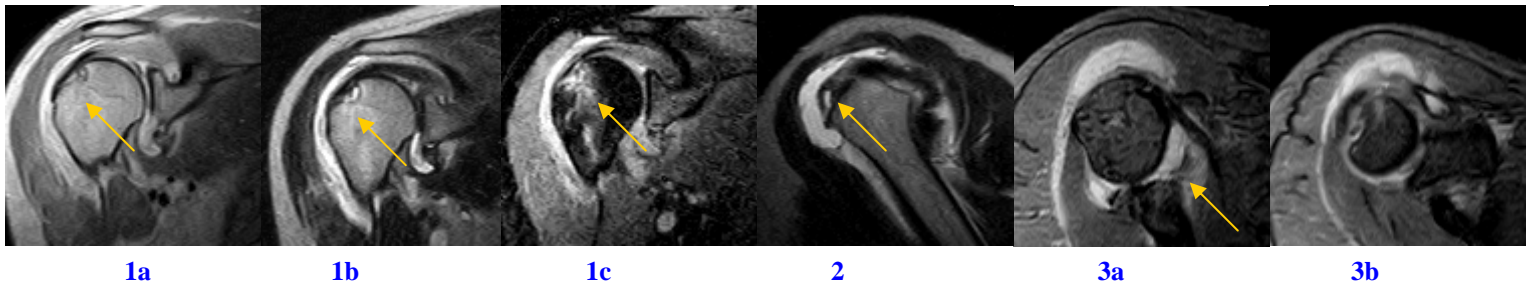


**BANKART LESION / HILL-SACHS LESION
ON MRI OF THE SHOULDER**



CLINICAL PRESENTATIONS: This 23-year-old claustrophobic male presented to an orthopedic surgeon with shoulder pain. The patient had a recent history of trauma and dislocated shoulder. X-rays at the surgeon's office showed no obvious fractures. The patient was referred for an MRI to evaluate the rotator cuff and the glenoid labrum.

FINDINGS: The above images are from an MRI scan performed on AIC's **OPEN MRI**. **Fig. 1a-c** are coronal images (a=proton density, b= T2 weighted, c=STIR). They show an impaction fracture injury of the posterolateral humeral head (the so-called **Hill-Sachs lesion**). **Fig. 2** is a sagittal image (T2 weighted) showing a small tear of the anterior leading edge of the supraspinatus tendon (SST). **Fig. 3a** shows a torn antero-inferior glenoid labrum (the so-called **Bankart lesion**).

DISCUSSION: An acute **Hill-Sachs lesion** is associated with anterior shoulder dislocation. It may be seen on an x-ray, but is much more clearly visualized by MRI, especially on a fat suppressed sequence such as STIR which clearly shows the presence of marrow edema. A cartilaginous **Bankart lesion** (torn antero-inferior glenoid labrum) is usually present as well, which may be also associated with disruption of the inferior glenohumeral ligament. When the labrum of the shoulder joint is torn, the stability of the shoulder joint is compromised. An osseous Bankart lesion may be present concomitantly.

In contradistinction, a posterior dislocation (usually seen in a seizure patient) is associated with a torn posterior labrum (reverse Bankart). MRI (for best results done with **MR arthrogram**) is performed not only to confirm the diagnosis of a Bankart lesion, but to diagnose a concomitant rotator cuff tear (as in the above case). Physical therapy can be tried to avoid repeated dislocations, but surgical repair may be necessary.

Ray Hashemi, MD
Ray H. Hashemi, M.D., Ph.D.
Director