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Rotator Cuff Repair Post-Operative Care

Dr. Miller

This protocol was developed to provide the physical therapist with guidelines for treatment of a patient who has undergone surgical repair of the rotator cuff. These guidelines are not a substitute for appropriate clinical decision making. It is essential that the therapist takes into consideration the size of the tear, tissue quality and individual function in order to obtain optimal outcomes. The protocol is divided into 5 phases. Patients will typically continue with formal physical therapy in some capacity until they are independent with Phase III home exercises (14 to 16 weeks post-op). Anticipated number of visits range from 18 to 27 formal PT sessions. Progression from phases should not occur prior to the appropriate post-op time frames; however, phase progression should be delayed if the patient does not meet the progression criteria. Tolerance to exercise should be closely monitored. Patients should not have a significant increase in pain after treatment or exercise. If this occurs, treatment is too vigorous and should be modified accordingly. UBE's should not be used during the rehab process due to high injury rates. Heat can be used pretreatment as needed, but no sooner than 2 weeks post-op.

Phase IA: Protection Phase

Weeks 0 to 2

Immobilization:

- Sling is worn for 6 weeks post-op
  - It may be removed for exercises and showering

Home Exercise Program:

- Patient will perform pendulums, elbow, hand, and wrist exercises (see handout)
- Patient will see surgeon at 10-14 days post-op then begin formal physical therapy

Formal Physical Therapy:

- Patients will be scheduled for 1st PT visit approximately 14 days after surgery

Goals:

- Maintain the integrity of the repair
- Diminish pain and inflammation
- Maintain hand, wrist, and elbow ROM

Phase 1B: Protection Phase

Weeks 2 to 6

Formal Physical Therapy:

- Most patients will be seen 2 times per week during Phase I
- If the patient has good PROM, it is appropriate to see the patient 1 time per week for the remainder of Phase I

- If a patient is developing post-op stiffness and cannot safely or properly perform their home ROM program, then they can be seen 3 times per week as needed until motion is on schedule

Goals:

- Gradually restore PROM per guidelines
- Modified independent with ADL's, while maintaining the integrity of the repair

Precautions:

- No shoulder AROM
- **No passive forward elevation >90° for 4 weeks**
- Remove sling only for exercises and showering
- No isometrics of GH musculature
- No shoulder extension beyond neutral until week 5
  - Place towel under distal humerus when supine
  - Advise patient to always be able to visualize their elbow
- No excessive stretching or sudden motion
- No supporting of bodyweight with involved extremity
- No driving until out of sling, unless cleared by the surgeon
- <u>If anterior cable</u> involvement present:
  - No external rotation >20° in neutral before 8 weeks
- <u>If posterior cable</u> involvement present:
  - No external rotation >20° in abduction before 8 weeks
- If <u>any cable</u> involvement present:
  - **No rotator cuff strengthening before 16 weeks**

Physical Therapy Treatment:

- Forward elevation PROM: ≤90° for 4 weeks
  - By week 5: progress to full ROM as tolerated
- Monitor cervical ROM
- Pendulums
  - If painful, perform pendulum hangs without motion
- AAROM (week 4)
  - *If <u>no</u> cable involvement present*
- Elbow and wrist AROM
- Grip strengthening
- Address postural issues (cervical/scapular)
- Scapular retraction/depression
- Scapular stabilization exercises (manual)
- GH/ST joint mobilizations as tolerated
- Self-PROM: Only performed if patient demonstrates good form
  - Supine forward elevation: Use uninvolved extremity to lift involved extremity <90° for 4 weeks
  - Supine external rotation: Cane-assisted
    - If cable involvement present: <20° for 8 weeks
  - Horizontal adduction: No earlier than 5 weeks post-op
  - Internal rotation: No earlier than 5 weeks post-op. Hand to back (gentle). Goal of reaching to glut

- If <u>no</u> cable involvement present
  - Internal/external rotation PROM in the scapular plane
    - Elbow supported to avoid shoulder extension
    - Begin at 30° abduction and progress as tolerated
    - At week 4, progress:
      - ER at 90° of abduction: ≥ 45°

        - IR at 90° of abduction: as tolerated (pain free)
    - If anterior cable involvement present:
        - No external rotation >20° in neutral before 8 weeks
    - If posterior cable involvement present:
        - No external rotation >20° in abduction before 8 weeks

Recommended HEP:

- *If the patient cannot demonstrate correct performance of these exercises in the clinic, they should not be performed at home*
- Perform 5 times daily
    - Pendulums
    - Self-PROM forward elevation (<90° for 4 weeks): 10 second holds x 5 reps
    - Self-PROM external rotation: 10 second holds x 5 reps
        - *If cable involvement present, adhere to ROM precautions listed above*
    - Scapular retraction/depression
    - Cervical ROM and treatment as needed
    - Elbow and wrist AROM
    - After week 4:
        - Self-PROM horizontal adduction: Hold if anterior shoulder pain occurs
        - Self-PROM internal rotation: Hand to back (if no cable involvement)
            - Gentle, without reproduction of rotator cuff insertion pain

Criteria for Progression to Phase II:

- Forward elevation PROM: ≥90°
- External rotation PROM:
    - If no cable involvement: 45°
    - If cable involvement: 20°
- Full elbow/wrist AROM

Phase II: AROM Phase
Weeks 6 to 12

Formal Physical Therapy:

- The patient's sling will be removed at 6 weeks
- Most patients will schedule 2 times per week until full AROM is achieved without scapular compensation
- Progression into Phase II activities is delayed if the patient is stiff (defined as not meeting Phase II progression criteria)
- If the patient regains full, pain-free AROM, treatment can be decreased to 1 time per week for the remainder of Phase II

Goals:

- Maintain full PROM
- Progress to full AROM
- Promote soft tissue healing/do not overstress healing tissue
- Slow return to light, active use without resistance

Precautions:

- No lifting with involved extremity
- No supporting of bodyweight with involved extremity
- No excessive behind the back motions
  - Combined shoulder adduction, internal rotation and extension
- No sudden jerky motion
- Avoid frontal plane abduction
  - Perform elevation in the scapular plane
- If anterior cable involvement present:
  - No external rotation >20° in neutral before 8 weeks
- If posterior cable involvement present:
  - No external rotation >20° in abduction before 8 weeks
- If any cable involvement present:
  - No rotator cuff strengthening before 16 weeks

Physical Therapy Treatment:

- Pulleys
- Continued PROM as needed
- AAROM to AROM progression
  - Begin AROM supine/prone. Progress to standing as tolerated
- Light, resisted elbow flexion/extension
- Sub-max deltoid isometrics (week 6 without cable involvement / with cable involvement delay to week 10)
- Sub-max ER/IR isometrics in neutral (week 6 without cable involvement / with cable involvement delay to week 10)
- GH/ST joint mobilizations as tolerated

Recommended HEP:

- Continue PROM/AAROM as needed
- Add AROM exercises 2-3 times daily
- Begin sub-max isometrics 1 time daily (per above guidelines)
- Address scapular position and alignment as needed

Criteria for Progression to Phase III:

- Full, pain-free AROM without scapular compensation

Phase III: Early Strengthening Phase
Weeks 12 to 18

Formal Physical Therapy:

- The patient will be seen 1 time per week in Phase III for 2 to 4 visits to assure independence with a long-term strengthening program
- Discharge to HEP once patient demonstrates good form with functional strength

Goals:

- Gradual restoration of shoulder and scapular strength
- Maintenance of full ROM
- Gradual return to functional activities

Precautions:

- No heavy lifting (3 pound max)
- No sudden lifting or pushing activities
- If any cable involvement present:

- No rotator cuff strengthening before 16 weeks

Physical Therapy Treatment:

- Continue and progress with appropriate Phase I and II exercises as needed
- If cable involvement present, wait until week 16 to initiate the following exercises:
  - Theraband strengthening program
    - Internal/external rotation
    - Deltoid press to 90° forward elevation
    - Scapular program
  - Supine deltoid strengthening
  - Prone scapular program with light resistance

Recommended HEP:

- Continue Phase I and II exercises as needed
- Begin home strengthening Theraband program 1 time daily

Criteria for Progression to Phase IV:

- Restoration of dynamic shoulder stability
- Demonstrates good form and progress with Phase III strengthening exercises

Phase IV: Advanced Strengthening Phase
Weeks 18 to 26

Formal physical therapy has been completed. The patient will be instructed on which exercises need to be continued and how to progress with resistance bands and weights.

Phase V: Return to Function Phase
Weeks 26 onward

Determined by surgeon based on patient's presentation

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