Fraser Orthopaedic Institute
Physiotherapy Protocols
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Shoulder Arthroplasty/Reverse: Postoperative Protocols

(Rotator Cuff Tear Arthropathy- Reverse Prosthesis)

General Information

Reverse Shoulder Replacement for cuff tear arthropathy is an operation for pain relief. These patients often have severe limitations in shoulder function secondary to a massive rotator cuff tear. Significant gains in function during rehabilitation may not be achievable since the rotator cuff is not repaired surgically. Patients however can retrain the shoulder muscles to elevate the arm by stabilizing the scapula and recruiting the now tensioned anterior deltoid

Rehabilitation Considerations

• Compensatory scapulothoracic muscle recruitment is a typical feature of this condition. Specifically, the upper trapezius muscle 'hikes up' the scapula during attempts to elevate the arm. When this occurs, a stable fulcrum for elevation cannot be achieved and the deltoid muscle is placed at a mechanical disadvantage. One of the goals of therapy is effective scapular stabilization that preferentially strengthens the retractor and depressor muscles. By creating a fixed and stable platform, scapular stabilization provides a fulcrum for the deltoid to effectively elevate the arm.

• Aquatic programs may be very beneficial in treating this condition and may be instituted at week 3

Prehabilitation

• Apply ice (PolarCare if available) as much as tolerated within a 24 hour period for first week. If using ice packs, encourage icing 20-30 minutes every 3-4 hours while awake. This is also useful after therapy.

*Sling used for 4 weeks

Inpatient Physiotherapy: (0-2 days)

ROM

• Pendulum exercises - with the arm down at the side, gently swing the hand forward and backward, then side-to-side, and then clockwise and counterclockwise.
• PROM - limit ER to 20 degrees, and aim for 0 to 90 degrees of forward flexion by the end of 2 weeks.
• AROM - initially, only the elbow, wrist and hand. Grasping and gripping lightweight objects. Active shoulder flexion as pain allows.
• Instruct in home program, and begin, self-assisted forward elevation and external rotation
• Instruct in home program and begin cervical, elbow and wrist ROM and grip strengthening

Strength

• Instruct in home program, and begin, closed chain external rotation isometric exercises
• Instruct in home program and begin scapular retraction and depression

Other

• Instruct to don and doff sling or shoulder immobilizer
• Instruct on proper use of ice or PolarCare
• Arrange for outpatient physiotherapy to begin one day after clinic follow-up
• Provide written copy of home exercises to be done 5x/day

Goals (prior to discharge from hospital)
- initiation of arm being used for functional activities such as eating, combing hair (ADLS requiring minimal force
- independence in home exercise program
- understanding of precautions

Wound Instructions
• Mepore to wound until dressing totally dry
• may shower at 7 days but no bath or hot tub for 3 weeks
• no anti-inflammatory medications x 6 weeks unless on ASA for other reasons

Outpatient Physiotherapy Phase 1: (Weeks 2-4)
Instruct in basic progression of rehabilitation program and expectations for time course to recovery
ROM
• Continue program of self-assisted forward elevation and external rotation
• No ER beyond 40
• IR in scapular plane as tolerated; no IR behind back
• No IR in abduction, extension or cross body adduction
• Joint mobilization of glenohumeral joint and scapulothoracic junction grades I/II as dictated by patient's tolerance.
• Continue cervical, elbow and wrist ROM and grip strengthening
• Postural control exercises

Strength
• Continue isometric external rotation
• Instruct in a home program, and begin, closed chain isometric abduction, forward elevation
• No adduction, IR or extension
• Begin scapular retraction and depression but no shrugs
• Begin and encourage aerobic conditioning such walking or stationary bike

***Sling**
Continue to wear except for between exercise sessions and bathing

Other
• Incision mobilization and desensitization
• Modalities for pain, inflammation and edema control (no e-stim)
• Cryotherapy as needed

Outpatient Physiotherapy Phase 2: (Weeks 4-8)
ROM
• Continue program of self-assisted forward elevation and external rotation
• No ER beyond 40 until Week 7 and then progressive return to full in 10-15 increments per week
• Start posterior capsule stretching with cross-body adduction and internal rotation in abduction
• Gentle anterior chest wall stretching
• Grades I/II glenohumeral and scapulothoracic mobilization techniques
• Continue cervical, elbow, wrist ROM and grip strengthening

Strength
• Light UBE for warm-up
• Continue submaximal isometrics (no IR or extension)
• Instruct in home program and begin progressive supine two-hand press
• Start with hands close together and progressively widen
• Continue scapular retraction and depression
• Begin biceps/triceps strengthening with elbow supported

***Sling**
May discontinue use of sling in daytime but should continue to wear at night through Week 6 to protect subscapularis repair

***Outpatient Physiotherapy Phase 3**: (Weeks 8-12)*
ROM
• Continue program of self-assisted forward elevation and external rotation with goal of return to full range
• May begin ER stretch in progressive degrees of abduction
• Emphasize posterior capsule stretching
• Anterior chest wall stretching
• Grade III/IV glenohumeral and scapulothoracic mobilization techniques

Strength
• Instruct in home program and begin isotonic rotator cuff and deltoid strengthening starting with light resistance
• Start in non-impingement position and progress through increasing degrees of abduction as tolerated
• Assess for substitutions and focus on anterior deltoid strength in combination with scapular retraction
and depression
• Advance periscapular strengthening of posterior shoulder girdle (trapezius,rhomboids,latissimus dorsi,serratus)
• UBE with light resistance especially in reverse direction to promote scapular strengthening
• Closed chain scapular clocks, table top ball rolls and wall washes if tolerated
• Continue biceps and triceps strengthening
• Continue aerobic conditioning

Outpatient Physiotherapy Phase 4: (Weeks 12-24)
ROM
• Continue maintenance flexibility program until full ROM and emphasize posterior capsular stretching
with side-lying IR stretch and cross body abduction stretch

Strength
• Progressive cuff, deltoid and periscapular strengthening
• Emphasize strengthening force couples
• Continue UBE with progressive resistance
• Continue aerobic conditioning and core body strengthening