Reviewer’s report

Title: Open reduction and internal fixation of humeral midshaft fractures: anterior versus posterior plate fixation

Version: 0 Date: 07 Jul 2019

Reviewer: Robinson Pires

Reviewer's report:

Dear authors,

Thank you for the opportunity to review this interesting manuscript.

The manuscript compares two surgical techniques for midshaft humeral fracture fixation. The topic is prevalent and relevant for the daily practice of the orthopaedic trauma surgeon. The casuistic is reasonable and the cases well documented.

However, I have some concerns regarding the study.

1- Six months minimum follow-up is unacceptable to evaluate outcomes and complications. I strongly recommend the authors to evaluate patient outcomes with at least 1-year follow-up.

2- Exclusion criteria should address open fractures. Although the authors reported no documented infections, including open and closed fractures could be a potential bias.

3- The surgical technique of anterolateral approach should better detailed. I suggest the authors to perform a drawn or show pictures of the approach to allow the readers to better understand and be able to perform the approach after reading the paper.

4- The authors should include more information regarding the minimally invasive anterior bridge plating for diaphyseal humeral fractures. The anterior bridge plating is also performed in supine position and is an interesting alternative technique, especially in politrauma patients. The authors cited the Matsunaga paper, that compares the bridge plate with the Sarmiento treatment, but didn't reported the interesting results of the study.

5- The authors should discuss the potential advantages of surgical treatment of midshaft fractures of the humerus addressing the new studies that show a 1/4 rate of failure when using the Sarmiento treatment.

6- The authors stated that "in 50 cases, healing was defined as secondary healing with callus formation. In seven cases, healing was defined as primary fracture healing." (It's not clear if the authors advocate relative or absolute stability when using the anterolateral approach. It must be clarified.

7- Figure 2 depicts a distal humeral shaft fracture treated with anterior plating. The radiograph in anteroposterior view shows no anatomical reduction of the fracture. It seems that the authors tried to
perform absolute stability, but the fracture healed with some callus formation. Once again, it should be clarified.

Overall, the manuscript is interesting and relevant. However, I do recommend the authors to revise the manuscript addressing the above suggestions.

Best regards

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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I am able to assess the statistics

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