Dislocations of the Hand and Wrist

Tom Mordick
General Concepts

- Early reduction is important to prevent vascular or neural compromise
- Also maintains joint surface
- Definitive repair of ligaments and associated fractures may be delayed
General Concepts

- Adequate anesthesia or analgesia essential
- Reproduce mechanism of injury in reverse
- Steady firm forces
- Any dislocation may be impossible to reduce closed (due to intervening structures)
Dorsal PIP Dislocation
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Open Injuries

- Most open wounds are skin bursting from tension
- Explore wound, if wound is superficial it can be irrigated and closed
- If appears deep or heavily contaminated a more formal debridement may be needed
- Antibiotics for 24 to 48 hours
After Care

- Post reduction X ray is essential
- Assess gentle active ROM, if smooth and congruous a finger splint will suffice
- If grossly unstable pinning will be needed
- Splint in position opposite of injury (20 degrees of flexion)
- I prefer to splint for two weeks
Volar Plate Laxity
Monitor for Loss of Reduction
Monitor Progress of Motion

- Early problem is instability, long term problem is generally stiffness
- ROM by two weeks for stable reductions
- Buddy tape to protect and facilitate ROM
- Window of opportunity to restore motion is 4 months
- They will be sore and swollen for 4 months
Volar PIP Dislocation
Volar PIP Dislocation
Volar PIP Dislocation
Special Considerations

- Frequently associated with central slip avulsion
- If present must splint in extension for 6 weeks
MP Dislocation Fingers
MP Dislocation Fingers
Collateral Ligament Avulsion
Finger MP Joint Collateral Ligament Injury

- No Stener Lesion
- Generally will heal conservatively
- Splint MP in extension to avoid cam effect
- If neglected acutely may require surgical repair
CMC Dislocation Fingers
CMC Dislocation Fingers
Special Considerations

- Fracture Dislocation of ring and small finger metacarpals are frequently unstable
- Dislocation of all four CMC joints is a high energy injury, look for associated injury
DIP Dislocation Fingers
DIP Dislocation Fingers
CMC Dislocation Thumb
CMC Dislocation Thumb
CMC Dislocation Thumb
CMC Dislocation Thumb
CMC Dislocation Thumb
Special Considerations

- Often unstable post reduction, monitor closely if treat conservatively
- May be issue with volar beak ligament healing conservatively
- Consider open repair of volar beak ligament and or reconstruction (Eaton/Littler Procedure)
MP Dislocation Thumb
MP Dislocation Thumb
IP Dislocation Thumb
IP Dislocation Thumb
Peri-lunate Dislocations

• Mayfield Classification Grade 3 - Tear of scapho-lunate, luno-capitate and luno-triquetral ligaments

• Mayfield Classification Grade 4 - above plus tear of radio-lunate ligaments
Peri-lunate Dislocations

Mayfield Classification Grades 3 & 4
Mayfield 3
Mayfield 4
Mayfield 4
Trans-Scaphoid Peri-lunate Fracture Dislocation
Special Considerations

- Will not heal with closed treatment
- Closed reduction good to temporize but is not definitive treatment
- Be sure to assess and document perfusion and median nerve function
- Mayfield 4 very hard to reduce closed
Thank You