Author’s response to reviews

Title: Posterior shoulder dislocation with associated reverse Hill-Sachs lesion: treatment options and functional outcome after a 5-year follow up

Authors:

Markus Gühring (mguehring@bgu-tuebingen.de)
Simon Lambert (simonlambert@icloud.com)
Ulrich Stöckle (ustoeckle@bgu-tuebinge.de)
Patrick Ziegler (patrick.ziegler333@googlemail.com)

Version: 3 Date: 03 Nov 2017

Author’s response to reviews:

Dear Dr. Sondos Majeed,

we have made the necessary corrections for the following issues:

1. Please remove the title page from the supplementary files and include this as the first page of your manuscript instead.

2. In the Ethics approval and consent to participate section of the Declarations, please confirm whether written or verbal consent was obtained from all participants and clearly state this. If verbal, please state the reason and whether the ethics committee approved this procedure.

3. Figure files should contain only the image/graphic, as well as any associated keys/annotations. If titles/legends are present within the figure files, please remove them.

4. Please change the introduction heading to Background.
Thank you for your revision of our manuscript.

Major Reivsion:

The authors appreciate the critics to their paper with the knowledge that such a thorough review and ideas for improvement contribute profoundly to enhance the quality of the paper.

1. Overall I am happy with the paper. An algorithm for the treatment of the uncommon traumatic posterior dislocation is very useful but as the authors state the actual method is still controversial. This paper does not really help to address the controversy as the numbers are small in this case series. This is not a pathology that can be subject to a "proper" clinical trail of treatment methods as there are too many variables that cannot be controlled and the numbers to achieve statistical significance would be large.

We agree, that the number to achieve statistical significance would be large. The cases presented in the study do not allow to conclude better and worse results in a statistic significance. Yet, it is difficult to achieve such a large number of reverse Hill-Sachs lesions after posterior shoulder dislocation. As reviewing the literature, we couldn’t find a study about this topic with a large enough number of cases. That is why we tried to focus on the algorithm and therefore understand this paper more as a helpful tool when treating a patient.

2. I would like the authors to out the prevalence of traumatic posterior dislocation in the context of posterior dislocation in a more general sense. In specialist clinics patients with a posterior dislocation are actually not that uncommon but most are related to polar type II or II (or combination) type instability. Further, even though traumatic posterior dislocation are still missed far too often a careful clinical examination (lack of external rotation is a patient with a history of a shoulder injury) together with adequate radiographs will give the diagnosis is the majority of cases. I agree that a CT should be obtained in ALL cases to properly plan the intervention.

We added / changed the following sentences in the introduction section:

“Posterior shoulder dislocation is a rare injury, comprising 2% to 5% of all shoulder dislocations 1,2 and up to 10% in patients with shoulder instability (mostly polar type II and III according to the Stanmore instability classification).” and
“A radiological examination in two views is obligatory (anteroposterior (a-p) and axial; Fig. 1). If pain precludes an axial x-ray because of limited abduction, a ‘scapular-Y’ view is recommended, even if there is marked pain. In the a.-p. view the posterior dislocation classically appears as a ‘light-bulb’ but this is not diagnostic and dislocation is thus sometimes difficult to detect. Moreover, a careful clinical examination (lack of external rotation in a patient with a history of a shoulder injury) is mandatory.”

3. This paper shows an improvement in scores in the patients that are reviewed. These "statistically" significant results are not generalisable. The series is too small to comment about better results or not from a particular method. When writing a paper such as this we must be careful about the ability of colleagues to misinterpret the data. Most will only read the abstract.

The aim was to show different procedures for reverse Hill-Sachs lesion after posterior shoulder dislocations. The authors agree, that the number of cases is too small to recommend a certain operative technique. The paragraphs were changed respectively with regard on presenting the results and not to interpret them as statistically better (This has been changed and highlighted in the manuscript).

4. The study gives some new insights certainly. The T-score might be appropriate for postoperative follow up in large rotator cuff tears.

However I have just a Major concern as this Parameter does correlate with preoperative AAE, and so it cannot be used to select patients for surgery. So why should we use for postoperative follow up? Moreover ultrasound for example can be used without any radiation for follow up of tendon repair. I do not think that a postoperative follow up CT is useful and appropriate after rotator cuff repair. So it remains very questionable that the T Score will become a widespread parameter due to the mentioned difficulties. The authors should comment on this please.

The authors are not sure why the reviewer is referring to the T-score and rotator cuff repairs as the study evaluated posterior shoulder dislocations with reversed hill-sachs lesions and is mainly focusing on the osseous repair of the humeral head. We agree, that a postoperative CT is not necessary after rotator cuff repair only but useful after osseous repair of the dorsal humeral head and its follow up.