Reviewer’s report

Title: Detection of articular perforations of the proximal humerus fracture using a mobile 3D image intensifier.- A cadaver study

Version: 0 Date: 28 Mar 2017

Reviewer: Reto Babst

Reviewer's report:

It is overall a well written paper and of interest for the reader. Minor revision suggested.

Introduction is good.

Primary and secondary aim well defined.

Methods:

K-wire placement line 74-5 is confusing:

Wires were perforating the subchondral bone but also just below the cartilage?

Are these perforating into the joint or not?

How visible are they if they are below the cartilage? Were all as good visible as on the figure provided?

Who defined the position of the K-wires? One or more observers? This is important to define as it is the gold standard.

Who performed the analysis of the images?

Was this one or were there more observers?

Experience?

Blinded?

Discussion:

How reliable are the results that are being presented, i.e. number of observers, observer variation?
How realistic is the use of a 3D image intensifier in proximal humeral fracture treatment. Do the authors have experience with this?

Elaborate on the differences with the other studies, i.e. why did Bengard et al not found similar results? What are the additional strenghts of this study with respect to the others?

Conclusion good.

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

No

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

Unable to assess

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

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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