative outcome of Humerusblock and angular stable plate in treatment of 3- and 4-part proximal humeral fractures. The CMS, UCLA, SST scores and VSA were evaluated from 30 pairs of 60 patients. The Humerusblock showed overall better postoperative outcomes and lower pain scale. Complication was also discussed with details of reduction and pin/screw perforation. I suggest the authors to add more patient-specific conditions and limitation when recommending the Humerusblock approach. The manuscript could be accepted for publication after addressing the following comments.

Major Compulsory Revisions

1) The authors do not cite any reference that has the comparison study concerning the postoperative outcome between angular stable plates and Humerusblock. Is there any previous published work that compared the treatment with those two methods?

2) It will be helpful to show the information of a matched pair example. It is not clear whether all the conditions are the same including gender, handedness, affected side and fracture type, except an age difference with in 3 years?

3) A brief introduction of the CMS, UCLA, and SST scores would be beneficial to the reader who do not have those backgrounds.

4) Please add some labels related to the surgical technique description since it is hard to understand the without a clear figure.

Minor Essential Revisions

Detailed Comments for Author:

1. Page 2, line 82, Change the last period to comma.

2. Page 3, line 94. Please change 'was' to 'were'.

3. Page 4, line 119, is 'tough' a typo? Please rephrase the whole sentence.

4. Page 6, line 161. the' head' of what?

5. Page 6, line 168, line 175, and line 181. change '2,5mm' to '2.5mm'. Please
also check other similar typos.
6. Page 9, line 238. Does 'the patients' indicate all 4 patients?
7. Page 9, line 247. Please add 'and' before 'mean anterior...'.
8. Page 9, line 256 and line 257, please change '2' to 'Two'.
9. Page 9, line 259, Please rephrase 'for us'.
10. Page 10, line 282. Please add 'were' before 'significantly better...'.
11. Page 10, line 287. Please correct 'it may is...'.
12. Page 13, line 339. please correct 'is often due to ...cause...'.
13. Page 13, line 344. Please add more details to explain where is the shear force?
14. Page 13, line 350. Please add 'on' after 'which is base'.

Figures and Tables
Figure 1. Please add the treatment method in the title of Figure 1.
Figure 1 and 2. Please add some labels related to the surgical technique description since it is hard to understand the k wire, screw and reduction without a clear figure.
Since all the scores are the main standards to compare the two treatment, a table contain all the scores may have better presentation.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests.