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Biceps Tenodesis Post-Operative Care

This protocol was developed to provide the physical therapist with guidelines for treatment of a patient who has undergone biceps tenodesis surgery. These guidelines are not a substitute for appropriate clinical decision making. It is essential that the therapist take into consideration the patient's general health, integrity of associated joints, and any post-op complications. The protocol is divided into 3 phases. Patients will typically continue with formal physical therapy in some capacity until Phase III (~14 weeks post-op). Anticipated number of visits range from 12-18 formal PT sessions. Progression from phases should not occur prior to the appropriate post-op timeframes; 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. Heat can be used pretreatment as needed, but no sooner than 2 weeks post-op.

Phase I: Protection Phase
Weeks 0 to 5

Immobilization:

- Sling worn at all times for 5 weeks post-op, removing only for exercises and showering to minimize biceps activity
- No active elbow flexion until sling is removed
- No elbow extension PROM >30°

Formal Physical Therapy:

- Patients will be scheduled for 1st PT visit on POD 3-5
- Most patients will be seen 2 times a week during Phase I
- If the patient has good PROM, it is appropriate to see the patient 1 time a week for the remainder of Phase I
- If a patient is developing post-op stiffness and cannot safely and properly perform their home ROM program, they can be seen 3 times a week as needed until motion is on schedule

Goals:

- Maintain the integrity of the repair
- Minimize pain and inflammation
- Gradually restore full PROM
- Enhance scapular function

Precautions:

- No elbow AROM until sling is removed
- No excessive external rotation (beyond gentle tissue stretch)
- No lifting with involved extremity
- Keep incisions clean and dry
- No transverse friction massage to the surgically repaired biceps tendon
- Avoid shoulder extension beyond neutral
    - Place towel under distal humerus when supine
    - Advise patient to always be able to visualize their elbow
- Limit elbow extension to 30° from neutral (-30°)

Physical Therapy Treatment:

- Patient/family education
    - Motion restrictions despite potential for minimal pain
    - Posture
    - Performing ROM exercises
- Shoulder PROM/AAROM: to tolerance (pain free). No shoulder extension beyond neutral.
    - Forward elevation
    - ER/IR: start at 30° abduction. Progress to 90° (week 3)
- Shoulder ER/IR AROM
- Elbow PROM
    - Flexion, extension, supination, pronation
        - Limit elbow extension to 30° from neutral
- Wrist and hand AROM
- Grip strengthening
- Pendulums or hangs (with elbow supported ≤30° from neutral)
- Sub-max isometrics (week 1)
    - Flexion, extension, abduction, ER, IR
- Scapular retraction/depression
- Scapular isometric exercises
- GH/ST joint mobilizations as tolerated

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
    - Self-PROM forward elevation: 10 second holds x 5 reps
    - Self-PROM external rotation in supine at 30° abduction: 10 second holds x 5 reps
- Scapular retraction/depression
- Cervical ROM as needed
- Elbow PROM
- Limit elbow extension to 30° from neutral
- Wrist AROM

Criteria for Progression to Phase II:

- Appropriate healing of the surgical incision
- Full shoulder/elbow PROM with minimal pain

Phase II: Active Range of Motion Phase
Weeks 5 to 11

Formal Physical Therapy:
- Most patients will schedule 2 times a week until full AROM is achieved without scapular compensation
- If patient is independent with HEP and has good ROM, they may be seen 1 time a week for the remainder of Phase III
- Progression into Phase II activities is delayed if the patient is stiff (defined as not meeting Phase II progression criteria)

Goals:
- Minimize pain and inflammation
- Gradual restoration of shoulder and elbow AROM
- Return to chest-level functional activities

Precautions:
- No lifting with involved extremity
- No transverse friction massage to the surgically repaired biceps tendon
- No resisted biceps exercises
- Avoid shoulder extension beyond neutral
  - While lying supine, the distal humerus should be supported by a pillow
  - Patient advised to always be able to visualize their elbow

Physical Therapy Treatment:
- Continue Phase I exercises/treatments as appropriate
- Progress shoulder PROM/AAROM to AROM in all planes, as tolerated (pain free)
  - Progress from supine/side-lying → reclined, → sitting, → standing
- AROM/AAROM
  - Elbow flexion, extension, supination, pronation
- Capsular stretches
  - Cross-body adduction
  - Side-lying internal rotation (sleeper stretch)

Recommended HEP:
- Phase I and II exercises as appropriate

Criteria for Progression to Phase III:
- Full shoulder/elbow AROM without scapular compensation
- Minimal/no pain or tenderness

Phase III: Strengthening Phase
Week 12 onward

Formal Physical Therapy:
- Patients will typically be seen 1 time a week for 2-4 visits to assure independence with a long-term program
- Discharge to HEP once independent with functional activities

Goals:
- Progressive return to unrestricted work and recreational activities
- Maintain full, pain-free AROM without compensation

Precautions:

- No resistance given in a certain motion until full AROM has been achieved
- All exercises should be pain-free and without compensation
- No heavy lifting (≤5 pounds)
- Avoid exercises/activities that cause excessive anterior capsule stress
    - e.g. heavy overhead pressing, wide-grip pushing exercises

Physical Therapy Treatment:

- Elbow flexion, extension, supination, pronation with light resistance
- Rhythmic stabilization
    - ER/IR in scapular plane
    - Flexion, extension, abduction, adduction
        - At various degrees of elevation
- OKC and CKC exercises/activities
- Theraband ER/IR at 0°, 45°, and 90° abduction
- Prone rows at 30°, 45°, and 90° of abduction (no shoulder extension beyond neutral)
- Push-up with a plus (progress hand position from wall to floor)
- PNF patterns
- Gradual overhead strengthening (if pain-free with no compensations)
- Initiate light plyometrics (if appropriate)
    - Chest pass

Recommended HEP:

- Phase I, II, and III exercises as appropriate

Criteria for Progression to Overhead Work and Sports Activities:

- Clearance from surgeon
- Full, pain-free AROM without compensations
- Adequate strength for the task