

Labral Tear

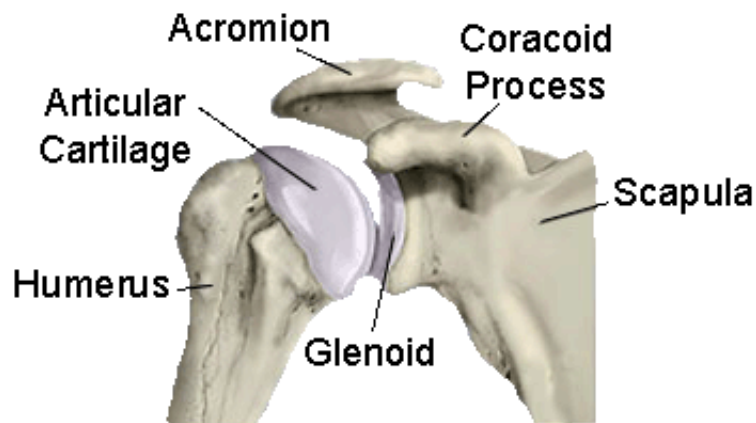
Introduction

Since orthopedic surgeons began using the arthroscope to diagnose and treat shoulder problems, several conditions that were not known to exist have recently been discovered. One of these is an injury to a small structure in the shoulder called the labrum. A tear of labrum can cause a very difficult to diagnose problem of pain and a catching sensation with movement of the shoulder. Let's learn some more about the labrum order to better understand how this problem can be treated.

Anatomy

The shoulder is made up of three bones: the scapula (shoulder blade), the humerus (upper arm bone) and the clavicle (collarbone). A part of the scapula, called the glenoid, makes up the socket of the shoulder. This socket is very shallow and flat. To make the socket more like a cup, there is a rim of soft tissue called the labrum. The labrum acts sort of like a gasket, turning the flat surface of the glenoid into a deeper socket that molds to the head of the humerus for a better fit.

This tissue can be caught between the socket and the humerus and be torn. This flap of tissue can move in and out of the joint, getting caught between the humeral head and glenoid socket, and cause pain and catching. The labrum is also the area for attachment of several of the tendons and ligaments of the shoulder. The ligaments that attach to the labrum help with maintaining the stability of the shoulder. (You may want to review the document on shoulder instability as well.)



Causes

Most labral tears are probably the result of an injury to the shoulder, such as falling on an outstretched hand. Labral tears are commonly seen in shoulders that are unstable. There is reason to believe that the excess motion of the humerus moving around on the glenoid may cause damage to the labrum over time. An unstable shoulder may also cause injury to the labrum, if it repeatedly dislocates out of the glenoid.

Symptoms

The main symptom caused by a labral tear is usually a sharp catching type sensation in the shoulder with certain movements. This may be followed by a vague aching for several hours. This catching feeling may occur only with certain movements of the shoulder and the shoulder is

otherwise painless.

Diagnosis

The diagnosis of a labral tear may be suggested by the history and the physical examination. There are several specific movements that may reproduce the symptoms. With the arm overhead, there may be pain, and the catching sensation may be felt as the arm is raised. If the arm is raised in front of the body, with the palm of the hand facing upward, pain may be felt when your physician tries to push down on the arm.

The tear is sometimes visible on the MRI scan, or in a CAT scan with special dye injected in the shoulder. An MRI scan is a special radiological test where magnetic waves are used to create pictures that look like slices of the shoulder. The MRI scan shows more than the bones of the shoulder. It can show the tendons and ligaments as well. A CAT scan is an older test that uses computer enhanced X-rays to show slices of the shoulder as well. Because the CAT scan uses X-rays, the soft tissues do not show up. The special dye is necessary to show the outline of the labrum, and if there is a tear the dye may leak into the tear and show up on the CAT scan. These two tests are not real accurate in detecting this problem.

The diagnosis of a labral tear can be extremely difficult and the diagnosis may finally rely on looking into the shoulder with the arthroscope. The arthroscope is a small TV camera that can be inserted into the shoulder joint and pictures can be viewed by the surgeon on a TV as he moves the camera around inside the shoulder joint. This allows the surgeon to look directly at the labrum and see if it is torn.

Treatment

Since there is some evidence that the symptoms of a labral tear may be made worse by instability, a rehabilitation program to strengthen the rotator cuff muscles may be started. A physical therapist will help instruct you in the exercises. Anti-inflammatory medications, such as aspirin or ibuprofen, may help the pain. If the problem persists, you may need to have surgery to confirm the diagnosis and attempt to treat the problem.

Surgical treatment for this condition is still evolving. The arthroscope can be used to treat the torn labrum in most cases. If the tear is small and is primarily getting caught as you move the shoulder, simply removing the loose part of the labrum may help your symptoms.

If the tear is larger, the shoulder may also have a problem with instability, meaning that the shoulder is too loose. If this is the case, the labral tear may need to be repaired instead of simply removed. There are several new techniques that allow the surgeon to place small staples into the labrum through the arthroscope, and attach the labrum to the bone of the shoulder socket (glenoid). If the tear is too large to repair through the arthroscope, an incision may have to be made in the front of the shoulder to repair the torn labrum.