Reviewer's report

Title: Effect of baseplate size on primary glenoid stability in reverse shoulder arthroplasty: a biomechanical study

Version: 1 Date: 13 October 2014

Reviewer: Gunther H. Sandmann

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Major compulsory revisions: General remarks:
This biomechanical study is the attempt to find out, whether a smaller base plate has an effect on primary glenoid stability after reverse shoulder arthroplasty compared to a standard sized base plate. The biomechanical study uses fresh frozen cadaver shoulders and tested two different sized base plates for micromotion of glenoid components.

Special remarks:
Abstract:
The abstract is clearly structured and gives all the necessary information.

Introduction/ Methods:
Well written and guiding to the topic. Nevertheless, I have some points:

Line 79:
„Seven pairs of human scapulae were dissected from 7 fresh- frozen cadavers ...

Where did you get the fresh frozen cadaver shoulders from? Did you have an IRB approval of your local ethics committee?

Do you think that a cyclic testing with 100 cycles is sufficient? Why did you choose this biomechanical setup?

Statistics
This part is well written and fulfills the common statistic criteria.

Results/ Conclusion:
In general these paragraphs are well written. Nevertheless, I have some remarks:

As you write in line 151- line 153 the glenoids „...had a smaller width than the 29mm- baseplate as well as insufficient bone stock to fix the anterior or posterior screw for fixation of the 29mm- baseplate.”
Do you think that the lower biomechanical stability of the 29mm baseplates might be due to the fact that there was an insufficient bone stock for the larger 29mm baseplates and that there was no possibility to fix the important anterior and posterior screws? Please comment on that!

In addition the screw lengths were different in the two groups? How did you choose screw lengths? Were the screws bicortical and did you use locking and cortical screws - as usually used in the Tornier base plate?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.