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What to expect following surgery!

SLAP Tear

You have been diagnosed with a SLAP tear. This stands for Superior Labral Anterior Posterior tear and implies that the portion of the bicep that anchors to the top of your socket (glenoid) is torn. This is an injury that can occur with natural aging or from sudden trauma. It is a frequent injury seen in overhead throwing athletes, gymnasts, swimmers or Crossfit athletes. The pain from this injury is usually described as a deep sharp pain that typically localizes and radiates from front to back of the shoulder. It is typically aggravated by rotation or compression of the torn tissue with motion of the shoulder. In throwing athletes, it is frequently called "dead arm" syndrome and can lead to changing of the throwing motion and poor mechanics. Initial management of SLAP tears are frequently nonsurgical with rest, NSAIDs, therapy focusing on parascapular and capsular mobility and occasionally an intra-articular steroid injection. SLAP tears typically do not lead to long term disability of the arm when left untreated but typically do not heal on their own and pain is generally the reason people decide to move forward with surgery.

The surgery is performed arthroscopically thru four to six small stab wounds and the repair is done with plastic abosrbable anchors that have heavy braided suture (stitches) that allow the tissue to be repaired back to bone. A double row repair is typically performed (biomechanically strongest type of repair) which means that the tendon is sewed back essentially with a double seam. You will be placed in a shoulder abduction sling after surgery which will remain in place for 4-6 weeks depending on the size of the tear. The ultimate goal is a healed tendon providing pain relief and eventual return of function to the shoulder. The biggest risks of rotator cuff surgery are a tendon that does not heal, stiffness and persistent pain.

Facts About Rotator Cuff Tears

- A full thickness tendon tear will not heal on its own(based on force and pull of tendon)
- A full thickness tear will get larger over time (40% progress by 2 years)
- A full thickness tear, even if asymptomatic, has a high probability of becoming painful over time
- A traumatic tear repaired soon after the injury carries a better chance of healing than delaying
- Repeated steroid injections into a full thickness tear can allow for quicker progression of the tear so caution should be made in a younger (<70yo) patient with such treatment
- A repair can take 3 months to heal and improvements following surgery can be seen upwards to 12-18 months following surgery

Physical Therapy

- You will start 3-4 weeks after surgery (recent 2011 Neer Award study would support delay in PT for improved healing and outcome)
- You will be wearing a sling for **4-6 weeks based on size of tear**.
- Usually 2-3 times per week for about 30-60 minutes. This may change according to individual responses to surgery or unforeseen circumstances and as deemed necessary by your therapist
- Every patient will be educated in a Home Exercise program that they will perform daily.

*****The milestones below are not absolute and can vary depending on the patient's progress.**

Weeks 0-6	Sling for 4-6 weeks Exercises focusing on passive ROM, gentle stretching and avoidance of active motion per the physician protocol Goal shoulder motion approximately 75% normal arc **Physician follow-up visit at 10-14 days (check wound)** Therapy usually starts 3-4 weeks from surgery
Week 6-10	**Physician follow up visit at 6 weeks** **Sling discontinued or gradually weaned (if larger tear) for comfort only** **May resume driving** Begin active assisted motion with therapist Focus on restoration of full arc of shoulder motion
Weeks 10-12	**Begin resistance and gradual strengthening** at week 10 Continue to focus on full range of motion (internal rotation typically last to improve)
Week 12	**Physician follow up visit at 12 weeks** **Therapy typically weaned to home program** Avoidance of overhead weight and activity modification still advised (no pulling or tugging or lifting greater than 10-20lbs)
Week 14-24	**May begin light activities (i.e. chipping or putting with golf club however driver should be avoided** **Biggest improvement typically seen during this phase as strength to tendon gradually improves** **If severe pain and/or limitation of motion persist repeat imaging (ultrasound in office or MRI) may be advised**
Weeks 24	**Physician follow up visit at 6 months** **Majority of patients cleared to return to work or activities as tolerated**
Months 6-12	**Continued improvement typically seen which typically plateaus at 12 months**

GENERAL INDICATIONS FOR PROPOSED SURGERY/TREATMENT

This procedure is indicated for patients who have shoulder pain; loss of shoulder function and/or patients who have shoulder instability (the shoulder slips out of socket). The procedure is performed to allow the surgeon to look inside the shoulder to further diagnose the anatomic problem within the joint, and to attempt to repair the problem.

DESCRIPTION OF THE PROPOSED PROCEDURE/TREATMENT

The procedure is performed in the operating room. The patient will be provided anesthesia by an anesthesiologist, which may include a general anesthetic where the patient is put to sleep or a regional anesthetic where an injection is performed near the nerves in the upper arm to numb the arm for surgery. In some cases, these two anesthetic options are combined. During the procedure, the surgeon will make a number of small incisions surrounding the shoulder and a camera is introduced. The camera is used to visualize the anatomic structures inside the shoulder joint and further diagnose the specific problem. Depending on the type of problem identified, the surgeon may attempt to repair the problem using the camera and working through small incisions to allow introduction of instruments into the joint. In some cases, however, it may be required to make a larger open incision to allow completion of the procedure.

During the procedure, the surgeon may use implants to repair the injured structures in the shoulder. These implants are made of varying materials including plastic or other composite materials. Some are designed to remain permanently in place; others may be slowly reabsorbed by the body. After the procedure, in most cases, the patient will be placed into an arm sling. Specific instructions regarding wound care, medications, movement of the arm after surgery and physical therapy will be provided by the surgeon based on the procedures performed.

POTENTIAL BENEFITS

The potential benefit of the procedure is to improve the condition of the shoulder. This benefit may include improvement in function of the shoulder, improvement in pain in the shoulder or a decrease in likelihood that the shoulder may dislocate (slip out of socket).As with any surgical procedure, there is no guarantee of success. In rare cases, the shoulder

may be made worse following the procedure. The surgeon can provide specific information regarding the expected results following the specific procedure.

MATERIAL RISKS OF THE PROCEDURE

In general, arthroscopic shoulder surgery is extremely safe, highly successful, and has minimal complications associated with the procedure. Certain risks may be increased or decreased depending upon the type of arthroscopic surgery and the extent of injury. Material risks of shoulder arthroscopy are rare arid include, but are not limited to the following:

1. **Postoperative bleeding** within or around the shoulder joint.
2. **Persistent swelling**.
3. **Postoperative infection.** Superficial (skin) or deep (within the joint) may occur. The incidence is reported at <1% (1/250). A skin infection generally is treated with oral antibiotics. If the patient develops a deep infection, it would require readmission to the hospital, re-arthroscopy or an open procedure to wash out the infection, and a variable period of intravenous antibiotics (2-6 weeks).
4. **Phlebitis/Deep Vein Thrombosis (blood clots).** Deep vein thrombosis or blood clots are ***unusual*** in arthroscopic shoulder surgery, but can as with any surgery, occur. Compressive boots are used during surgery to help minimize this risk. A blood clot would require a readmission to the hospital a treatment with a blood thinner (Heparin/Coumadin) for several days followed by a 3 month period of oral anticoagulants (Coumadin). Patients are encouraged to become ambulatory as much and as soon as possible after surgery.
5. **Pulmonary embolus.** When a blood clot becomes dislodged it may travel to the lungs resulting in acute shortness of breath, rapid heartbeat, and in ***rare*** situations result in sudden death.
6. **Broken instruments.** The instruments that are used to perform the surgery may potentially break within the joint. This is a ***rare*** complication. If this occurred, the piece almost always could be uneventfully removed arthroscopically. However, if this was not possible, the surgeon might need to open the shoulder surgically to extract the broken instrument.
7. **Nerve injury.** Partial or complete injury to the major nerve to the limb has ***rarely*** been reported in the literature. Stretch injury to the nerve may also occur as a result of positioning of the arm and body during surgery. Most of these injuries recover within weeks to months following the surgery. Incomplete recovery, partial and complete permanent injuries have resulted from these rare but serious complications.
8. **Vessel injury.** ***Rarely*** the major artery/vein in the upper extremity is injured. If this occurs its injury is generally quickly detected but occasionally its detection may be delayed. If a major injury to these vessels of the upper extremity occurs, an immediate vascular repair by a vascular surgeon is required with a subsequent hospitalization. ***Very rarely,*** vascular injuries have resulted in an amputation of the extremity.
9. **Reflex sympathetic dystrophy.** This ***rare*** entity is characterized by pain out of proportion. If this occurred postoperatively it would require referral to a pain clinic, prolonged rehabilitation, and epidural spinal pain blocks.
10. **Stiffness.** Following any type of shoulder surgery, stiffness of the shoulder is frequently noted in the early stages of recovery. In most cases, normal motion is regained about 6-12 months after surgery. Occasionally, if more significant or prolonged stiffness occurs, a secondary procedure may be required to remove scar tissue and manipulate the shoulder to regain motion.
11. **Fracture.** In cases where the shoulder is undergoing treatment for stiffness (adhesive capsulitis or frozen shoulder), there is a risk of fracture, dislocation or tear of the rotator cuff which may be associated with attempts to move the shoulder to restore motion while the patient is under anesthesia.
12. **Cosmetic Deformity.** In certain cases, the surgeon may elect to perform a biceps tenodesis or tenotomy. *In this* situation, the long head biceps is found to have disease or damage which is contributing to the shoulder condition and is therefore removed from the shoulder joint. If this procedure is performed, there may be a cosmetic asymmetry in the appearance of the biceps and arm compared to the opposite side. This change in appearance is not associated with any loss of function.
13. **Recurrent Instability.** In cases in which the shoulder is being operated on for instability (otherwise referred to as dislocations or the shoulder slips out of socket), repeat dislocations of the shoulder may occur after surgery. The risk of repeat dislocations following a procedure to stabilize the shoulder is about 10%.
14. **Hardware Complications.** During many shoulder procedures, anchors, screws or other implants are used to repair the shoulder. In most cases, these implants cause no additional problems and are required to complete the procedure. In rare cases, these implants may be associated **with** complications such as loosening, pain, infection or bone reaction that require secondary surgery or removal.
15. **Persistent Pain/Function Deficit:** As with any surgery, there is no guarantee of success, complete relief of pain, or return of normal function. In rare cases, pain or functional loss may become worse after surgery. The surgeon can discuss with the outcomes and chance of success of the specific procedure.
16. **Open Surgery.** In some cases, the surgeon may elect to make an open incision to complete the surgery. This decision may be required based on the amount of swelling that occurs in the shoulder during arthroscopy, or as a result of the type

of problem identified in the shoulder at the time of surgery. The same risks as described above are associated with open surgery.

Common but less serious risks include:
1. **Bruising/Swelling:** Some patients will note bruising around the shoulder. Occasionally this will be noted tracking in the upper arm or forearm or hand. In addition, swelling in the hand can occur after immobilization in the sling. Movement of the elbow, wrist and hand can help decrease swelling in this area. This is ***not*** a complication.
2. Numbness associated with sling use. Numbness of the hand can be associated with the use of a sling which is often required after shoulder surgery. Generally, this numbness resolves with movement of the elbow once the sling is removed.
3. Portal discomfort. The small arthroscopic skin incisions as they heal may feel nodular. This generally resolves over time.

PROCEDURE ALTERNATIVES
In most cases, alternatives to surgery are available. The first alternative is to undergo no further treatment, and to live with the shoulder in the current condition. Other possible alternatives include medications, injections, physical therapy and activity modifications. The patient can discuss these alternatives with the surgeon in regards to their specific problem.

PROBABLE CONSEQUENCES OF REFUSING THE RECOMMENDED PROCEDURE
The surgical procedure for the shoulder has been recommended to attempt to improve the patient's shoulder condition. If the patient elects not to proceed with surgery, possible consequences include persistent or worsening pain and/or loss of function or shoulder dislocation. In some cases, shoulder problems may become worse with time, resulting in permanent pain or loss of function.