

## Shoulder Arthroplasty/Fracture: Postoperative Protocols

(Hemiarthroplasty for Proximal Humerus Fracture)

### **Basis**

- Tuberosities are repaired to prosthesis and bony healing must occur before stress is applied to rotator cuff tendons
- Tuberosity migration causes stiffness from mechanical impingement
- Tuberosity migration causes weakness from abnormal soft tissue tension

### **Precautions**

- No external rotation past 40 deg for 6 weeks
- No active internal rotation for 6 weeks
- No cross body adduction for 6 weeks
- No lifting/pushing/pulling > 5lb for first 6 weeks

### **Inpatient: (0-4 days)**

- Instruct to don and doff sling or shoulder immobilizer
- Shoulder should be completely immobilized at all times except to change
- Instruct on proper use of ice or PolarCare
- 20-30 minutes at a time, several times per day
- Should be done especially after exercises
- Instruct in home program, and begin, cervical, elbow and wrist range of motion
- Instruct in home program, and begin grip strengthening
- Arrange for outpatient physical therapy follow-up to begin on day after office follow-up

### **Other Instructions:**

Mepore to wound until dressing totally dry

May shower at 10 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: (Hospital discharge to Week 4)**

#### **ROM**

- Continue cervical, elbow and wrist ROM
- Pendulum exercises only
- No passive ROM or self-assisted ROM yet
- No mobilizations

#### **Strengthening**

- No cuff strengthening
- Begin and instruct in program of postural correction
- May begin scapular retraction and depression

#### **\*Sling**

Arm in sling at all times except for exercises and bathing (Includes sling at night)

#### **Other**

- Continue Cryotherapy
- Incision mobilization and desensitization
- Modalities to decrease pain and inflammation

## **Outpatient Physiotherapy Phase 2: (Weeks 4-8)**

### **ROM**

- Instruct in home program and begin self-assisted forward elevation to 90 deg and progress in 20 deg increments per week. May use pulleys
- Instruct in home program and begin self-assisted ER to 40 deg
- IR in scapular plane as tolerated
- No IR behind back
- No cross body adduction
- Grade I-II scapulothoracic and glenohumeral mobilizations

**NOTES:** Hydrotherapy program is okay provided the limits of no active internal rotation and ER limit to 40 deg are kept. Should not begin prior to week 3 so wound is fully healed

### **Strength**

- No cuff strengthening
- Continue scapular retraction and depression
- Lower extremity aerobic conditioning

**\*Sling:** May discontinue use of the sling

### **Other**

- Continue modalities to decrease pain and inflammation
- Incision mobilization and desensitization techniques
- Continue Cryotherapy as necessary

## **Outpatient Physiotherapy Phase 3: (Weeks 8-12)**

### **ROM**

- Progressive return to full forward elevation and external rotation
- May begin posterior capsular stretching program
- May begin IR behind back
- Grade III-IV glenohumeral and scapulothoracic mobilizations
- Begin anterior chest wall stretches (pectoralis minor)

### **Strength**

- Instruct in home program and begin submaximal isometrics in flexion, abduction, IR, ER and extension
- Add progressive isotonic with low resistance, high repetitions as tolerated
- Progressive two-hand supine
- Emphasize anterior deltoid strength and scapular stabilization
- Emphasize upper trapezius, serratus anterior force couple rehab to create stable scapular base
- Assess for and correct compensatory movement patterns
- UBE with low resistance
- Continue aerobic conditioning

## **Outpatient Physiotherapy Phase 4: (> Week 12)**

### **ROM**

- Progressive return to full motion in all planes
- Emphasize posterior capsule stretching
- Maintenance home flexibility program

### **Strength**

- Continue rotator cuff and scapular strengthening program. Progressive increase in resistance as strength improves
- Continue UBE with progressive resistance as tolerated
- Maintenance home exercise program
- Recreation/vocation specific rehabilitation
- Maintenance aerobic conditioning program