

PARTIAL TEAR OF THE ROTATOR CUFF

Overview

The rotator cuff is a group of 4 muscles with their tendons, namely the supraspinatus, infraspinatus, subscapularis and teres minor. These muscles and tendons attach the humerus to the scapula and allow for movement of the shoulder. Their function is to stabilise the ball shaped humerus in the cup shaped glenoid fossa and to keep the joint surfaces together through a wide range of motion during which the humeral head otherwise dislocate. Partial tear of the rotator cuff refers to a situation where fraying or defect of the rotator cuff tendon occurs that has not progressed to a point where the damage has taken place through the full thickness of the tendon.

Rotator cuff injuries can occur through local irritation and trauma. Acute tears can occur when excessive stress is placed on the rotator cuff by jerky lifting of heavy objects, use of the arm to break a fall or where the shoulder dislocates.

Degenerative or chronic tears occurs through normal wear and tear of the tendon by bony outgrowth associated with arthritis, weak muscles, weak posture, weak blood supply to the tendons or repetitive strenuous movements during work or sport. Infection of the tendons or the bursa that lies between the rotator cuff and overlying bone can further narrow the space and increase impingement as the tendon moves through this space. This contributes to pain, wear and tear and degeneration of the tendon.

Symptoms

Weakness, continuous pain, tenderness and inability to take the shoulder through the full range of motion are usually present. Pain is most intense when the arm is elevated to the front or to the side or with push ups with the hands behind the back. Degenerative tears usually start with mild pain that progresses over time. Night pain occurs when the tendon is damaged or weakened.

Classification

Injury to the tendons is classified according to the degree of damage that has taken place, the location of the tear, whether it involves a part or the full thickness of the tendon and the specific tendons of the rotator cuff that is involved.

Treatment

Pain relief and improvement of function is the aim of treatment and treatment is adjusted to the patient's specific injury and the grade thereof. Partial tears can be treated conservatively with rest, limitation of activities that causes pain, anti-inflammatory medication and exercises to strengthen the shoulder girdle, mobilise the joint and improve range of motion.

Where there is no sufficient response to conservative treatment the use of a corticosteroid injection is controversial. When pain continues despite the above treatment and when the tears enlarge as observed by ultra sound examination, surgery might be indicated to debride the involved tendon ends, stitch them back to bone and decompress the tendons by removing a certain amount of overlying bone. Repair of the tendons take place by specialised bone anchors, or through drill holes through the bone.