

# Shoulder Instability

We've all seen or heard about footballers dislocating their shoulder in tackles and recurrent instability as a result. There are some subtleties worth appreciating. This newsletter is about anterior dislocations with some comments about other types of dislocations at the end.

## Signs & symptoms

The first dislocation of a shoulder requires substantial force. The labrum is torn from the glenoid and often fails to reattach. The key symptom of fully fledged shoulder instability is recurrent dislocation with minimal force involved. This can be simply reaching into the back seat of the car and some patients will dislocate their shoulder during sleep. This is because there is a large tear of the anterior labrum. There are more subtle degrees of instability due to smaller labral tears. This can be pain at mid elevation mimicking rotator cuff syndrome. The so called "dead arm" syndrome occurs with activities such as throwing a ball or serving at tennis. There is a small labral tear and subluxation occurs during the activity. The patient suffers reflex inhibition of the shoulder muscles, and the arm drops to the side. This is typically painless. By the time the arm has got back to the patient's side, it seems normal.

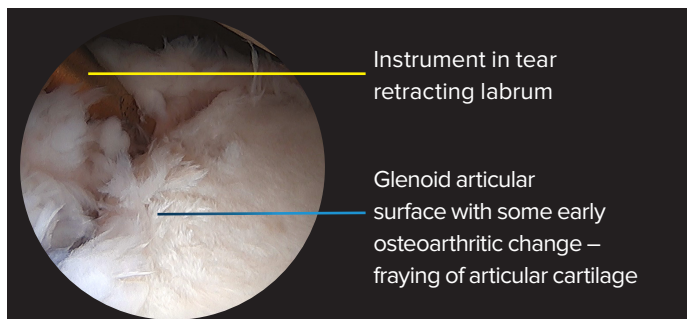
Examination may reveal little more than a positive apprehension test, fear of dislocation when the arm is brought into the "Stop Sign" position.

## Investigation

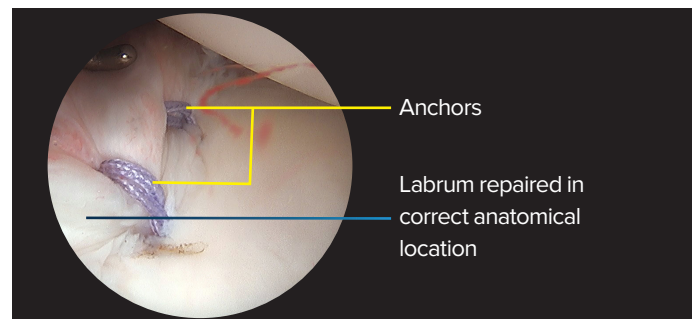
**Plain x-ray:** A frank dislocation is demonstrated by a plain x-ray. Sometimes fragments dislodged from the anterior glenoid can be seen and sometimes a Hill Sachs lesion can be present. This is a defect in the posterior aspect of the humeral head caused by impaction from the anterior aspect of the glenoid when it dislocated.

**MRI Scan:** The key lesion in anterior shoulder instability is tearing of the glenoid labrum from the glenoid bone. Large tears can be seen on non-contrast MRI scanning. Small tears can be difficult to demonstrate, and intra-articular contrast can be very useful. Patients with lower grade symptoms - such as pain at mid elevation or the dead arm syndrome, typically have small tears and sometimes, even with contrast, they are impossible to see on an MRI.

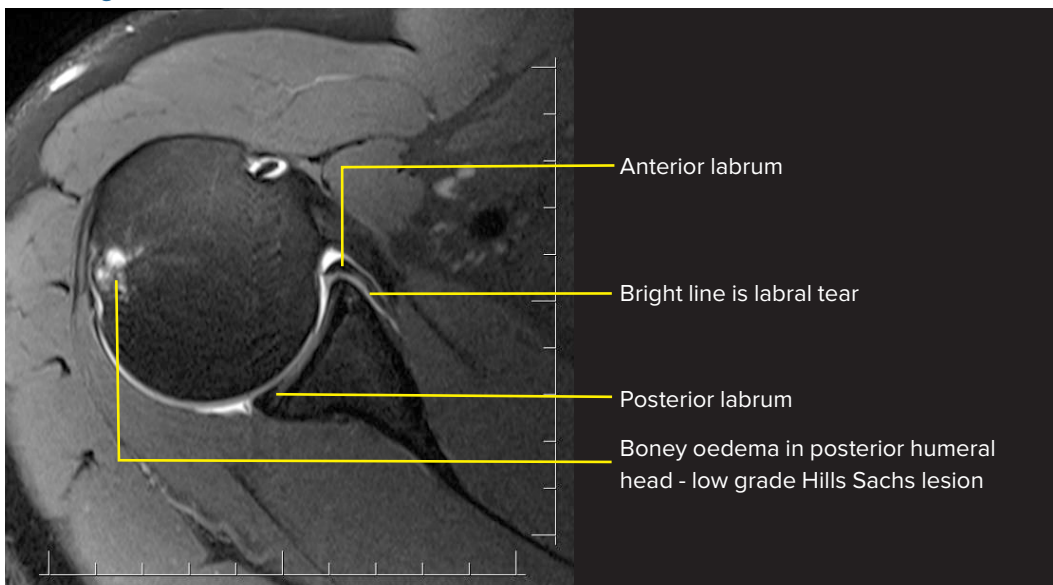
## Arthroscopic image of labral tear



## Labral repair



## MRI image



## Management

Dislocated shoulder is painful and needs to be reduced without delay. Some patients can reduce their own dislocation, others will need sedation or even anaesthesia. Occasionally a patient will have a shoulder which is so unstable that it re-dislocates promptly and will need urgent referral.

Labral tears are now repaired surgically via shoulder arthroscopy. The labrum is returned to its anatomical position and fixed in position using anchors. Rarely we encounter patients with bone loss from either the anterior glenoid or a large Hill Sachs lesion which may require a bony procedure.

## Prognosis

The prognosis for surgical repair of glenoid labral tears is excellent. The patient will reliably get a comfortable, stable shoulder. If the patient has a labral tear without any bone loss, then the shoulder anatomy is effectively restored to normal. Any shoulder can be dislocated if enough force is applied so a surgical repair does not prevent them from ever dislocating their shoulder again, however, they will need a substantial injury to do it, much as a normal shoulder would require a substantial injury to dislocate it.

## When to Refer

In the past, the procedures we had for shoulder instability repairs did not result in an accurate anatomical repair. As such, we typically waited for patients to have multiple dislocations before offering surgery. With arthroscopic labral repair, we can restore the shoulder anatomy to normal without significant damage to the normal anatomy. This has led to repair of torn labrums earlier in the patient's clinical course – in some situations, after a single dislocation. I would like to think this will reduce the incidence of patients who have had many dislocations with resulting bone loss or other articular damage.

## Other dislocation types

Posterior dislocation: These are rare but typically occur with strong muscle contractions such as epilepsy or electrocution. They can be missed if there is an AP x-ray of the shoulder but no lateral. The lateral can be difficult to get because the patient is in pain and perhaps uncooperative but, a missed posterior dislocation results in a substantial disability.

Posterior labral tears: With the advent of MRI scanning and shoulder arthroscopy, we are seeing more of these. Typically, they are small and present with pain, often the tear acts as a valve and there is an associated cyst (essentially a ganglion), along the posterior aspect of the scapula. They are arthroscopically repaired which cuts off the supply of fluid to the cyst which then resolves.

Voluntary dislocation: With voluntary dislocation, the patient can voluntarily dislocate and reduce their shoulder. If they are persistent with this, they can get to a point where their shoulder will dislocate involuntarily. The solution is for the patient to cease voluntarily dislocating their shoulder, it is not a surgically correctable condition.



### About Dr David Shepherd

Dr David Shepherd is an Orthopaedic Surgeon with over 22 years of experience. Dr Shepherd has an interest in arthroscopy of the knee and shoulder (particularly rotator cuff syndrome), shoulder instability and ACL repair as well as hip, knee and shoulder joint replacement surgery. Dr Shepherd seeks to provide quality, long-term relationships with his patients.

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