

SLAP Tears - Patient Information

Contributed by Richard Dallalana
Last Updated Thursday, 05 June 2008

SLAP tears are separations of cartilage from bone inside the shoulder which cause pain, clicking or feelings of looseness of the shoulder. They may arise after a single traumatic event such as a fall onto the shoulder or attempt to lift a heavy object, or through repetitive overhead or throwing sports or work duties. They can also exist alongside other cartilage and ligament damage following a shoulder dislocation.

SLAP Tears Background

SLAP tears are separations of cartilage from bone inside the shoulder which cause pain, clicking or feelings of looseness of the shoulder. They may arise after a single traumatic event such as a fall onto the shoulder or attempt to lift a heavy object, or through repetitive overhead or throwing sports or work duties. They can also exist alongside other cartilage and ligament damage following a shoulder dislocation. Anatomy

The main part of the shoulder consists of the ball at the top of the arm (humerus) which sits in a shallow socket (glenoid) connected to the shoulder blade (scapula). The socket has a ring of cartilage (labrum) around its edge which deepens it and helps keep the ball in it. Surrounding the shoulder joint is a watertight sac called the joint capsule. The joint capsule holds in fluids that lubricate the joint. The walls of this capsule are made up of ligaments. These ligaments loosely connect the ball to the socket and attach to the ring of cartilage (labrum) at its edge. They become tight if the shoulder rotates too far in any direction and prevent the ball slipping out of the socket (a dislocation). One of the biceps tendons enters the shoulder and attaches to the ring of cartilage near the top of the socket. Structural damage

SLAP stands for "Superior Labrum (tear) from Anterior to Posterior". The cartilage (labrum) at the top of the shoulder joint socket is torn away from the bone just near the point where the biceps tendon connects to the bone. The biceps tendon itself may separate from the bone along with the cartilage. The tear can extend further along the rim of the socket down the front or the back, and multiple tears within the labrum itself can occur. Consequences

The SLAP lesion can result in:

- Pain in the shoulder
- Reduced performance with overhead or throwing sports
- Catching or clunking with movement
- "dead-arm" sensations
- Impingement (pinching) of the rotator cuff tendons with elevation of the arm.

The torn cartilage of this disorder catches with movement causing pain and / or clicking, usually when the arm is elevated above the head. The loss of the complete "ring" of cartilage around the socket may result in excessive sliding of the ball of the shoulder joint within the socket leading to the temporary numbness or "dead-arm" sensations sometimes seen after a sudden rapid movement (eg throwing a ball). Occasionally this excessive movement may also lead to pinching of the rotator cuff tendons under the point of the shoulder when the arm is raised forward or to the side in a repeated fashion. Treatment

SLAP tears do not generally heal by themselves; however, may become less symptomatic with time.

Initial treatment after a traumatic event may involve use of a sling for a short period plus analgesics. Later, avoiding the position of the arm or activity which reproduces the pain will help but may not be possible or desired. Physiotherapy can help to restore movement initially and regain strength after a period of decreased use of the arm, but cannot help to heal the structural defect in the cartilage.

Surgical repair is indicated when symptoms do not settle down adequately with time, or in some cases will be advised earlier depending on the exact type and size of SLAP tear present. If the SLAP tear is present along with other tearing (e.g. a Bankart tear) following a dislocation, then surgery will very often be required. Surgery

SLAP repair surgery is performed under general anaesthetic and via a keyhole (arthroscopic) technique.

2 or 3 small incisions (1 cm each) are made around the shoulder through which the camera (arthroscope) and plastic instrument tubes are inserted.

Stitches are passed through the torn labrum and the biceps tendon and secured to the bone with small plastic pins, the aim being to encourage the labrum and tendon to heal down strongly to the bone. The pins will remain inside the bone and do not dissolve.

Pictures or video of the operation are taken during the procedure and will be discussed with you at review. At the end the wounds are closed with buried stitches and then covered with a waterproof dressing.

The keyhole technique has some advantages compared with traditional methods of 'open' surgery using larger incisions:

- Less pain
- Shorter hospital stay (day case or overnight only)
- Faster rehabilitation
- Less stiffness (restriction of movement) following the surgery
- Better ability to identify and treat other areas of damage

On rare occasions the procedure will need to be converted to one where a larger incision is made due to unexpected findings (such as a large fracture to the bone of the socket, or extreme looseness of the shoulder joint). What to expect after the surgery

You will wake up in the recovery area of the operating suite with a bulky dressing over the shoulder and a sling applied.

Pain will be present however not extreme. By evening it should be well controlled with tablets. Occasionally a small dose of a strong pain killer given via injection is needed.

The shoulder will be swollen for approximately 24 hours due to collection of sterile fluid used during the operation to enable vision inside the joint.

Discharge from hospital is usual the following morning but may be in the same evening following a morning operation. The bulky dressing is taken down and the small waterproof dressings replaced if soiled. These should be left in place until the time of review which is generally 10 to 14 days following surgery (the date of this will be given to you at the time the surgery is booked). You may shower but try not to directly soak the dressings each day. The wounds should be kept dry until the dressings (and stitches if present) are removed.

A physiotherapist will see you prior to discharge and instruct you on simple exercises and management of the sling. In general it should be used all of the time except for brief periods when doing specific exercises or when showering. At these times the elbow should be stretched out and the underarm can be cleaned. It should be used overnight also unless otherwise instructed.

You will receive a short (usually 5 day) supply of pain killing tablets to use at your discretion. Reaction to the tablets may occur and can include a rash, nausea, stomach pain, dizziness and light-headedness. Stop them and see your local doctor for alternatives if needed.

The small wounds usually heal well with only a faint scar ultimately visible.

In the short term, the size of the muscle surrounding the shoulder will decrease due to lack of use. This will return following rehabilitation and is expected to take many months. Rehabilitation

The first month after surgery is critical for healing and thus a successful outcome.

- The sling should be used for 4 weeks unless otherwise instructed.
- No elevation of the arm above shoulder height or loading of the biceps muscle is permitted.
- Most general duties of daily living should be performed with the other hand.
- Running should be avoided in this time.
- Driving is not permitted while the sling is being used. Three Phases of Rehabilitation Phase 1 rehab – regain motion

It is normal to have a degree of stiffness in the shoulder following surgery and the subsequent immobilization in a sling outlined above which needs to be overcome

- Physiotherapy plus home exercises

Commence from 4 weeks post surgery.

Full movement is usually achieved by 3 months. Phase 2 rehab ‐ regain strength

From 6 weeks post operatively

- Physiotherapy utilizing therabands and other resistance techniques.

Home exercises completed daily are an important ongoing facet of rehabilitation Phase 3 rehab ‐ muscle balance and strength, co-ordination and return to work or sport

- Sport / activity specific physiotherapy plus ongoing strengthening work including a gym programme in some cases.

- Timing to full recovery and return to sport or work is variable and depends greatly on individual demands.

- Running may resume at 4 weeks and swimming (breaststroke) from 6 weeks.

- Throwing or overhead sports may resume from 3 months.

- Freestyle swimming is permitted from 3 months.

- Contact sports should be avoided for 6 months.

- Non-physical work duties are appropriate from the time of removal of the sling, or before this as comfort allows in some situations.

- Return to heavy physical work with the involved arm will require 10 to 20 weeks depending on demands.

Complications

Complications are rare from this type of surgery. The procedure generally takes less than an hour to perform and there is no blood loss.

Some of the more common or important potential complications or consequences are outlined below.

1. Some complications which are related more directly to the shoulder:

- Bleeding under the skin related to the arthroscopy entry holes leading to local bruising. This bruising may run down the arm and across to the chest area. It is common, goes away in a couple of weeks, and does not require treatment.

- Infection may occur and may be indicated by an increase in pain, fever, nausea and generally feeling unwell. The surgical wounds may be surrounded by reddening of the skin and may discharge fluid, blood or pus. There may be a foul odour. Infection around the small wounds only will settle without consequence after treatment to the area such as removing the stitch, local dressings and possibly antibiotic tablets. Infection deep within the shoulder is very rare however more serious when it occurs, and may require surgical washout of the shoulder along with prolonged courses of antibiotics. This type of infection may lead to permanent damage to the cartilage within the shoulder joint.

- Stiffness (restricted movement) may occur despite appropriate rehabilitation with exercise and physiotherapy. It is uncommon. On occasions a brief procedure under anaesthetic may be required to free up the shoulder.

- Failure of the procedure will result in persistent pain or clicking or feelings of looseness of the shoulder. This may happen due to the labrum or biceps tendon not adhering well to the bone. Failure usually occurs following another injury to the shoulder but may occur with only minimal trauma to the shoulder. It is uncommon and in the order of 5% depending on individual circumstances. Repeat surgery is often, but not always, required in the case of failure of the initial procedure.

- Nerve injury resulting in weakness of the muscles around the shoulder or of the arm or hand, and / or loss of feeling in the skin in the same areas, has been reported following this type of surgery. It may result from stretching of the nerves during grasping and positioning of the arm during the surgery, or direct damage to the nerve from the arthroscope or arthroscopic instruments used. Nerve injury is usually temporary but rarely may be permanent. Permanent nerve injury may require grafting or other corrective surgery.

- Injury to the major blood vessels passing by the shoulder is possible however extremely rare. If this happens, surgery to reconstruct the artery or vein could be needed. Permanent loss of muscle function in the arm or hand may occur.

2. Some complications of a more general nature:

- The surgery is carried out under general anaesthetic which is extremely safe, however on very rare instances a problem relating to the airway, lungs or heart and circulation may occur.

- An intravenous line is always required, and often an additional line into a small artery near the wrist to monitor blood pressure. Its use may result in pain or bruising at the point of entry, and rarely an infection or thrombosis of the vein or artery.

- Blood clots in the veins of the calf and / or leg (Deep Venous Thrombosis) may occur despite the surgery not involving these areas. It is very rare but when large can pose the threat of movement of the clots within the veins to the lungs (Pulmonary Embolus) and this can be serious or even fatal.

- Your anaesthetist will discuss the use of an injection above the shoulder near the neck (Nerve Block) to help 'deaden' the shoulder and arm for approximately 24 hours to help control pain. There are complications reported relating to this including bruising and nerve damage. A nerve block is not often used with this particular type of keyhole surgery. My anaesthetist will be happy to provide further details relating to nerve blocks or other issues regarding the anaesthetic on request. You will be given contact details for the anaesthetist at the time of surgery booking.

- Infection within the body at a place other than the shoulder can occur, e.g. pneumonia, urinary or blood infection. This is more likely in elderly people or those who smoke cigarettes.

- Allergy to the antibiotic which is routinely used immediately prior to the surgery can occur. This most often causes a rash. Very rarely when serious an allergy can cause obstruction to the airway or reduced blood pressure. In case of problems:

- Pain control – contact local GP initially if you have run out of the tablets given to you at discharge, or you are experiencing side-effects.

- Signs of infection (persistent increase in pain, wound discharge beyond 2 days following surgery, foul odour, fevers) – contact Mr. Dallalana via the rooms or through the hospital where you had your surgery if out of business hours. A GP may be contacted for review at the same time.

- Tingling in the arm or hand or calf pain – contact Mr. Dallalana via the rooms or GP. Contact the hospital where you had your operation if out of hours.

- Numbness or persistent coolness in the hand or fingers – attend the nearest emergency department.

- Shortness of breath, severe lack of energy or sudden high fevers with chills or shakes – attend nearest emergency department.

Non-urgent matters should be listed for discussion at the next review with Mr. Dallalana or alternatively queries can be directed via email or by calling the rooms.

Certificates can be obtained at review or by your GP at other times.

- Please contact Mr Dallalana's rooms if you require further information.