HAGL lesion of the shoulder

A 24 year old rugby player presented to an orthopaedic surgeon with a history of dislocation of the left shoulder. It reduced spontaneously and again later during the same match.

On examination there was no residual instability, but the apprehension test for anterior instability was positive. Speed’s test as well as O’Brien’s test for SLAP lesions (“Superior Labrum Anterior to Posterior” tear) lesion was negative. There were no signs of rotator cuff tear or impingement.

The patient was sent for an X-ray series consisting of the routine impingement series and additional views of the inferior glenoid (Bernageau and Westpoint). No fracture of the inferior glenoid was demonstrated.

An MRI (magnetic resonance imaging scan) was then requested to evaluate the labro-capsular structures and to exclude an occult fracture or articular surface tear of the rotator cuff. The MRI scan showed an avulsion on the inferior glenohumeral ligament attachment to the humerus(Fig1.&2.). This is described as a HAGL lesion (“Humeral Avulsion of the Glenohumeral Ligament”)\(^1\).
Fig. 1. MR arthrogram shoulder. Coronal T1 fat-saturated study shows avulsion of the inferior glenohumeral ligament from the attachment onto the humerus (arrow). Note the J-shaped configuration of the axillary recess, which is normally U-shaped. Note the impaction fracture of the posterolateral humeral head. (dotted arrow)

Fig. 2. MR arthrogram shoulder. ABER view shows lax inferior glenohumeral ligament.

An arthroscopy of the shoulder confirmed the diagnosis of a HAGL lesion (Fig. 3). An open procedure was performed to repair the lesion. The postoperative period was uncomplicated and the patient made a full recovery with full range of motion and no residual instability.
Fig. 3. Arthroscopic view, looking from posterior through the joint at the anterior capsule. The capsule is torn off the humerus, with the fibres of the subscapularis seen deep to it.

The HAGL lesion is an uncommon cause for recurrent dislocation of the shoulder\textsuperscript{1-3}, although in cadaveric studies a higher percentage of HAGL lesions was found\textsuperscript{4}. The HAGL lesion can be difficult to visualise during arthroscopy and a pre-operative diagnosis by a MR-arthrography can be helpful. The most common sequela of a shoulder dislocation in the young is Bankart lesion or a Bankart variant of anterior glenolabral complex. In most cases of traumatic dislocation the labrum avulses with a fragment of bone (“bony Bankart”).

Macroscopically there is a tear of the capsule at the humeral attachment. Microscopically there is haemorrhage and inflammatory cells associated with the torn capsule, mostly with an attached bone fragment.
Associated injuries are common\textsuperscript{5-7} and include rotator cuff tears, Hill-Sachs fracture of the posterosuperior humeral head, biceps tendon lesions and brachial plexus injury.

Imaging with MRI arthrography is the non-invasive investigation of choice\textsuperscript{6,8,9}. The management is usually surgical, although conservative management is used in selective cases.

Reference List


