ORTHOPEDICS & SPORTS MEDICINE
BAYCARE CLINIC®

Dr. Klumb
Small – Medium Rotator Cuff Repair / Bicep Tenodesis Protocol

Phase 1- Early Protection & Initiate PROM (0 - 6 weeks post-op)

Goals for phase 1

- Minimize pain and inflammation
- Protect repair
- Initiate shoulder PROM

Criteria to Progress to Phase 2:

- PROM flexion/abduction to 120°
- ER/IR/extension to 45°

Other considerations

- Educate patient in no lifting, pushing, or pulling with the involved arm.
- It is normal for the patient to have tenderness over bicep tenodesis site and upper trapezius pain due to sling use for 3-4 months after surgery
- Incisions: nylon sutures are removed at 2-week post-op appointment with MD
- Bicep tenodesis: No active bicep flexion until 4 weeks post-op, no bicep loading for 10 weeks
- Subscapularis repair: limit ER to 30° until 6 weeks

Immobilization / Sling

- All patients must wear the abduction sling at all times except exercises and hygiene immediately after surgery for a minimum of 2 weeks
- Small-Moderate repair (3-4 anchors or less) and/or Bicep Tenodesis wear sling until 5 weeks post-op
- Large repair (>4 anchors) and smokers wear sling until 6 weeks post-op

Begin Therapy

- Small-Moderate repair: patient starts therapy at 5 weeks
- Bicep Tenodesis Only (No rotator cuff repair): patient can start therapy at 2 weeks
- Diabetic patients: start therapy at 2 weeks post-op regardless of type of repair due to risk of adhesive capsulitis. Frequency of therapy visits between 2-5 weeks should be based on joint stiffness. Poor joint mobility would warrant more frequent therapy visits for gentle limited PROM while good joint mobility would warrant delaying rehab program until 5 weeks to allow more healing to take place.

Modalities

- Encourage regular icing to reduce pain and swelling.
- Heat modalities to promote flexibility of tissues at 3-4 weeks post-op.

ROM

- Avoid end range holds
- 2-4 weeks: pendulums, PROM flexion/abduction to 90°, ER/IR/extension to 30°, scapular ROM
- 5 weeks: PROM flexion/abduction to 120°, ER/IR/extension to 45°, gentle AAROM elbow flexion/extension, forearm pronation/supination, continue scapular ROM
- 6 weeks: PROM as tolerated in all planes, AROM elbow and forearm all planes. Progress to AAROM in all planes: start with dowel exercises in supine and submaximal ROM in gravity-eliminated planes

Manual Therapy

- 2-4 weeks: grade I-II joint mobilizations for pain control
- 5-6 weeks: grade II-III joint mobilizations to improve joint mobility
- Soft tissue mobilization to upper shoulder to relieve pain related to sling use

Strengthening

- 5-6 weeks: prone scapular exercises including rows, extension, horizontal abduction. For patients who cannot tolerate prone, perform bent over in seated, half-kneeling or standing.

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Phase 2- AROM & Scapular Strengthening (6 - 14 weeks post-op)

Goals for phase 2

- Minimize pain and inflammation
- Restore full shoulder passive ROM
- Restore full AROM against gravity

Criteria to Progress to Phase 3:

- Full PROM in all planes
- Full AROM in all planes
- Pain-free with all strengthening exercises
- Dynamic shoulder stability

Other Considerations:

- Educate patient in no lifting, pushing, or pulling. Patient can lift one pound with involved arm at 5-6 weeks, 3 pounds at 10-12 weeks and 5-10 pounds at 16 weeks depending on the degree of repair.
- Bicep tenodesis: No bicep loading for 10 weeks

Immobilization / Sling

- Discontinued for all patients but should be used as needed in uncontrolled environments for up to 8 weeks

Modalities

- Continue ice and heat as needed
- NMES to recruit scapula stabilizers

ROM

- Restore full PROM and slowly progress to sustained end range holds
- Slowly progress A/AAROM from supine to beach chair to seated positions beginning with 0° to mid-range, then progressing to full range as tolerated without pain or shoulder shrug sign, may add in pulleys
- 11 weeks: okay to add in posterior capsule cross body stretching

Strengthening

- Initiate submaximal isometric strengthening in all shoulder planes
- Isotonic scapular strengthening: prone exercises, TheraBand® rows and extension, serratus press-outs, etc.
- 7 weeks: rhythmic stabilization progressing from 100° to 30° of flexion and IR/ER in various planes
- 10-12 weeks: When patient has full AROM in gravity eliminated planes, slowly add light weight to gravity-eliminated planes and progress to beach chair and seated mid-range strengthening before progressing to full range overhead strengthening, okay to begin light weight isotonic bicep curls with patients who had bicep tenodesis
- For patients with shoulder shrug sign: perform all weighted exercises in gravity eliminated positions and seated below 90 degrees flexion/abduction, focus more on scapular stabilization
- 12 weeks: Add resistance band for internal/external rotation beginning with step outs and progressing to isotonic strengthening

Functional Activities

- 8 weeks: initiate light functional activities starting at waist level and progressing to shoulder level and then overhead if there is no shoulder shrug sign

Manual Therapy

- 7 weeks: grade III-IV joint mobilizations to restore joint mobility

Phase 3 – Progressive Stretching & Strengthening (14+ weeks post-op)

Goals for phase 3

- Minimize pain and inflammation
- Maximize PROM/AROM
- Improve shoulder and scapular strength
- Improve neurodynamic stabilization
- No shoulder shrug sign with strengthening exercises

Criteria for return to work, function, sport.

- Minimal pain with exercises
- Full pain-free active and passive ROM
- Shoulder and scapular strengthening at least 4+/5

Other Considerations:

- Educate patient in no lifting, pushing, or pulling. Patient can lift 5-10 pounds at 16 weeks depending on the degree of repair.

ROM

- Continue to restore full A/PROM
- Incorporate capsular stretching: sleeper stretch, behind back with towel for internal and external rotation, doorway external rotation stretches

Manual Therapy

- Continue joint mobilizations as needed to restore ROM

Strengthening

- Progress to more advanced scapular stabilization exercises
- Progress to resistive functional movement patterns such as PNF pattern diagonals
- Serratus strengthening including push up plus exercises progressing from wall to floor and dynamic hug with bands
- Progress to strengthening internal and external rotation at 90 degrees shoulder abduction (start with supported arm and progress to unsupported)
- Pain-free bicep, triceps, forearm/wrist/hand strengthening as needed
- Weeks 20-24: gradually increase resistance without shoulder shrug sign

Functional Activities

- 16-24+weeks: Progress to work-related activities depending on job demands and MD orders
- 24+ weeks: Progress to sport-related activities based on MD orders

References

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