

## Coronoid Displaced Fractures: My Preferred Method of Reconstruction

### Individualize Care by Answering Four Questions

- What is the nature (type, personality, size) of the coronoid fracture?
- What are the associated injuries and elbow instability patterns?
- What's the best surgical approach?
- What's the best surgical strategy?

### Evaluating Coronoid Fractures and Associated Instability Patterns

- 1) Terrible Triad
  - Posterolateral instability
  - Transverse or oblique coronoid fracture towards lateral the side
- 2) Posteromedial Injuries
  - Posteromedial instability and anteromedial coronoid fracture
- 3) Olecranon fracture – dislocations
  - Anterior-posterior instability
  - Most associated coronoid fractures are large

### Surgical Approaches to Coronoid Fracture

- Anteromedial Coronoid Fractures
  - Split common flexor group
  - Decompress ulnar nerve (no need to transpose)
- Terrible Triad Injuries (“standard” coronoid fracture)
  - Approach laterally – “open the book” – through space created by removing radial head fragments.
  - Rarely need additional medial exposure may need for MCL repair or buttress plate fixation
- Olecranon Fracture Dislocations
  - Approach coronoid through olecranon fracture before putting plate on the ulna

### Preferred Repair and Reconstruction Strategies

- My preference for terrible triad injuries and posteromedial Injuries is:
  - Lasso suture coronoid fragment of terrible triad injury and capsular tie down to a suture anchor, and plates for anteromedial fractures
  - Repair LCL with anchors to be repaired in most cases, or trans-osseous non-absorbable sutures.
  - Static elbow external fixation (2-3 weeks) if elbow joint is still subluxated after ligament repair
- My preference for olecranon fracture-dislocations is for retrograde fixation (from dorsal-olecranon to volar-coronoid fracture) using cannulated screws either outside plate or through the plate