SLAP tears

What is it?

The shoulder joint is often compared to a golf ball sitting on a tee due to its bony configuration. For this reason, this relatively unstable ball and socket joint relies heavily on both muscle control and cartilage within the joint. Within this socket there lies a ring of cartilage called the labrum, which allows for increased depth of the socket which then improves the stability of the shoulder. A Superior Labrum Anterior-Posterior (SLAP) tear occurs when the ring of cartilage that makes up the labrum in the shoulder is damaged (see figure A).

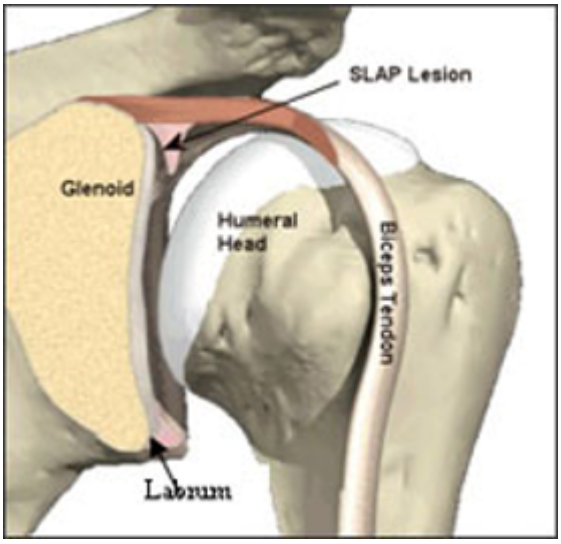

Figure A. The 'ball and socket' of the shoulder with the labrum in between

SLAP tears can be a significant cause for disability and pain. This pain is normally felt at the front of the shoulder and may even report a clicking sensation or feeling of instability. SLAP tears are commonly found with overhead athletes. A common mechanism for injury is a throwing motion where the arm is taken out into abduction and external rotation (the cocking phase). This can result in a "peel-back" mechanism where the bicep tendon helps tear the labrum off the glenoid rim as mentioned above. Traction-type forces sustained by the shoulder have also been described as a possible mechanism for SLAP tears. The lesion may develop from one incident or may occur due to repetitive micro-trauma.

Diagnosis

A thorough clinical examination by your physiotherapist can help accurately diagnose someone with a SLAP lesion. This can

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be further confirmed with the use of MRI or MRA which are the most sensitive imaging techniques for this injury. Quite often athletes with SLAP tears will have concurrent rotator cuff tears which is important to distinguish in order to rehabilitate effectively.

Management

Management of SLAP lesions should be a multimodal approach which looks at the underlying issues behind the development of the condition. SLAP tears remain a diagnostic and therapeutic challenge, with non-operative and surgical both being viable options. In general, a period of non-operative management is recommended before surgery is considered.

Non-operative rehabilitation considerations:

- Load management is critical to allow enough opportunity to reduce sensitivity of affected structures
- A progressive strengthening program to increase resilience of the shoulder girdle and other muscle groups in the kinetic chain
- Manual therapy to help relieve sensitivity and improve flexibility
- A gradual return to activity

Surgical considerations:

- Operating on a SLAP tear is the next step if conservative management fails, with large labral and rotator cuff tears making surgery more likely.
- Surgical treatment options including SLAP repair, debridement, and open or arthroscopic biceps tenodesis. The decision-making surrounding type of surgery should be based on patient factors and the type of tear.
- Primary SLAP repair may have better outcomes in those under the age of 40, whereas repair with biceps tenodesis may be more reliable for pain relief in those over the age of 40.

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In a nutshell

The diagnosis of SLAP tears can be a challenge, but a thorough assessment by your health professional can help differentiate between pathologies. Understanding the mechanism involved, the underlying cause and the extent of tissue damage will help guide a successful management.

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