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SLAP Tears

Introduction:

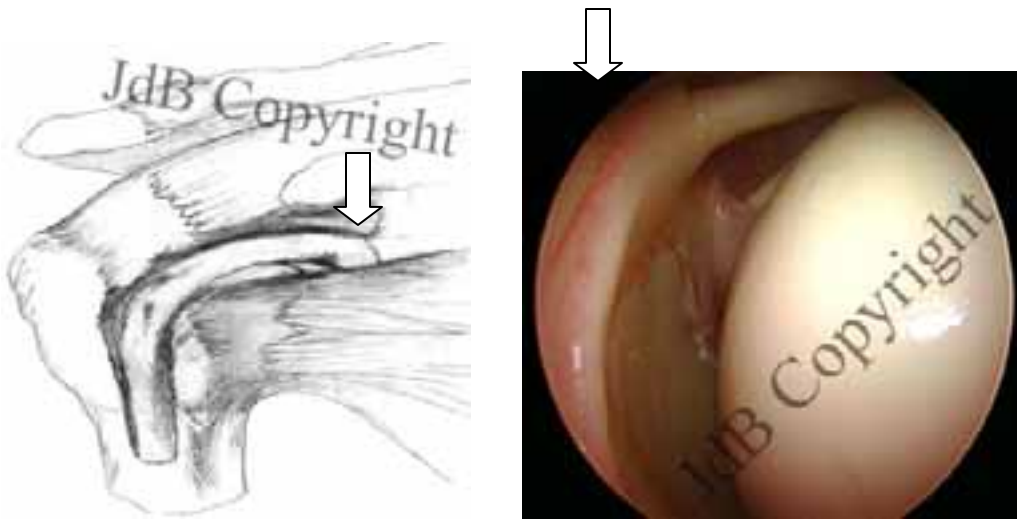
S.L.A.P. is an acronym for **S**uperior **L**abrum **A**nterior **P**osterior, which simply means that the attachment of the long tendon of the biceps is torn away from the upper end of the shoulder socket. (Superior Labrum=Biceps attachment, Anterior=front, Posterior=back).

Anatomy:

The Biceps is an **upper arm muscle** that acts across the shoulder and elbow joints. At the elbow, it helps to bend the joint. At the shoulder, its function is more complex and incompletely understood.

The biceps has **two tendons** around the shoulder: the **long tendon** passes inside the joint via a groove in the ball and attaches to the upper end of the shoulder socket, and the **short tendon** passes outside the joint to an adjacent bony outgrowth (coracoid).

The attachment of the Long tendon extends to a ligament/ cartilage like structure (Labrum) which encircles the socket, thereby adding stability to this joint. The entire complex is called a Biceps anchor.



Arrow shows long tendon of Biceps attaching to the shoulder socket. The hook- like passage of the tendon over the ball predisposes to SLAP tears.

Mechanism of SLAP tear:

A sudden injury to the shoulder may peel the biceps anchor off the upper socket. This is usually seen in sportsmen (throwing and rugby athletes), and sometimes in weightlifters. The hook- like passage of the tendon over the ball predisposes to SLAP tears.

Types of SLAP tears:

Many different SLAP types have been described ranging from simple separation of the biceps anchor from the socket, to tearing away a flap from the anchor, and even extensions of these tears further to the front or back.



Separation of the anchor from the upper socket.



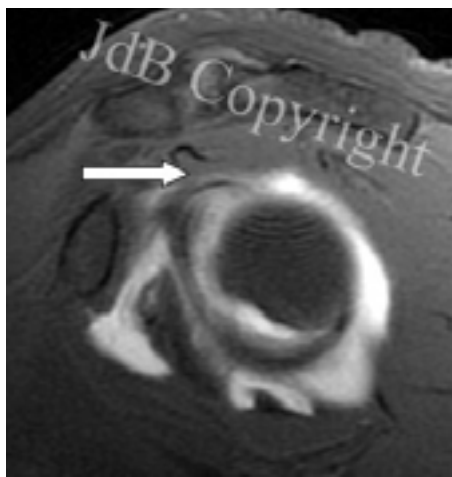
Tearing away a flap from the anchor.

Diagnosis:

1. Clinical: Usually patients complain of pain around the shoulder that is poorly localized. Painful “popping” or “clicking” can occur.
2. Radiological: SLAP tears can be visualized on MRI scans, however, the diagnostic accuracy is poor.
3. Arthroscopic: Arthroscopy accurately identifies the tear. The tear can be classified and treated based on standard recommendations in scientific literature.



MRI shows detachment of the biceps anchor from the socket resulting in a SLAP tear. (arrows)



Arthroscopy reveals the SLAP tear as shown on the MRI.

Surgical repair of the lesion is necessary in sportsmen. Arthroscopy accurately identifies these tears, and three keyholes are used to insert one or two tiny plastic/metal screw-like devices (anchor); the sutures on these are utilized to repair the tear. Some tears may need only shaving away of the torn region, and some may need a biceps tenodesis (see section on biceps).

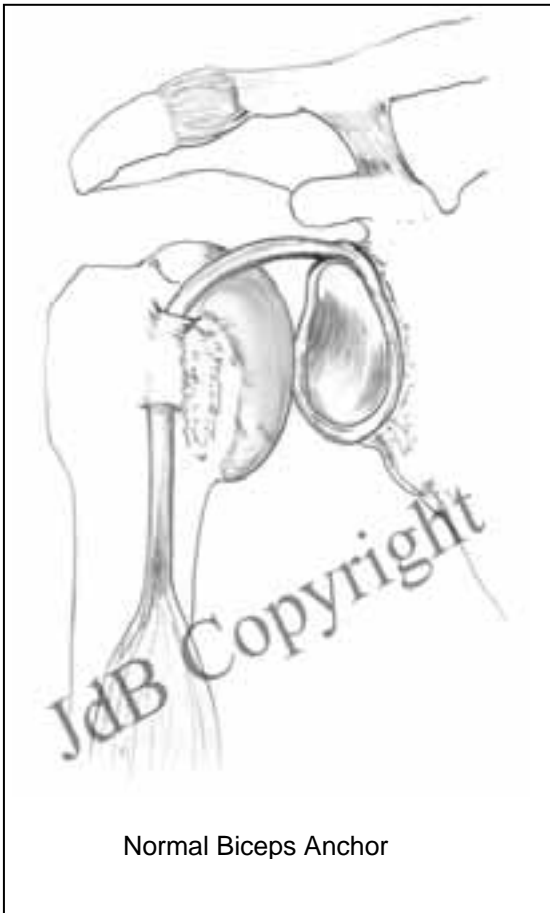
Postoperatively, overhead activities should be avoided in the first few weeks. Thereafter, range and muscle strengthening exercises are started. Full return to sports is possible within 3 months.



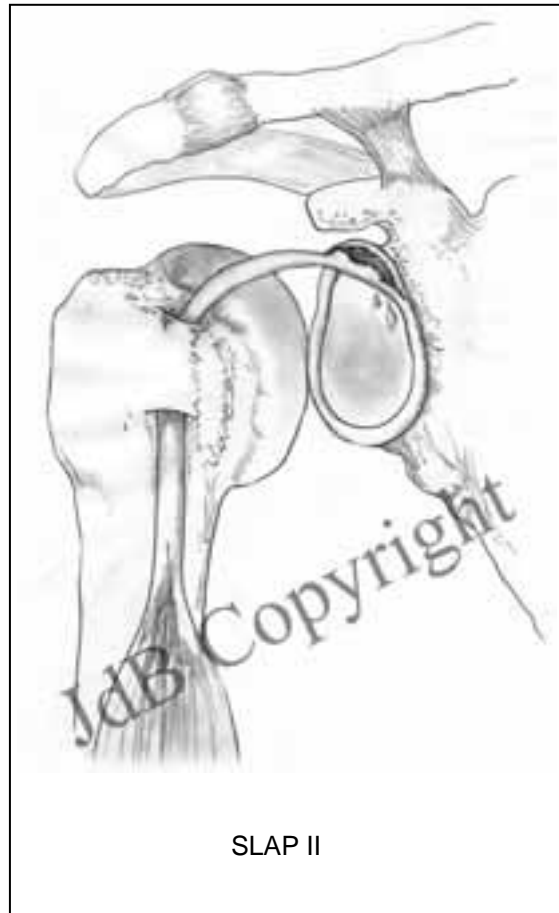
Arthroscopic repair of a SLAP tear is shown.

Sutures attached to tiny screws are used to tie the torn anchor to the socket.

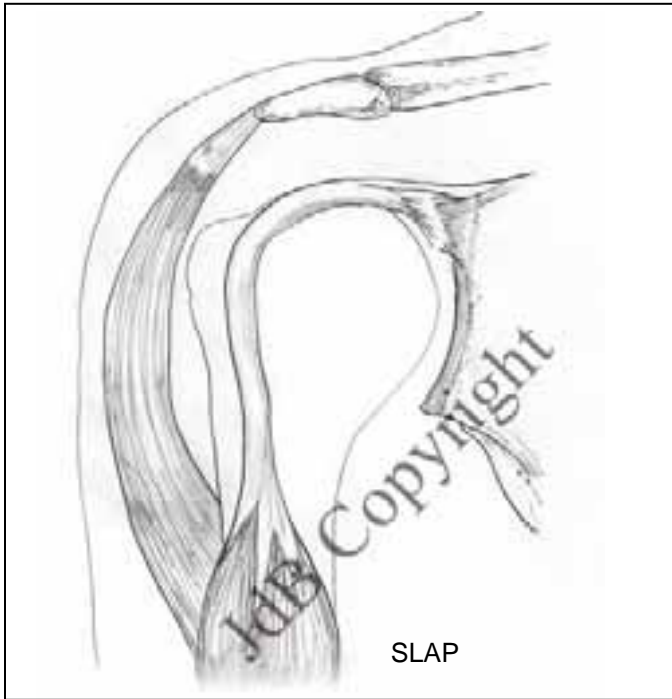
Simplified illustration of a SLAP lesion:



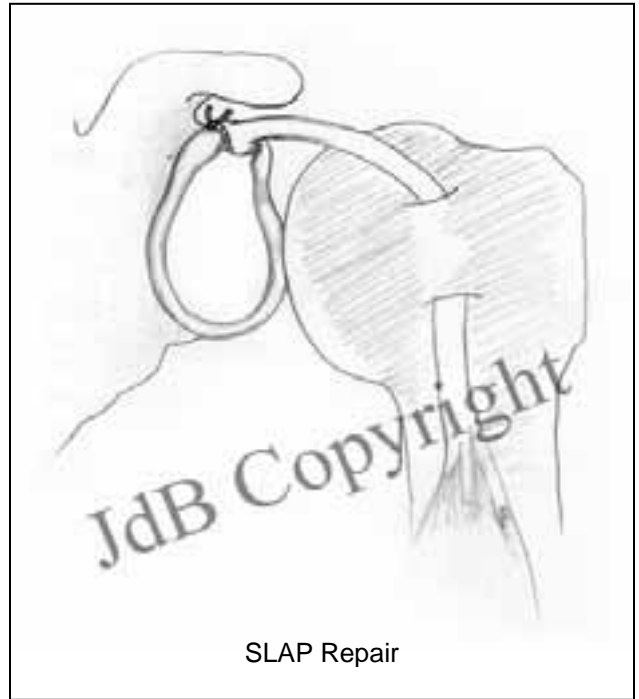
Normal Biceps Anchor



SLAP II



SLAP



SLAP Repair