



Ep 35 Notes- Terrible Triad Fracture Dislocations of the Elbow w/ Dr. Mauricio

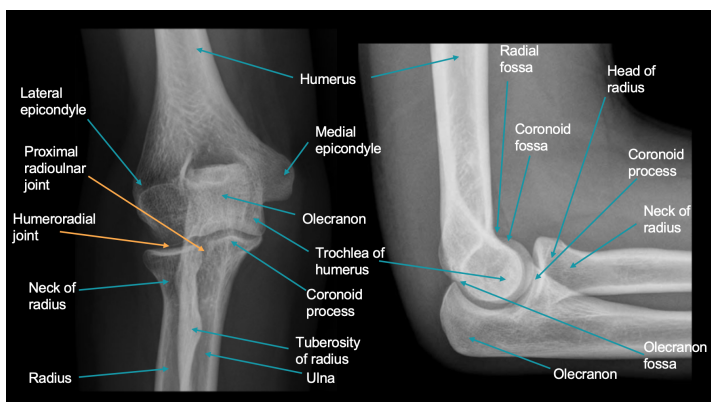
History/Physical

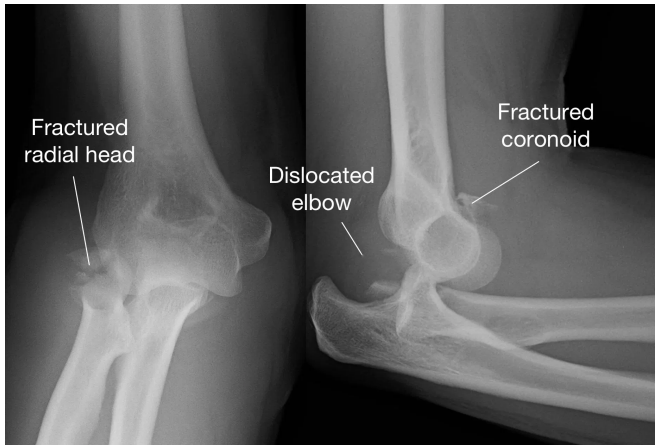
- Fall on extended arm
(valgus, axial, and posterolateral rotatory forces)
- Obvious deformity
- Soft tissue injury, hematoma, etc
- Need thorough neurovascular exam
- ROM, Stability
- Evaluate for injuries to wrist and forearm

Imaging

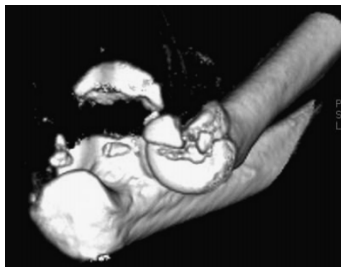
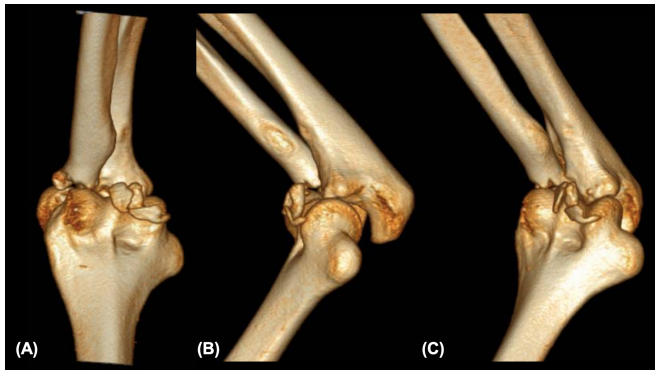
- Radiographs of the Elbow
 - a. AP
 - b. Lateral

What are you looking for ?





- CT imaging
 - a. Is it required ?
With new 3D CT technology, can be helpful for surgical planning



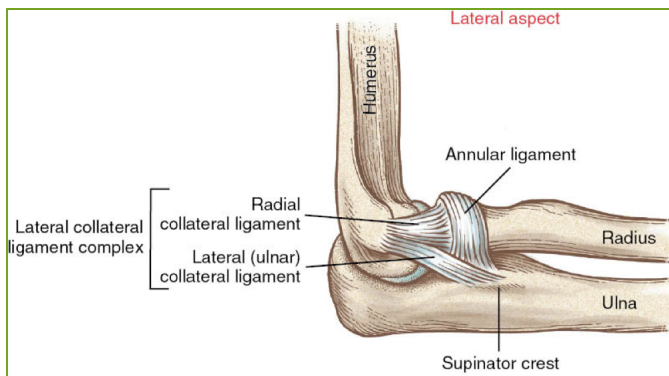


- **Anatomy**

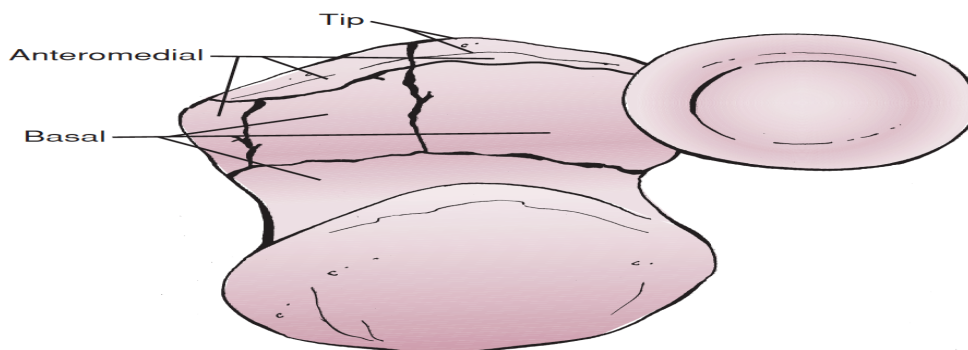
- Typically causes complete capsuloligamentous injury and variable degree of avulsion of the common flexor and extensor muscles from the epicondyles
- The Coronoid typically a single transverse fragment
- The radial head typically displaced and fragmented
- Associated w/ recurrent or persistent subluxation and dislocation (Posterolateral rotatory instability)

Lateral Collateral Ligament (LCL Complex)

- Origin on the lateral epicondyle ; Inserts on supinator crest
- Main component for lateral sided stability (Radial collateral ligament, Lateral ulnar collateral ligament, annular ligament, accessory LCL)
- Other stabilizers include the radial head, coronoid process, and forearm muscles
- Often avulsed from the lateral epicondyle with portion of common extensor



Coronoid Process





Radial Head

MCL

Treatment

Initial Tx:

Reduce. Test stability in pronation/supination/neutral. Splint. RTC in 1 week.

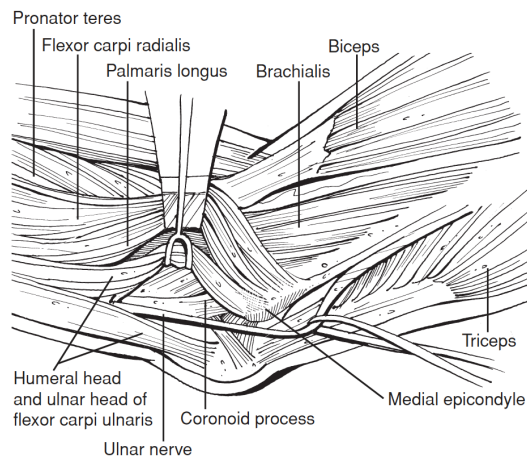
Nonoperative Treatment

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- Small coronoid and radial head fractures that remain concentrically reduced
- What would be your f/u plan

Operative Treatment

Approach:

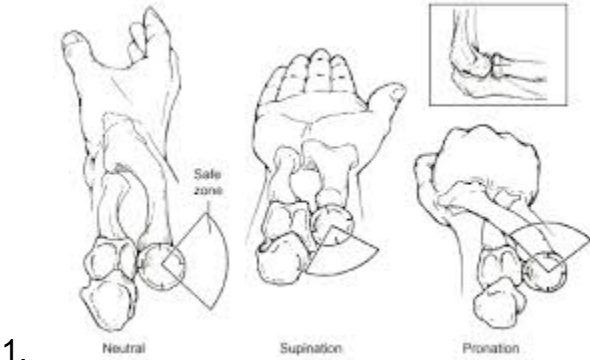
- Direct posterior skin incision w/ medial and lateral flaps
 - Typically can access coronoid through this window
- If basal fx and Coronoid plate needed
 - Medial approach
 - Flexor Pronator Split
 - Elevate entire FCU
 - Detach pronator mass from medial epicondyle + ridge





Radial Head

- Unstable radial head injuries
- Repair vs Replace vs Resection : Indications
- Where to put plate if plating
- Hardware choice
- Replacement technique
- Overstuffing the joint



AO



Coronoid fx

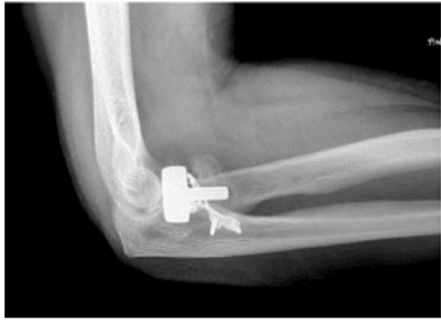
- Indications
- Why fix Coronoid
- Technique ; Sutures, screws, etc

LCL Repair

- Technique
- Sutures anchors or transosseous sutures

What if the Elbow still dislocates ?

- Usually is stable after repair of the coronoid , radial head, and LCL
- But if still unstable, medial instability may be the issue
- Consider reattaching the MCL and the common flexors muscles to the medial epicondyle. May also considered external fixator or cross pinning the joint.



Recovery



Nailed It Ortho podcast episode

- Ig: [Naileditortho](#) -
Naileditortho@gmail.com -
www.naileditortho.com



References:

Rockwood and Greene



**ELBOW FRACTURES AND
DISLOCATIONS**

*Daphne M. Beingsner, J. Whitcomb Pollock,
and Graham J.W. King*

Terrible Triad Fracture-Dislocations of the Elbow

George Dyer, MD,^{*} and David Ring, MD, PhD[†]
