

Arthroscopic Acromioplasty Rehabilitation Protocol

Methodist Sports Medicine Center

Introduction

Impingement Syndrome is a common cause of chronic shoulder pain. In this condition, the rotator cuff tendon becomes “pinched” under the anterior aspect of the acromion during elevation of the upper extremity. Normally there is just enough room for the rotator cuff and the overlying bursa to slide through without significant friction. However, if the subacromial outlet becomes narrowed secondary to anterior acromial spur formation, or if the rotator cuff tendon or bursa becomes enlarged impingement can occur. In most cases this condition resolves with rest and rehabilitation. However, 10-30% of patients requires surgical intervention

Surgical Technique

Open Acromioplasty was first reported as a means of relieving subacromial impingement in 1972. This remained the Gold Standard technique until the mid 1980's when surgeons began to use arthroscopic means to accomplish the same goal. During an acromioplasty, the contour of the anterior, inferior aspect of the acromion is beveled so that the rotator cuff tendons can slide through the subacromial space unimpeded.

In most situations, patients will be given a light general anesthetic in combination with an interscalen block. An interscalen block anesthetizes those nerves that supply the nerve and upper extremity. This allows the patient to undergo the procedure with much less anesthetic agent and afterwards the patient has minimal if any pain for a duration of 12-24 hours. Once the anesthetic agent has been administered the shoulder and arm are sterilely prepped and draped. The arthroscope is a fiberoptic instrument, which is roughly 4mm in diameter that is inserted into the shoulder joint. This tool allows the surgeon to visualize all the “nooks and crannies” of the shoulder. The arthroscope is typically inserted through a tiny stab incision over the posterior aspect of the shoulder. Initially the arthroscope is placed into the glenohumeral joint. A careful assessment of the cartilage, labrum, biceps tendon, and rotator cuff are undertaken. Once the intraarticular exam is complete, the arthroscope is repositioned in the subacromial bursa above the rotator cuff tendons and below the acromion. A lateral incision is then made through which special cauterizing and shaving instruments can be placed. Initially the scarred and inflamed bursa is resected using a specialized shaving/suction instrument. Once the pathologic bursal tissue has been resected the surgeon can then visualize the superficial surface of the rotator cuff, the coracoacromial fraying of the superficial aspect of the rotator cuff and the coracoacromial ligament and the anterior acromial periosteum. This is due to the chronic rubbing of the tendon against the anterior acromion and CA ligament. Through the lateral portal a cauterizing instrument is introduced to release the coracoacromial ligament off of the anterior and lateral aspects of the acromion. Typically 4-8 mm of the acromion is removed and gently beveled posteriorly. The goal of the surgery is to create a flat acromial undersurface. During the procedure, the surgeon constantly reassesses the amount of resection and adjusts it as necessary for each individual patient. Once this is done the arthroscopic equipment is removed. The wounds are typically sutured closed and reinforced with steristrips. The patient is given a cryo-cuff and shoulder sling to wear home.

Phase I: 0 – 4 Weeks

Clinical Goals:

- ◆ Restore passive and active ROM as tolerated
- ◆ Pain-free sleep and activities of daily living to shoulder height.

Testing:

- ◆ Bilateral ROM

Exercises:

- ◆ Ice will be utilized during this phase to control pain and swelling.
- ◆ Passive, active-assistive and/or active ROM are performed depending on the patient's tolerance.
 - These exercises consist of pendulum, pulley, PROM and/or wand exercises in all planes of motion as tolerated
- ◆ Isometric strengthening exercises are also initiated at this time.

Follow-up

- ◆ The patient will follow-up one time weekly to measure ROM, monitor pain, and update HEP as tolerated
- ◆ The patient will return to see the physician at one month

Phase II: 4 - 12 Weeks

Clinical Goals:

- ◆ full pain-free AROM and light work activities

Testing:

- ◆ Bilateral ROM
- ◆ Bilateral strength with MMT

Exercises:

- ◆ Ice is used depending on the patient's symptoms.
- ◆ Doorway stretching for flexion and external rotation is used to attain end-range motion if needed.
- ◆ Tubing exercises are initiated at this time. Patients will begin with IR/ER in a neutral position, progressing to flexion, extension, and abduction as tolerated. Tubing exercises should remain at or below 90° of elevation
- ◆ Dumbbell exercises are implemented when tolerated. Flexion/abduction to 90°, IR/ER in sidelying position
- ◆ Hughston exercises can be implemented for scapular stabilization when tolerable.
- ◆ **Emphasis is placed on proper elevation techniques and scapular stabilization**
- ◆ **Isokinetics are discouraged by our physicians.**

Follow-up

- ◆ The patient will follow-up with the physician monthly during this phase; physical therapy visits will be determined on an individual basis by the therapist depending on the patient's progress and/or complications

Phase III: 3 – 6 Months

Clinical Goals:

- ◆ Pain-free work or athletic activities.

Testing:

- ◆ Bilateral ROM

Exercises:

- ◆ The focus of this phase is on the functional return of the patient to his or her prior level of activity.
- ◆ The patient will be able to utilize heavier weight with exercise and may begin weight room activities such as bench press, lat pulls to front, rows, bicep/tricep work. Strength exercises at or above 90° may be implemented as long as it is pain free. Exercises done behind the neck such as lat pulls to the back, shoulder press, flys, pect. deck are discouraged.
- ◆ Implementation of a sport specific functional progression is appropriate at this time.
- ◆ The patient is discharged once they have full ROM, normal strength and resumed full pain free, uninhibited activity.

DISCLAIMER

These general rehabilitation guidelines are created by physical and occupational therapist for the rehabilitation of various shoulder and elbow pathologies. These are to simply be used as guidelines. This information is provided for informational and educational purposes, only. Specific treatment of a patient should be based on individual needs and the medical care deemed necessary by the treating physician and therapists. The University of Kentucky and The American Society of Shoulder and Elbow Therapists take no responsibility or assume no liability for improper use of these protocols. We recommend that you consult your treating physician or therapist for specific courses of treatment.