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Arthroscopic Rotator Cuff Repair Postoperative Rehab Protocol

Post-operatively you will be placed in a sling. On post-operative day #1 you will see a TMI physical therapist in Dr. Robertson's office and begin a rehabilitation program. This handout serves as a guideline for your rehabilitation after rotator cuff repair. The speed in which you progress through these phases of rehab may be altered depending upon the size of your tear and the quality of the tissue. Shoulder surgery can be painful. You may have to sleep in a semi-erect position or in a recliner for several days. A pillow behind the operative shoulder and elbow can often provide relief. Typically, you may not remove the sling to drive for four weeks.

Postoperative Phase I: Maximum Protection (Weeks 0 to 3)

Goals

- Protect surgical repair
- Diminish pain and inflammation
- Gradually increase PROM
- Improve scapular and distal muscle strength
- Independence in home exercise program

Precautions

- Maintain sling immobilization when not performing therapy exercises
- No active movements of the operated shoulder except for gentle self-care activities below the level of the shoulder
- Avoid exceeding ROM limitations set by the surgeon
- Avoid pain with ROM and isometric exercises

General Principles

- Weight-bearing status: NWB
- Cryotherapy: Polar care or ice used for first week and then PRN
- Sling: at all times except for therapy exercises unless specified by the surgeon

Treatment Plan

- Education: sleeping postures, activity modifications
- Cryotherapy
- Pendulum exercises
- PROM exercises
  - PROM by rehab therapist
  - Passive forward to 100°, Abd and ER. (If subscap repair, limit ER to neutral)
- Active range of motion exercises
  - elbow/forearm/wrist/hand
- Scapular stabilization exercises – side-lying (advance to manual resistance)
- Submaximal deltoid isometrics in neutral as ROM improves (short lever arm)
- Advance home exercise program

Criteria for Progression to Phase II

- Normal Scapular mobility
- Full AROM distal to the shoulder

<u>Postoperative Phase II: Moderate Protection (Weeks 3 to 7)</u>

Goals

- Protect surgical repair
- Diminish pain and inflammation
- Improve ROM to 80 - 100% forward flexion and external rotation
- Improve periscapular strength and stability
- Improve scapulohumeral rhythm and neuromuscular control
- Decrease rotator cuff inhibition

Precautions

- Avoid pain with ADLs
- Sling immobilization until discontinued by surgeon (typically 4-6 weeks)
- Avoid active elevation of the operative arm
- No maximal cuff activation
- Avoid Pain with ROM/therapeutic exercises
- No excesses behind the back movements
- No supporting of body weight by the arms and hands

Treatment Plan

- Continue exercises from phase I, progress ROM as tolerated
- Discontinue sling as directed by physician
- AAROM exercises at 4-6 weeks at discretion of MD
  - Supine forward flexion with contralat hand; advance to wand (scapular plane)
  - Wand ER/IR
  - May initiate pulleys (week 6) as ROM and muscle control improves
  - May initiate pool program for light AROM exercises
- Physioball scapular stabilization (below the horizontal)

- Isometric exercises 4-6 weeks at discretion of MD
  - ER/IR (submaximal) at neutral
  - Progress deltoid isometrics to long lever arm in neutral
- Gentle isotonic exercises (generally 2 weeks after Isometrics began)
- Begin humeral head stabilization exercises as range of motion improves (>90°)
- Modalities as indicated
- Modify home exercise program

Criteria for Progression to Phase III

- Ability to activate cuff and deltoid without pain
- Tolerate arm out of sling
- ROM 80% or greater for forward flexion and external rotation

Postoperative Phase III: Early Strengthening (Weeks 7 to 13)

Goals

- Eliminate/minimize pain and inflammation
- Restore full ROM
- Improve strength and flexibility
- Restore normal scapulohumeral rhythm below 90° elevation
- Gradually return to light ADLs below 90° elevation

Precautions

- Monitor activity level
- Limit overhead activity
- Avoid shoulder "shrug" with activities and exercise
- Avoid jerky movements and lifting heavy objects

Treatment Plan

- Continue cryotherapy PRN
- Continue wand exercises for ER/IR and flexion
- Flexibility exercises, adduction (posterior capsular stretching)
- Progress to functional ROM exercises (IR behind back)
- Periscapular isotonic strengthening
  - scapular protraction
  - progress to scapular retraction exercises
  - shoulder extension with theraband
  - dumbbell rolling
- Rotator cuff isotonic strengthening exercises
  - AROM, sidelying ER
  - ER/IR modified neutral with therabands, if sufficient scapular strength (base) has developed
- Functional strengthening exercises

    - AROM supine forward flexion in the scapular plane
    - Progress to standing forward flexion
- Progress to rhythmic stabilization exercises

Criteria for Progression to Phase IV

- Minimal pain and/or inflammation
- Full PROM
- Improved Rotator Cuff and Scapular Strength
- Normal scapulohumeral rhythm with shoulder elevations below 90°
- Independence with home exercise program

Postoperative Phase IV: Late Strengthening (Weeks 14 to 19)

Goals

- Improve (MMT) strength to 5/5 for scapular and shoulder musculature
- Improve neuromuscular control
- Normalize scapulohumeral rhythm throughout the full ROM

Precautions

- Progress to overhead activity only when proper proximal stability has been achieved

Treatment Plan

- Continue to progress isotonic strengthening for periscapular and rotator cuff musculature
    - Latissimus pull-down
    - Rowing machine
    - Chest press
- Continue flexibility – side-lying posterior capsular stretch
- Progress scapular stabilization program
- Initiate isokinetic strengthening (IR/ER) in scapular plane
- Initiate plyometric exercises below horizontal, if sufficient strength base
- May initiate interval golf program if appropriate (week 16)

Criteria for Progression to Phase V

- Normalize scapulohumeral rhythm throughout the full ROM
- Normal (MMT) strength to 5/5 for scapular and shoulder musculature

Postoperative Phase V: Return to Sport (Weeks 20 to 24)

Goals

- Maximize flexibility, strength, neuromuscular control to meet demands of sport
- Gradual return to recreational sport activities
- Gradual return to strenuous work activities
- Isokinetic testing: 85% of contralateral limb

- Independence in home and gym therapeutic exercise program for maintenance and progression of functional level at discharge

Precautions

- Avoid pain with therapeutic exercise and activity
- Avoid sport activity until adequate strength, flexibility, and neuromuscular control
- Surgeons clearance needed for sport activity

Treatment Plan

- Continue to progress isotonic strengthening for periscapular and rotator cuff musculature
- Continue flexibility and stabilization program
- Individualized program to meet demands of sport-specific requirements
- Plyometrics (above horizontal)
- **Week 22:**
  - May progress golf program to playing golf (if appropriate)
  - May initiate interval tennis program (if appropriate)
  - May initiate swimming
  - May initiate interval training program for pitchers and overhead athletes

Criteria for Discharge

- Isokinetic testing close to normal ER/IR ratios (66%), 85% of contralateral
- Independence with home/gym program at discharge for maintenance and progression of flexibility, strength, and neuromuscular control