

GARRETT COUNTY ORTHOPAEDICS

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Total Shoulder Arthroplasty

TSA/Hemiarthroplasty: This protocol is a guideline for the clinician. The actual post-operative course must depend on sound clinical judgment, not just time frames. The protocol may be altered based on the surgery performed (ie...rotator cuff repair, rotator cuff deficient, fractures etc).

Precautions: Subscapularis precautions must be followed unless otherwise instructed by the surgeon. This includes avoiding any hand behind the back motions, external rotation at the side greater than 30 degrees, no active internal rotation and using a pillow under the arm when lying supine to avoid any excessive stress/stretch to the anterior capsule (subscapularis).

Phase I: Immediate Postsurgical Phase

Goals

- • Allow healing of soft tissues
- • Maintain integrity of replaced joint
- • Gradually increase PROM
- • Reduce pain and inflammation
- • Independence with activities of daily living (ADL's) while maintaining the integrity of the replaced joint

Precautions

- • Sling should be worn continuously for 3 to 4 weeks
- • Keep small pillow or towel roll behind the elbow when lying supine to avoid hyperextension/anterior capsule/subscapularis stretch
- • Avoid shoulder AROM
- • No lifting of objects
- • No excessive shoulder motion behind the back
- • No excessive stretching or sudden shoulder movements
- • No supporting of body weight by hand on involved side
- • Keep incision clean and dry (no soaking for 2 weeks)

Phase I POD 1 (Hospital)

- • Passive elevation (using opposite hand or therapist assisted) to tolerance
- • Gentle ER in scapular plane to available PROM (as documented in operative

note or confirmed with surgeon) usually 30 degrees. Do not put excessive stress or force on anterior capsule.

- • Passive IR to chest
- • Elbow/wrist/hand exercises
- • Pendulum exercises (may need to support elbow)
- • Frequent cryotherapy for pain/swelling/inflammation
- • Patient education regarding proper positioning and joint protection

Phase I (discharged from hospital)

- • Continue previous exercises, progress elevation as tolerated
- • Begin supine PROM abduction to tolerance (goal 90 degrees). Keep pillow under arm.
- • Progress to AAROM ER/elevation pain free

Goals to progress to phase II:

- • Tolerates PROM program
- • 90 degrees PROM flexion
- • 90 degrees PROM abduction
- • 30-45 degrees PROM ER in plane of scapula
- • 70 degrees PROM IR in plane of scapula (at 30 deg of abduction)

Phase II: Early Strengthening Phase

Not to begin before 4-6 weeks based on surgeon's guidance

Goals :

- • Restore full PROM
- • Gradually restore AROM
- • Control pain and inflammation
- • Allow continuing of healing soft tissue
- • Re-establish dynamic shoulder stability

Precautions:

- • Sling as needed for sleeping only, gradually wean out of it over the next 2 weeks
- • Continue to support arm with pillow or towel roll while laying supine
- • Poor shoulder mechanics/hiking or scapular dyskinesis will require Pt to continue supine/prone and side lying exercises
- • No heavy lifting of objects (no heavier than coffee cup)
- • No supporting of body weight by hand on involved side
- • No sudden jerking motions

Early Phase II

- • Continue with PROM, AAROM (AAROM)

- • Begin active flexion, IR, ER abduction pain-free ROM
- • AAROM pulleys (flexion and abduction), as long as > 90 deg of PROM and no shoulder hiking
- • Begin shoulder submaximal pain-free shoulder isometrics in neutral
- • Scapular strengthening exercises
- • Gentle glenohumeral and scapulothoracic joint mobilizations as indicated
- • Initiate glenohumeral and scapulothoracic rhythmic stabilization
- • Continue cryotherapy

Late Phase II

- • Progress scapular strengthening

Criteria for progression to phase III:

- • Tolerates PROM/AAROM isometric program
- • Achieves at least 140 deg PROM flexion
- • Achieves at least 120 deg PROM abduction
- • Achieves at least 60 deg PROM ER in plane of scapula
- • Achieves at least 70 deg PROM IR in plane of scapula at 30 deg abduction
- • Able to actively elevate arm against gravity with good mechanics to 100 deg

Phase III: Moderate Strengthening

Goals:

- • Gradual restoration of shoulder strength, power and endurance.
- • Optimize neuromuscular control
- • Gradual return to functional activities

Precautions:

- • No heavy lifting of objects (no heavier than 3 kg)
- • No sudden lifting or pushing

Early Phase III

- • Progress AROM
- • Advance PROM as needed
- • Initiate assisted shoulder IR behind back
- • Resisted shoulder IR, ER in scapular plane
- • Wean completely from sling
- • Begin supine active elevation strengthening (anterior deltoid) with 1 lb weights

Late Phase III

- • Resisted flexion, abduction, extension (t-band program)
- • Continue IR, ER strengthening
- • Progress IR stretch behind back AAROM to AROM as tolerated

(avoid stress to anterior shoulder capsule, do not strengthen through a shoulder shrug/hiking)

Criteria to progress to phase IV

- • Tolerates AAROM/AROM/strengthening
- • 140 deg AROM flexion supine
- • 120 deg abduction supine
- • At least 60 deg AROM ER in plane of scapula
- • At least 70 deg AROM IR in plane of scapula (30 deg abd)

Phase IV: Advanced Strengthening Phase

Not to begin before 3 months

Goals:

- • Maintain non painful AROM
- • Enhance function of UE
- • Improve muscular strength, power and endurance
- • Progress wt bearing exer as needed/appropriate

Precautions:

- • Slowly progress strengthening
- • Avoid excessive stress to the ant capsule (careful w/ combined abd at 90 deg and ER)

Early Phase IV

- • Usually on a HEP of 3-4 days a week strengthening
- • Gradually incorporate functional/sport specific training

Late Phase IV (typically 4-6 months)

- • Return to recreational hobbies, gardening, sports, golf, doubles tennis

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References:

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Nicholson G. Arthroplasty in the cuff-deficient shoulder. OKU 3rd ed. 2008; 395-401.

Brown DD, Friedman RJ. Postoperative rehabilitation following total shoulder Arthroplasty. Orthop Clin North Amer. 1998 (Jul) 29:3. 535-547.