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Proximal Humeral Fracture Post-Surgical Rehabilitation Protocol (OPEN REDUCTION / INTERNAL FIXATION)

General Principles:

1. Bony healing occurs usually within 6 to 8 weeks in adults
2. Return to normal function and motion may require 3 to 4 months

Overall Goals:

1. Increase ROM while protecting the fracture site (you can be slightly more aggressive with this vs. a closed fracture due to the hardware fixation)
2. Control pain and swelling (with exercise and modalities)
3. Perform frequent gentle exercise to prevent adhesion formation

I. Phase I – Early Motion Phase (0 – 5 weeks)

A. Week 1 Early Passive Motion

1. Wear the sling at all times except to exercise
2. Hand, wrist, elbow, and cervical AROM
3. Grip and wrist strengthening
4. PROM: ER to 30° and flexion to 130°
5. Modalities as needed for pain relief or inflammation reduction

B. Week 2 Active Assisted ROM

1. Apply hot packs 10 minutes before exercising
2. Begin pendulum (Codman) exercises
3. Begin pulley for flexion and abduction
4. Begin gentle AAROM flexion to 140°
5. Supine ER with a stick to 40°
 - a. Keep arm in plane of scapula
6. Scapular Stabilization

- a. S/L scapular clocks
- b. Seated scapular retractions

C. Week 3 – 4 AAROM and Isometrics

- 1. Continue all exercises
- 2. Begin S/L assisted forward elevation
- 3. Begin submaximal isometrics IR, ER, Flex, Ext, and ABD
- 4. Begin flexion and ABD on slide board or table

II. Phase II – Active Motion Phase (Week 4 – 12)

A. Week 4 – 6 AROM

- 1. Establish full PROM
- 2. Begin AROM
 - a. Supine flexion with and without stick
 - b. Progress to sitting (or standing) flexion with a stick
 - c. Sitting flexion with elbow bent and arm close to the body
 - d. Raise arm over head with hands clasped
 - e. Perform ER and ABD with hands behind head
 - f. Eccentric pulleys
 - g. Sidelying ER
 - h. Prone Ext and ABD
 - i. Serratus Punches
- 3. Continue PROM and begin patient self stretching (**week 6**)
 - a. Wall Walking
 - b. Doorway ER stretch
 - c. S/L post. Capsule stretch
- 4. Begin multi-angle isometrics

B. Week 8 Early Resisted ROM

- 1. Begin Theraband for IR, ER, flexion, ABD, and extension
- 2. Begin supine IR, ER with 1# (with arm supported at 15° ABD)
- 3. Begin UBE no resistance
- 4. Progress to adding weight to above exercises **only if pain-free**
- 5. Biceps / Triceps strengthening with dumbbells

III. Phase III – Aggressive Stretching and Strengthening Phase (beginning week 12)

- 1. Isotonic strengthening with weights all directions
- 2. Increase theraband or use rubber tubing
- 3. Increase stretches on door and add prone stretches
- 4. Begin functional or sport activity for strength gain