Case 1
Trauma Fracture

Patient Information

- **Patient Name:** John Doe
- **Date of Birth:** 02/15/1985
- **Gender:** Male
- **Patient ID:** 1029384756
- **Admitting Physician:** Dr. Sarah Finch, MD

Admission Information

- **Admission Date:** 10/25/2023
- **Visit Type:** Inpatient
- **Admission Diagnosis:** Left arm trauma from a pedestrian-car accident

Clinical Indication

- **Reason for Visit:** Trauma due to pedestrian hit by a car
- **Evaluation Focus:** Fractures in the upper left extremity

History and Physical (H&P)

- **Chief Complaint:** Left shoulder and arm pain following trauma
- **History of Present Illness:** Patient was hit by a car while crossing the street. Complains of pain in the left shoulder and upper arm. Swelling and limited movement reported in the affected area.
- **Past Medical History:** GERD, Allergies (penicillin)
- **Surgical History:** None
- **Family History:** Father (heart disease), Mother (arthritis)
- **Social History:** Non-smoker, occasional alcohol use, denies illicit drug use
- **Medications:** Calcium carbonate (e.g., Tums): 500-1,000 mg as needed, usually up to 4 times a day
- **Physical Exam Findings:**
  - Vitals: BP 140/90, HR 86, RR 18, Temp 98.6°F
  - General: Alert, oriented x3
  - HEENT: Unremarkable
  - Cardiovascular: Regular rate and rhythm, no murmurs
  - Respiratory: Clear to auscultation bilaterally
  - Musculoskeletal: Left upper extremity shows significant tenderness, swelling, limited range of motion in the shoulder

Orders

1. **Radiographs:** XR 2VW Left Humerus, XR 2VW Left Forearm
2. **CT Scan:** Bilateral upper and lower extremities
3. **Pain Management:** Morphine 2 mg IV q4h prn
4. **Consults:** Orthopedics

Imaging Results

- **XR Left Humerus (2 views):** Comminuted fracture of the proximal humeral shaft with lateral displacement
- **XR Left Forearm:** No fractures of the radius and ulna
- **CT Bilateral Extremities:**

Left Upper Extremity:

There is an avulsion fracture of the greater tuberosity, which is now seen seated within the acromiohumeral joint space. The avulsed greater tuberosity demonstrates comminution but the fracture fragments remain

in relatively close proximity to one another.

Comminuted oblique fracture of the proximal shaft of the left humerus with overall lateral and dorsal displacement, and mild lateral angulation of the apex of the dominant fracture component.

No appreciable fractures of the radius and ulna, and visualized aspect of the wrist. There is a cast overlying the left upper extremity limiting assessment of bony detail.

Impression:

* Multifocal fractures of the left humerus as detailed above, comparable to most recent CT.

Progress Notes

Orthopedic Progress Note (10/26/2023)

- **Subjective:** Patient reports severe pain in the left shoulder and upper arm, worse with movement
- **Objective:** Swelling and ecchymosis noted over the left shoulder. Limited range of motion, especially abduction
- **Assessment:** Comminuted proximal humeral shaft fracture with avulsion of greater tuberosity
- **Plan:** ORIF (Open Reduction Internal Fixation) scheduled for 10/27/2023

Nursing Progress Note (10/26/2023)

- **Patient Status:** Alert, oriented, reports pain of 8/10 in left arm
- **Interventions:** Administered Morphine 2 mg IV for pain control. Left upper extremity immobilized in sling. Notified physician of continued pain
- **Plan:** Monitor pain, prepare for surgery tomorrow

Operative Report (10/27/2023)

- **Procedure(s):**
    1. ORIF Proximal Humerus
    2. Shoulder Arthroscopy
- **Diagnosis:** Proximal humerus fracture with rotator cuff avulsion
- **Surgeon:** Dr. Henry Locke, MD
- **Anesthesia:** Regional block with ultrasound guidance
- **Procedure**
- **ORIF Proximal Humerus**

The patient received a regional anesthetic block under ultrasound guidance without complication. The patient was positioned supine during the procedure. All prominences & critical areas were padded and free from pressure. Weight-based cefazolin was administered prior to skin incision per protocol. The operative site was prepared with chlorhexidine pre-scrub followed by chlorhexidine gluconate antiseptic then draped in standard sterile fashion.

We took a standard deltopectoral approach to the proximal humerus. Incision was made through skin,

and subcutaneous tissue. The subscap and teres minor were intact. The supraspinatus and infraspinatus were avulsed from the greater tuberosity. Rotator cuff avulsion was noted. It involved the insertion of the supraspinatus and infraspinatus. It was provisionally reduced with tagging sutures through the supraspinatus and infraspinatus. We used a speed bridge construct by Arthrex. We placed medial anchors at the medial portion of the fracture. We had sufficient spread of the fiber tapes. We utilized K wires for provisional reduction to the footprint. Lateral anchors were inserted in normal fashion.

An x-ray was taken intraoperatively. It confirmed anatomic reduction.

» **ORIF humeral shaft**

The proximal shaft fracture was provisionally clamped. Along lateral extra-articular posterior humeral plate was then slid under the radial nerve onto the posterior humeral shaft. The plate was first secured distally and compression plating technique was used to compress the more proximal of the 2 fracture lines in the humeral shaft with good fixation.

The surgical site was irrigated with normal saline, and hemostasis was ensured. Primary wound closure was performed in a standard layered fashion with nylon for skin suture. A sterile, occlusive dressing was applied.

» **Postoperative Plan:** Keep non-weight-bearing, follow-up in one week

Postoperative Notes

» **Date:** 10/28/2023

» **Pain Level:** Reports 5/10 pain, managed with IV acetaminophen and morphine

» **Wound Assessment:** Clean, dry, intact dressing, no signs of infection

» **Instructions:** Continue non-weight-bearing on left arm. Daily dressing changes and administer antibiotics as per protocol

Discharge Summary

» **Date of Discharge:** 11/01/2023

» **Discharge Diagnosis:**

1. Proximal humeral shaft fracture, status post-ORIF
2. Rotator cuff avulsion, repaired

» **Discharge Condition:** Stable, pain well-controlled

» **Discharge Instructions:**

» Wear sling at all times

» Avoid lifting or moving the left arm

» Follow-up with Orthopedics in one week

» Pain management with prescribed oral pain medication