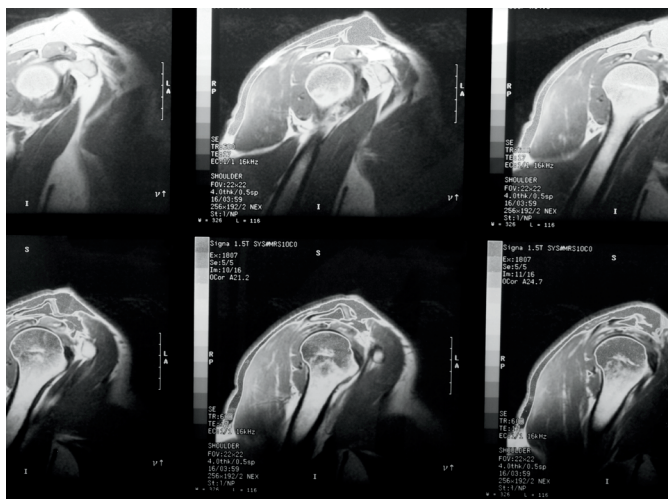


SLAP repair and shoulder labral tears

by Dr Sarah Coll

The glenohumeral joint of the shoulder is required to perform a large range of movement. The role of the shoulder is to position the hand in space to allow us to manipulate objects. The shoulder is therefore anatomically designed to have a shallow socket and a large unencumbered ball. The instability that then arises is offset by a number of mechanisms. Negative joint pressure or the vacuum effect of the closed joint capsule is a consistent stabiliser. The rotator cuff muscles are very powerful, short muscles that pull the ball into the socket. The glenoid face (socket) is further deepened by a ring of soft tissue, which has the consistency and shape of a calamari ring (unbreaded). The calamari ring is densely adherent to the bony surface of the socket (glenoid) and contributes to the suction effect and also creates a buttress to hold the head in the socket.



The labrum can be torn by a number of mechanisms, all of varying severity. The classic labral tear occurs during a football match when the shoulder is dislocated anteriorly and inferiorly. This tears a 1.5cm size gap in the labrum. This labrum is unable to re-attach to the socket because any time it forms any glue, this is washed away by the circulating joint fluid. Furthermore, it sits slightly off the side of the glenoid and doesn't perform its buttress duties. This injury does not heal over time, but the patient rapidly adapts to this disability and does not place their arm in the position that will allow the shoulder to fall out of place. If the joint is repeatedly dislocated (or severely dislocated on first attempt), then the tear becomes so large that it is hard for the joint to remain in the socket.

Repairing the labrum is a relatively new technique that was developed in the 1950s by Bankart. He proposed a radical idea that the muscles / tendons were not responsible for the instability, but the labrum itself. He was roundly criticised at the

time but the procedure has spoken for itself. He recommended re-attaching the labrum to the bone to prevent future dislocations. The technology has caught up with him in the form of soft tissue anchors, which allow Orthopaedic Surgeons to attach soft tissue to bone. This requires a drill hole for the anchor into the bone and the surgeon has to pass sutures through the soft tissue. This is now performed arthroscopically as it allows a better view of the inferior part of the shoulder joint.

The SLAP tear arises from a similar problem. The superior labrum tears, but this usually occurs when the arm is forcibly flexed above the head, a classic example is the baseball player who slides towards a plate with the arm reaching forward. Like a labral tear, a SLAP lesion can be repaired with soft tissue anchors. The MRI scan is the gold standard for diagnosing these injuries and I usually order an MRI scan once the X-ray and ultrasound are normal. The ultrasound is very powerful at detecting rotator cuff injuries, but cannot penetrate deeply enough to see anterior or superior labral tears.

The rehabilitation after arthroscopic stabilisation is reasonably simple in the early phase as the patient usually obtains range of motion quite quickly. The trick is to strengthen the rotator cuff and scapular stabilising muscles to prevent re-injury. This includes a light weights programme and should progress to a gym programme depending on the patient's normal activity requirements.

I hope this helps you better understand shoulder injuries. I thoroughly enjoy treating patients with labral tears and they usually identify that they feel 'more stable' very early after surgery and they progress quickly through their recovery.

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