Reviewer's report

Title: Post-traumatic glenohumeral cartilage lesions: a systematic review

Version: 1 Date: 16 February 2008

Reviewer: NOBUYUKI YAMAMOTO

Reviewer's report:

General Comments:
The authors reviewed reports about the post-traumatic glenohumeral cartilage lesions to understand the pathomechanism leading to shoulder cartilage damage. They concluded that cartilage lesions are rare and mainly due to overuse and appropriate instrumentation as the arthroscope is needed to detect shoulder cartilage.

The topic presented here has good clinical relevance to the management of shoulder instability and overall the paper has originality. But there is a fetal flaw of this study.

My big question is why the authors did not include osteochondral lesions in their study. Post-traumatic glenohumeral cartilage lesions are often present with bony lesions in patients with traumatic anterior instability. Glenoid defect and Hill-Sachs lesion is a common injury associated with recurrence anterior dislocation of the shoulder. Its incidence ranges between 8% and 90% in shoulders with recurrence anterior dislocations in the literature. It's very high. It is well known that Hill-Sachs lesion is a compression fracture of the humeral head including the cartilage defect. Regarding glenoid defect, there are two types of defect; a fragment and erosion type. A fragment type sometimes includes the articular cartilage if its size is large. Like this, cartilage lesions are involved with osteochondral lesions in some cases. If there are specific reasons why the authors excluded osteochondral lesions, they should describe. If not, they should include both of them when considering the post-traumatic glenohumeral osteoarthritis because both of them are strongly related to it.

Major Compulsory Revisions:

Abstract

1. "We reviewed all reports about post-traumatic glenohumeral cartilage lesions"
   This paragraph needs to be reworded. The authors choose some articles out of ones describing only the cartilage damage.

2. The authors should describe the detailed pathomechanism. "This kind of lesion is uncommon" is not correct.

Background

3. Two categories are confusing. Why did the authors choose single impact
situation as acute trauma? Are there any reasons why they exclude patients with recurrent anterior instability if they divided into two categories (trauma and overuse)?

Material and Methods
4. The authors should describe the reasons why they did not include osteochondral lesions in their study. Post-traumatic glenohumeral cartilage lesions are often present with bony lesions in patients with traumatic anterior instability. They should be included in this study.

Results
5. Page 7- Lines 1
â##In many cases the subchondral bone becomes visible.â## This means that there is a possibility that cartilage lesions affect the subchondral bone.
6. Page 7- Lines 12
In 3 categories, both traumatic injuries and post-traumatic osteoarthritis are included.
Page 7- Lines 22
â##The incidence of glenohumeral cartilage lesions in subjects with full-thickness RC tears is reported to between 7% and 28%, with lesions up to 6 cm2.â## This incidence is including the traumatic cartilage and degenerative lesion.
7. Page 8- Lines 3
The location of those two lesions is the same as that in patients with recurrent anterior dislocation.

Discussion
8. There are few descriptions about the pathomechanism in the Discussion. Although, in the Background, the authors described that â##To understand the pathomechanism leading to shoulder cartilage damage,â##, there are few descriptions about it in the Discussion. Conclusions are very simple and have no new findings. Conclusions are very simple and have no new findings. Overall Discussions is not well written.

Minor Essential Revisions:
Results
9. Page 8 Line 15
â##Chondral damageâ## means degenerative change of the articular cartilage?
10. Page 9 Line 10
â##Tendinopahyâ## is not a finding but a diagnosis.
11. Page 9 â##Line 18
â##m. supraspinatusâ## should be revised.

Discussion
12. Page 10 - Lines 4

â##To get damage and to atrophyâ## should be reworded.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**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.