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REHAB PROTOCOL: Anterior Shoulder Stabilization with Distal Tibial Allograft

Name:_____ **Date:**_____

Diagnosis:_____ **Date of Surgery:**_____

Phase I – Immediate Post Surgical Phase (approximately Weeks 1- 3)

Goals:

- □ Minimize shoulder pain and inflammatory response
- □ Protect the integrity of the surgical repair
- □ 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 operative shoulder
- □ No excessive external rotation range of motion (ROM) / stretching. Stop at first end feel felt
- □ Remain in sling, only removing for showering. Shower with arm held at side
- □ No lifting of objects with operative shoulder
- □ Keep incisions clean and dry
- □ Patient education regarding limited use of upper extremity despite the potential lack of or minimal pain or other symptoms

Activity:

- □ Arm in sling except when performing distal upper extremity exercises
- □ (PROM)/Active-Assisted Range of Motion (AAROM)/ (AROM) elbow and wrist/hand
- □ Begin shoulder PROM (do not force any painful motion)
- □ Forward flexion and elevation to tolerance
- □ Abduction in the plane of the scapula to tolerance
- □ Internal rotation (IR) to 45 degrees at 30 degrees of abduction
- □ External rotation (ER) in the plane of the scapula from 0-25 degrees; begin at 30-40 degrees of abduction; respect anterior capsule tissue integrity with ER range of motion; (seek guidance from intraoperative measurements of external rotation ROM)
- □ Scapular clock exercises progressed to scapular isometric exercises
- □ Ball squeezes
- □ Sleep with sling supporting operative shoulder; place a towel under the elbow to prevent shoulder hyperextension
- □ Frequent cryotherapy for pain and inflammation

 Patient education regarding posture, joint protection, positioning, hygiene, etc.

Milestones to progress to phase II:

 Appropriate healing of the surgical repair
 Adherence to the precautions and immobilization guidelines
 Achieved at least 100 degrees of passive forward elevation and 30 degrees of passive external rotation at 20 degrees abduction
 Completion of phase I activities without pain or difficulty

Phase II – Intermediate Phase/ROM (approximately Week 4-9)

Goals:

 Minimize shoulder pain and inflammatory response
 Protect the integrity of the surgical repair
 Achieve gradual restoration of (AROM)
 To be weaned from the sling by the end of week 4-5
 Begin light waist level activities

Precautions:

 No active movement of shoulder till adequate PROM with good mechanics
 No lifting with affected upper extremity
 No excessive external rotation ROM / stretching
 Do not perform activities or strengthening exercises that place an excessive load on the anterior capsule of the shoulder joint (i.e. no pushups, pec flys, etc..)
 Do not perform scaption with internal rotation (empty can) during any stage of rehabilitation due to the possibility of impingement

Early Phase II (approximately week 4):

 Progress shoulder PROM (do not force any painful motion)
 Forward flexion and elevation to tolerance
 Abduction in the plane of the scapula to tolerance
 IR to 45 degrees at 30 degrees of abduction
 ER to 0-45 degrees; begin at 30-40 degrees of abduction; respect anterior capsule tissue integrity with ER range of motion; seek guidance from intraoperative measurements of external rotation ROM)
 Glenohumeral joint mobilizations as indicated (Grade I, II) when ROM is significantly less than expected. Mobilizations should be done in directions of limited motion and only until adequate ROM is gained.
 Address scapulothoracic and trunk mobility limitations. Scapulothoracic and thoracic spine joint mobilizations as indicated (Grade I, II, III) when ROM is significantly less than expected. Mobilizations should be done in directions of limited and only until adequate ROM is gained.
 Begin incorporating posterior capsular
 Side lying internal rotation stretch (sleeper stretch)
 Continued Cryotherapy for pain and inflammation
 Continued patient education: posture, joint protection, positioning, hygiene, etc.

Late Phase II (approximately Week 6):

 Progress shoulder PROM (do not force any painful motion)
    - Forward flexion, elevation, and abduction in the plane of the scapula to tolerance

- IR as tolerated at multiple angles of abduction
- ER to tolerance; progress to multiple angles of abduction once >/= 35 degrees at 0-40 degrees of abduction

□ Glenohumeral and scapulothoracic joint mobilizations as indicated (Grade I-IV as appropriate)
□ Progress to AA/AROM activities of the shoulder as tolerated with good shoulder mechanics (i.e. minimal to no scapulathoracic substitution with up to 90-110 degrees of elevation.)
□ Begin rhythmic stabilization drills
- ER/IR in the scapular plane
- Flexion/extension and abduction/adduction at various angles of elevation

□ Continue AROM elbow, wrist, and hand
□ Strengthen scapular retractors and upward rotators
□ Initiate balanced AROM / strengthening program
- Initially in low dynamic positions
- Gain muscular endurance with high repetition of 30-50, low resistance 1-3 lbs)
- 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 substitution patterns
- Exercises should consist of both open and closed chain activities
- No heavy lifting or plyometrics should be performed at this time
    - o Initiate full can scapular plane raises to 90 degrees with good mechanics
    - o Initiate ER/IR strengthening using exercise tubing at 0° of abduction (use towel roll)
    - o Initiate sidelying ER with towel roll
    - o Initiate manual resistance ER supine in scapular plane (light resistance)
    - o Initiate prone rowing at 30/45/90 degrees of abduction to neutral arm position

□ Continued cryotherapy for pain and inflammation
□ Continued patient education: posture, joint protection, positioning, hygiene, etc.

Milestones to progress to phase III:

□ Passive forward elevation at least 155 degrees
□ Passive external rotation within 8-10 degrees of contralateral side at 20 degrees abduction
□ Passive external rotation at least 75 degrees at 90 degrees abduction
□ Active forward elevation at least 145 degrees with good mechanics
□ Appropriate scapular posture at rest and dynamic scapular control with ROM and functional activities
□ Completion of phase II activities without pain or difficulty

<u>Phase III - Strengthening Phase (approximately Week 10 – Week 15)</u>

Goals:

□ Normalize strength, endurance, neuromuscular control
□ Return to chest level full functional activities
□ Gradual and planned buildup of stress to anterior joint capsule

Precautions:

□ Do not overstress the anterior capsule with aggressive overhead activities / strengthening
□ Avoid contact sports/activities
□ Do not perform strengthening or functional activities in a given plan 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 as needed/indicated
□ Initiate biceps curls with light resistance, progress as tolerated
□ Initiate gradually progressed strengthening for pectoralis major and minor; avoid positions that excessively stress the anterior capsule
□ Progress 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

Milestones to progress to phase IV:

□ Passive forward elevation WNL
□ Passive external rotation at all angles of abduction WNL
□ Active forward elevation WNL with good mechanics
□ Appropriate rotator cuff and scapular muscular performance for chest level activities
□ Completion of phase III activities without pain or difficulty

<u>Phase IV - Overhead Activities Phase / Return to activity phase (approximately Week 16-20)</u>

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 tricep dips, wide grip bench press, and no military press or lat pulls behind the head. Be sure to "always see your elbows"
□ Do not begin throwing, or overhead athletic moves until 4 months post-op or cleared by MD
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 do pushups as long as the elbows do not flex past 90 degrees
□ May initiate plyometrics/interval sports program if appropriate/cleared by PT and MD

 Can begin generalized upper extremity weight lifting with low weight, and high repetitions, being sure to follow weight lifting precautions.
 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 or instability
 Adequate ROM for task completion
 Full strength and endurance of rotator cuff and scapular musculature for task completion
 Regular completion of continued home exercise program

Comments:

Frequency:_____times per week **Duration:_____weeks**

Signature:_____ **Date:_____**

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