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ROTATOR CUFF REPAIR (<3CM) REHABILITATION PROTOCOL

Procedure

- .. Shoulder arthroscopy / biceps tenotomy / biceps tenodesis / rotator cuff repair / sub-acromial decompression / distal clavicle excision

Phase I (PASSIVE) (Weeks 2-4)

- .. Sling immobilization with supporting abduction pillow to be worn at all times except for showering and rehab under guidance of PT
- .. Patients are seen 1-2 times per week for the first 4 weeks with the goal of saving formal therapy sessions for later in the rehabilitation process when strengthening/mechanics are key. HEP is heavily emphasized by the therapist during Phase I

Exercises

- .. Codman exercises/pendulums
- .. Elbow/wrist/hand ROM and grip strengthening
- .. Isometric scapular stabilization
- .. **Cryotherapy, manual therapy, E-stim/TENS units**
- .. PROM exercises for elevation, external rotation, and internal rotation
 - Pulley exercises for elevation
- .. Range of Motion:
 - Supine external rotation starting at 0-30 deg beginning at 2 weeks, do not exceed 45 deg until 4 weeks. At 4 weeks may progress to full PROM for ER as tolerated (progress to upright as tolerated)
 - Supine forward elevation starting at 0-90 deg beginning at 2 weeks, do not exceed 140 deg until 4 weeks. At 4 weeks may progress to full PROM for supine forward elevation (progress to upright as tolerated)

Phase II (ACTIVE) (Weeks 4-8)

- .. Discontinue abduction pillow. Sling for comfort but may progressively discontinue
- .. Goal is for full ROM (equal to noninvolved side) by the end of this phase
- .. Therapy visits may increase to 2-3 times each week

Exercises

- .. **4-6 weeks:** Begin gentle active assisted ROM (AAROM) exercises (supine position), gentle joint mobilizations, continue with Phase I exercises.
- .. **6-8 weeks:** Progress to active exercises with resistance, shoulder flexion with trunk flexed to 45 deg in upright position, begin deltoid and biceps strengthening (**no biceps strengthening until 8 weeks post-op if tenodesis was performed**)
- .. Modalities per PT discretion

Range of Motion

- .. Gentle passive stretch to reach ROM goals from Phase I
- .. May begin AROM at week 7 as tolerated

Phase III (ACTIVE) (Weeks 8-12)

Exercises

- .. Continue with scapular strengthening
- .. Continue and progress with Phase II exercises
- .. Begin Internal/External rotation isometrics
- .. Stretch posterior capsule when arm is warmed up
- .. The patient may begin progressive resistance exercises as tolerated including the following:
 - Isometrics exercises for the shoulder musculature in all planes
 - Theraband exercises; grade of tubing and exercise disposition (concentric or eccentric) will vary according to the patient's strength and tolerance. The exercise planes will include first internal/external rotation with the shoulder in neutral (elbow tucked at the patient's side) then extension and adduction and progressing to "scaption" elevation to 90°
 - Dumbbell exercises for the rotator cuff may be implemented. Standing flexion and abduction exercises, side-lying external rotation, supine internal rotation and prone extension and horizontal abduction exercises are performed.
 - Closed kinetic chain exercises may also be implemented during this phase.
 - Emphasis must be made on proper scapular stabilization and control. Accurate assessment of the scapular stabilizing musculature strength and length/flexibility is critical to proper shoulder function.
- .. Caution against: 1) repetitive activities, 2) overhead activities, 3) fast-jerky movements and 4) heavy lifting (limits determined by physician)

Range of Motion

- .. Progress full AROM without discomfort

Clinical Follow-up

- .. The patient will follow-up with the Physician at monthly intervals.
- .. The patient will follow-up with the therapist as needed during this phase for treatment and home exercise program updates
 - The patient should have full active and passive ROM (equal to noninvolved side) with good scapular control.
 - Adequate strength to perform pain free ADL's and non-labor, work related activities.

Phase IV (RESISTANCE) (3 to 6 Months)

Clinical Goals

- .. Pain free AROM WFL
- .. Advance strength and function as tolerated
- .. Return to all non-heavy labor activities
- .. Possible referral to Work Conditioning or Sports Performance program if deemed appropriate.

Testing

- .. Bilateral ROM
- .. Strength evaluation using hand held dynamometer at 4 and 6 months

Exercises

- .. Begin and advance strengthening as tolerated
 - Isometrics --> therabands --> light weights (1 - 5 lbs)
- .. The patient will begin a more aggressive shoulder stretching program as indicated. This may include self-stretching or partner stretching
- .. The patient will increase the resistive strengthening program to include heavier resistance with tubing or weight
- .. Implementation of an easy, sport/activity specific functional progression (at shoulder height and below) can begin depending on the patient's activity level.
- .. Strengthening continued in areas of weakness as documented by hand held dynamometer
- .. Generally it takes 4-6 months for return to full activity and 9-12 months to reach full rehabilitation potential

Clinical Follow-up

- .. The patient will follow-up as needed between 4 and 6 months post-op
- .. The patient will return at 6 months post-op to see the physician and the therapist:
 - 70% strength compared to non-involved side determined by hand held dynamometer.
- .. Released to any and all activities at home and work, as well as, leisure sports or hobbies, as long as pain free.

Phase V (MAINTENANCE)

(6 Months to 1 Year)

Clinical Goals

- .. Full ROM
- .. Full return of strength (equal to noninvolved side) if possible

Testing

- .. Bilateral ROM
- .. Strength evaluation with hand held dynamometer and/or Cybex isokinetic

Exercises

- .. Continue with daily stretching if needed
- .. Resume a regular “workout” routine 3x/week for general upper body strength and conditioning
- .. Continue with rotator cuff specific strength exercises.
- .. Increase participation in sports, hobbies, and activities at home and work
- .. A functional progression for overhead activities may begin during this phase

Clinical Follow-up

- .. Patient will follow up with both the physician and therapist at 6, 9, and 12 months
- .. Patient will be discharged at one-year postoperative if patient has reached full rehabilitation potential