TROPICAL
MEDICAL GROUP

Dx: ☐ Right ☐ Left

Patient Name: _____

Date of Surgery: _____

PT/OT: Evaluate and treat. Follow the following protocol.

Signature/Date: _____

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Dx: ☐ Right ☐ Left

Date of Surgery: _____ Patient Name: _____

PT/OT: Please evaluate and treat. Follow attached protocol. 2-3 x per week x 6 weeks.

Signature/Date: _____

Biceps Tenodesis Protocol

The intent of this protocol is to provide the clinician with a guideline of the postoperative rehabilitation course of a patient that has undergone a Biceps Tenodesis for biceps dysfunction. It is no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient they should consult with the referring Surgeon.

A biceps tenodesis procedure involves cutting of the long head of the biceps just prior to its insertion on the superior labrum and then anchoring the tendon along its anatomical course more distally along the humerus. There are a number of different anchoring techniques that surgeons are currently using. We recommend the treating therapist understand the technique their referring surgeon typically uses. A biceps tenodesis is typically done when there is significant chronic long head of the biceps dysfunction either along its length or from its labral attachment. If the treating physical therapist needs to learn more about biceps tenodesis and rehabilitation we recommend reading:

Krupp RJ. Kevern MA. Gaines MD. Kotara S. Singleton SB. Long Head of the Biceps Tendon Pain: Differential Diagnosis and Treatment. JOSPT. 2009; 39(2): 55-70.

If further information regarding the various biceps tenodesis surgical techniques the treating therapist should reference:

Mazzocca AD, Bicos J, Santangelo S, Romeo AA, Arciero RA. The biomechanical evaluation of four fixation techniques for proximal biceps tenodesis. Arthroscopy. 2005; 21(11): 1296-306.

Biceps Tenodesis Protocol

Progression to the next phase based on Clinical Criteria and/or Time Frames as Appropriate.

Phase I – Passive Range of Motion Phase (starts approximately post op weeks 1- 2)

Goals:
- Minimize shoulder pain and inflammatory response
- Achieve gradual restoration of passive range of motion (PROM)
- Enhance/ensure adequate scapular function

Precautions/Patient Education:
- No active range of motion (AROM) of the elbow
- No excessive external rotation range of motion (ROM) / stretching. Stop when you feel the first end feel.
- Use of a sling to minimize activity of biceps
- Ace wrap upper forearm as needed for swelling control
- No lifting of objects with operative shoulder
- Keep incisions clean and dry
- No friction massage to the proximal biceps tendon / tenodesis site
- Patient education regarding limited use of upper extremity despite the potential lack of or minimal pain or other symptoms

Activity:
- Shoulder pendulum hang exercise
- PROM elbow flexion/extension and forearm supination/pronation
- AROM wrist/hand
- Begin shoulder PROM all planes to tolerance /do not force any painful motion
- Scapular retraction and clock exercises for scapula mobility progressed to scapular isometric exercises
- Ball squeezes
- Sleep with sling as needed supporting operative shoulder, place a towel under the elbow to prevent shoulder hyperextension
- Frequent cryotherapy for pain and inflammation
- Patient education regarding postural awareness, joint protection, positioning, hygiene, etc.
- May return to computer based work

Milestones to progress to phase II:
- Appropriate healing of the surgical incision
- Full PROM of shoulder and elbow
- Completion of phase I activities without pain or difficulty

Phase II – Active Range of Motion Phase (starts approximately post op week 4)

Goals:
- Minimize shoulder pain and inflammatory response
- Achieve gradual restoration of AROM
- Begin light waist level functional activities
- Wean out of sling by the end of the 2-3 postoperative week
- Return to light computer work

Precautions:
• No lifting with affected upper extremity
• No friction massage to the proximal biceps tendon / tenodesis site

Activity:
• Begin gentle scar massage and use of scar pad for anterior axillary incision
• Progress shoulder PROM to active assisted range of motion (AAROM) and AROM all planes to tolerance
• Lawn chair progression for shoulder
• Active elbow flexion/extension and forearm supination/pronation (No resistance)
• Glenohumeral, scapulothoracic, and trunk joint mobilizations as indicated (Grade I - IV) when ROM is significantly less than expected. Mobilizations should be done in directions of limited motion and only until adequate ROM is gained.
• Begin incorporating posterior capsular stretching as indicated
• Cross body adduction stretch
• Side lying internal rotation stretch (sleeper stretch)
• Continued Cryotherapy for pain and inflammation
• Continued patient education: posture, joint protection, positioning, hygiene, etc.

Milestones to progress to phase III:
• Restore full AROM of shoulder and elbow
• Appropriate scapular posture at rest and dynamic scapular control with ROM and functional activities
• Completion of phase II activities without pain or difficulty

Phase III - Strengthening Phase (starts approximately post op week 6-8)

Goals:
• Normalize strength, endurance, neuromuscular control
• Return to chest level full functional activities

Precautions:
• Do not perform strengthening or functional activities in a given plane until the patient has near full ROM and strength in that plane of movement
• Patient education regarding a gradual increase to shoulder activities

Activity:
• Continue A/PROM of shoulder and elbow as needed/indicated
• Initiate biceps curls with light resistance, progress as tolerated
• Initiate resisted supination/pronation
• Begin rhythmic stabilization drills
• External rotation (ER) / Internal Rotation (IR) in the scapular plane
• Flexion/extension and abduction/adduction at various angles of elevation
• Initiate balanced strengthening program
    - Initially in low dynamic positions
    - Gain muscular endurance with high repetition of 30-50, low resistance 1-3lbs)
    - Exercises should be progressive in terms of muscle demand / intensity, shoulder elevation, and stress on the anterior joint capsule
    - Nearly full elevation in the scapula plane should be achieved before beginning elevation in other planes
    - All activities should be pain free and without compensatory/substitution patterns
    - Exercises should consist of both open and closed chain activities
    - No heavy lifting should be performed at this time
        - Initiate full can scapular plane raises with good mechanics
        - Initiate ER strengthening using exercise tubing at 30° of abduction (use towel roll)
        - Initiate side lying ER with towel roll
        - Initiate manual resistance ER supine in scapular plane (light resistance)
        - Initiate prone rowing at 30/45/90 degrees of abduction to neutral arm position
        - Begin subscapularis strengthening to focus on both upper and lower segments

• Push up plus (wall, counter, knees on the floor, floor)
• Cross body diagonals with resistive tubing
• IR resistive band (0, 45, 90 degrees of abduction
• Forward punch
• Continued cryotherapy for pain and inflammation as needed

Milestones to progress to phase IV:
• Appropriate rotator cuff and scapular muscular performance for chest level activities
• Completion of phase III activities without pain or difficulty

Phase IV – Advanced Strengthening Phase (starts approximately post-op week 10)

Goals:
• Continue stretching and PROM as needed/indicated
• Maintain full non-painful AROM
• Return to full strenuous work activities
• Return to full recreational activities

Precautions:
• Avoid excessive anterior capsule stress
• With weight lifting, avoid military press and wide grip bench press.

Activity:
• Continue all exercises listed above
    - Progress isotonic strengthening if patient demonstrates no compensatory strategies, is not painful, and has no residual soreness
• Strengthening overhead if ROM and strength below 90 degree elevation is good
• Continue shoulder stretching and strengthening at least four times per week
• Progressive return to upper extremity weight lifting program emphasizing the larger, primary upper extremity muscles (deltoid, latissimus dorsi, pectoralis major)
    - Start with relatively light weight and high repetitions (15-25)
• May initiate pre injury level activities/ vigorous sports if appropriate / cleared by MD

Milestones to return to overhead work and sport activities:
• Clearance from MD
• No complaints of pain
• Adequate ROM, strength and endurance of rotator cuff and scapular musculature for task completion

Protocol Courtesy:

Biceps Tenodesis Protocol

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