Considerations:

1. Mini-Open - shoulder usually assessed arthroscopically and acromioplasty is usually performed. 3/4 to 1 inch incision made, and deltoid is split longitudinally rather than detached, then the RTC is repaired.
2. Arthroscopic - Acromioplasty and RTC repair performed arthroscopically. Note: if Large to massive tears repaired, follow Open Repair protocol.
3. Always note if the bicep tendon was released or repaired. Note which RTC tendons were repaired, as well as the quality of tendon and bone fixation, and size of the initial tear. Always obtain the operative note.

Tear Classifications:

Full thickness - through entire muscle from bursal to articular surface.
Partial thickness - may be on bursal or articular side, interstitial or intratendinous.

Size: small = < 1 cm, medium = 1-3 cm, large = 3-5 cm, massive = > 5 cm.

General Precautions for Client:

1. No lifting of objects
2. No excessive shoulder extension
3. No overhead motions
4. No excessive ER/IR for 6-8 weeks
5. No supporting of body weight through hands
6. Keep incision dry and clean
7. No sudden jerking motions
General Goals for 0-4 Weeks Post-Op:

1. Maintain integrity of the repair
2. Promote tissue healing
3. Gradually increase PROM
4. Diminish pain and inflammation
5. Prevent muscular inhibition

Post-Operative Protocol:

0-2 Weeks Post-Op:

- Client in an immobilizing brace with 30 degrees of abduction and slight external rotation, to be worn at all times except to wash and during exercises.
- Begin AROM of elbow, wrist, and hand.
- Pendulums may be initiated as tolerable.
- No active biceps (elbow flexion) if long head of biceps was repaired.
- Smaller tears - may initiate gentle AAROM exercises (rolling hand on a ball on flat bench, standing pulleys at door handle height, supine forward flexion with good arm lifting).
- Gentle grade I/II oscillations by therapist, and passive forward flexion to 115 degrees.
- Ice 15-20 minutes, 4 times a day or as pain determines.

2-4 Weeks Post-Op:

- Continue with immobilizing brace as above
- For small tears and arthroscopic repairs, may begin scapular setting exercise.
- Passive forward flexion to 155 degrees, abduction to 90 degrees, IR to 45 degrees and ER to 45 degrees.
- AAROM exercises as above, supine pulleys added.
- May use electrical stimulation to shoulder external rotators for muscle re-education.
- Therapist oscillations and PROM as above
- Ice as above, may use heat in weeks 3-4.

General Goals for 4-6 Weeks Post-Op:

1. Allow healing of soft tissue
2. Do not overstress healing tissue
3. Gradually restore full PROM
4. Re-establish dynamic shoulder stability
5. Decrease pain and inflammation

4-6 Weeks Post-Op:

- Begin to wean from shoulder brace, but continue to wear out of home and for sleep for full 6 weeks, for sleep until 8 weeks.
Work towards full PROM, do not push into OVERT pain.  
Begin isometric cuff exercises for mini-open and medium tears.  
Therapist mobilizations as needed to restore full PROM of the glenohumeral joint, do not push into Overt Pain.  Forward flexion should be full, ER/IR = 45 degrees with shoulder abducted to 90 degrees.  Abduction 100 degrees to full.  
For small tears and arthroscopic repairs, may initiate gentle AROM in Forward flexion and abduction with elbow bent @ 90 degrees (short lever arm), to 90 degrees in scapular plane.  **At surgeon’s discretion/if patient has achieved 90% of normal PROM**  
Use heat prior to exercises.  

6-8 Weeks Post-Op:  
- Discharge shoulder immobilizer.  Continue to wear for sleep to 8 weeks.  
- If full PROM not achieved, continue to progress.  
- Continue AAROM exercises for movements that are not full.  
- Initiate AROM exercises for medium to large tear repairs, flexion at 6 weeks and abduction at 8 weeks in scapular plane.  
- Progress to full AROM for small tears.  
- For small tears and arthroscopic repairs begin light resistance tubing (level 1 theraband), IR, ER, extension to hip.  **At surgeon’s discretion/if patient has achieved 90% of normal PROM, 80% of normal AROM**  
- For mini-open, or medium to large tears, initiate or continue isometric strength exercises.  

General Goals for 8-16 Weeks Post-Op:  
1. Restore full AROM  
2. Maintain full PROM  
3. Achieve dynamic shoulder stability  
4. Gradual restoration of shoulder strength  
5. Gradual return to functional activities  

8-12 Weeks Post-Op:  
- Discharge immobilization splint completely (unless physician states otherwise)  
- Continue therapist stretching and PROM as needed to gain or maintain full PROM.  
- Continue AROM exercises, progress to full in all ranges.  
- Begin or Progress resistance program at 8 weeks: Start with 1-2lb. weights and increase to a maximum of 5lbs.  
  * ER/IR/extension with resistance tubing  
  * ER in sidelying  
  * prone extension  
  * Scapular stabilization exercises - supine or standing alphabet in scapular plane, ball against wall.  
  * prone horizontal abduction  
  * elbow flexion
* elbow extension
* Lateral raises to 90 degrees of abduction/ full can in scapular plane to 90 degrees of flexion (client must be able to elevate the arm without shoulder or scapular hiking before initiating these exercises) - usually 10 weeks.
  - May begin therapist resisted supine strengthening in non-impinging positions.

12-16 Weeks Post-Op:

- Resume normal functional ADL’s
- Continue to work on ROM and strengthening
- Progress strength 0.5Kg/10 days if nonpainful, and no residual pain following exercises.
- Correct any substitution patterns observed.
- Client may be ready to return to work (non-labour jobs), progress for return to work or modified duties.
- May discharge to home exercise program if appropriate.

16-24 Weeks Post-Op:

- Continue all exercises, progress as tolerated.
- Return to work or modified duties.
- Gradually return to recreational sport activities
- On average, there is a 70% return of shoulder strength by 6 months post-op. Client should continue rotator cuff strength and ROM program until 12 months post-op. May discharge to a home program when appropriate.

Complications:

1. Persistent rotator cuff soreness with decreased movement or frozen shoulder.
2. Clicking, cracking, other “sounds” from the shoulder.
3. Portal or incisional hypersensitivity.
4. Therapeutic non-compliance.

Potential Solutions:

1. Reduce stress to cuff; heat and massage to shoulder girdle, gentle oscillations, possible cortisone injection (3-6 months post-op).
2. Sounds will often subside with increased strength and stability of the glenohumeral joint.
3. Portal/scar sensitivity can be reduced with light tissue massage, topical analgesic creams, silicone gel sheet.
References from the Literature:


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