Rotator Cuff Repair with Biceps Release/Tenodesis

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Post-Operative Protocol

Phase I – Maximum Protection (Week 0 to 6)

Goals

- Reduce inflammation
- Decrease pain
- Postural education
- PROM as instructed

Restrictions/Exercise Progression

- Sling x 6 weeks - ultrasling x 4-6 weeks, larger tears may be in ultrasling x 6 weeks then regular sling for 2 additional weeks.
- Ice and modalities to reduce pain and inflammation.
- Cervical ROM and basic deep neck flexor activation (chin tucks).
- Instruction on proper head neck and shoulder (HNS) alignment.
- Active hand and wrist range of motion.
- Passive biceps x 6 weeks (AAROM; no release or tenodesis).
- Active shoulder retraction.
- Passive range of motion (gradual progression starting at 4 weeks)
  -**No motion** x 4 weeks
  -Flexion 0°-90° from weeks 4-6, then full
  -External rotation 0°-30° weeks 4-6 then full
  -Avoid internal rotation (thumb up back) until 8 weeks post-op.
- Encourage walks and low intensity cardiovascular exercise to promote healing.

Manual Intervention

- STM – global shoulder and CT junction.
- Scar tissue mobilization when incisions are healed.
- Graded GH mobilizations.
- ST mobilizations.

Phase II – Progressive Stretching and Active Motion (Weeks 6 to 8)

Goals

- Discontinue sling except as instruction with large or massive tears.
- Postural education.
- Focus on posterior chain strengthening.
- Begin AROM.
- P/AAROM:
  - Flexion 150°+
  - 30-50° ER @ 0° abduction
  - 45-70° ER at 70-90° abduction

Exercise Progression

- Progress to full range of motion flexion and external rotation as tolerated. Use a combination of wand, pulleys, wall walks or table slides to ensure compliance.
- Gradual introduction to internal rotation using shoulder extensions (stick off back).
- Serratus activation; Ceiling punch (weight of arm) many initially need assistance.
- Scapular strengthening – prone scapular series (rows and I's). Emphasize scapular strengthening under 90°.
- External rotation on side (no resistance).
- Gentle therapist directed CR, RS and perturbations to achieve ROM goals.
- Cervical ROM as needed to maintain full mobility.
- DNF and proper HNS alignment with all RC/SS exercises.
- Low to moderate cardiovascular work. May add elliptical but no running.

Manual Intervention

- STM – global shoulder and CT junction.
- Scar tissue mobilization.
- Graded GH mobilizations.
- ST mobilizations.
- Gentle CR/RS to gain ROM while respecting repaired tissue.

<u>Phase III – Strengthening Phase (Weeks 8 to 12)</u>

Goals

- 90% passive ROM, 80-90% AROM by 12 weeks. Larger tears and patients with poor tissue quality will progress more slowly.
- Normalize GH/ST arthrokinematics.
- Activate RC/SS with isometric and isotonic progression.
- Continue to emphasize posterior chain strengthening but introduce anterior shoulder loading.

Exercise Progression

- Passive and active program pushing for full flexion and external rotation.
- Continue with stick off the back progressing to internal rotation with thumb up back and sleeper stretch.
- Add resistance to ceiling punch.
- Sub-maximal rotator cuff isometrics (no pain).
- Advance prone series to include T's.
- Add rows with weights or bands.
- Supine chest-flys providing both strength and active anterior shoulder stretch.
- Supine (adding weight as tolerated) progressing to standing PNF patterns.
- Seated active ER at 90/90.
- Biceps and triceps PRE.
- Scaption; normalize ST arthrokinematics.
- 10 weeks; add quadruped or counter weight shift. Therapist directed RS and perturbations in quadruped – bilateral progressing to unilateral-tri pod position.

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

Phase IV – Advanced Strengthening and Plyometric Drills

PRE/PSE (weeks 12-20)

- Full range of motion all planes – emphasize terminal stretching with cross arm, TUB, triceps, TV, sleeper and door/pec stretch.
- Begin strengthening at or above 90° with prone or standing Y's, D2 flexion pattern and 90/90 as scapular control and ROM permit. Patient health, physical condition and goals/objectives will determine if strengthening above 90° is appropriate.
- Add lat pulls to gym strengthening program; very gradual progression with pressing and overhead activity.
- Continue with closed chain quadruped perturbations; add open chain as strength permits.
- Progress closed kinetic chain program to include push-up progression beginning with counter, knee then – gradual progression to full as appropriate.
- Initiate plyometric and rebounder drills as appropriate.

RTS program (weeks 20 to 24)

- Continue to progress RC and scapular strengthening program as outlined.
- Advance gym strengthening program.
- RTS testing for interval programs (golf, tennis etc.). Microfet testing as appropriate.
- Follow-up examination with the physician (6 months) for release to full activity.

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

Please have the Physicial Therapist call Dr. Sanders if there are any questions.
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