Hemiarthroplasty for Proximal Humerus Fracture: Protocol

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
• Pendulum exercises only
• 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 1-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

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**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 isotonics 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 rehabilitation to create stable scapular base
- Assess for and correct compensatory movement patterns
- UBE with low resistance
- Continue aerobic conditioning

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**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