

MANAGEMENT OF FOREARM INJURIES

Caroline Hing

MB BS BSc MSc MD FRCS FRCS(Tr&Orth)

Consultant Orthopaedic Surgeon

St Geroge's Hospital, London



Mechanism

- ▣ Fall
- ▣ Direct blow

Bones

- ▣ Radius
- ▣ Ulna

Nerves

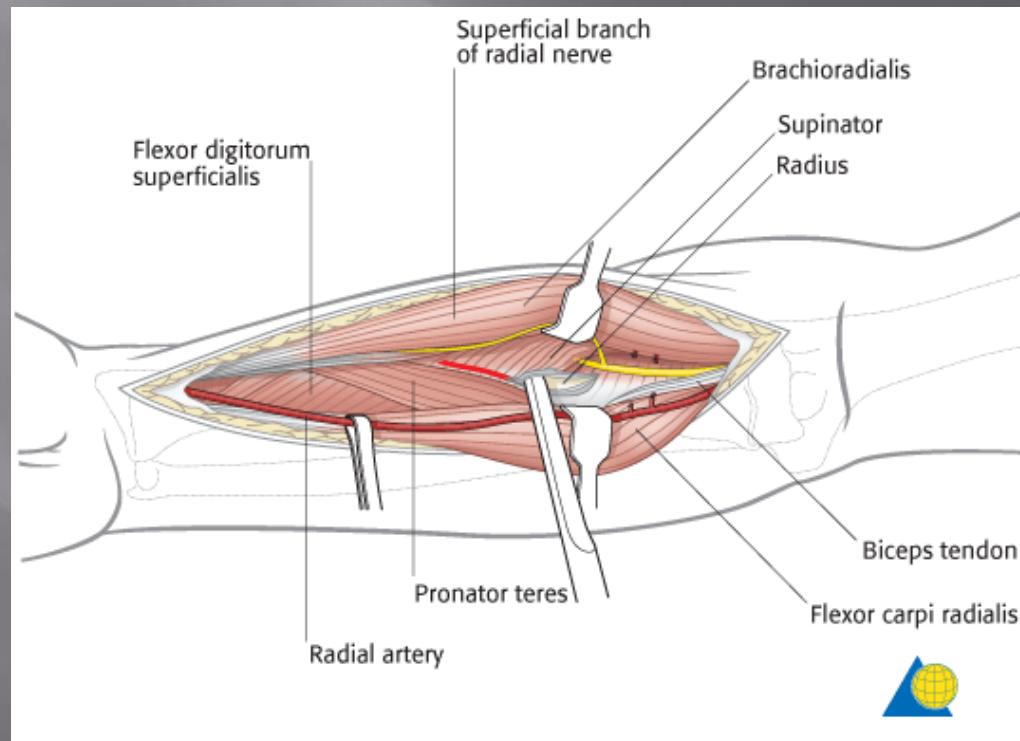
- ▣ Radial nerve
 - Anterior branch to mobile wad (BR, ECRB, ECRL)
 - Superficial branch sensory between BR & ECRL
 - Deep branch (PIN) splits the supinator, supplies extensors (except ECRB & ECRL)
- ▣ Median nerve
 - Splits PT
 - Runs between FDS & FDP
- ▣ Ulnar nerve
 - Splits FCU
 - Runs between FCU & FDP

Arteries

- ▣ Radial artery
 - Deep to BR
 - Between BR and FCR
- ▣ Ulnar artery
 - Prox between FDS & FDP
 - Dist between FCU & FCS

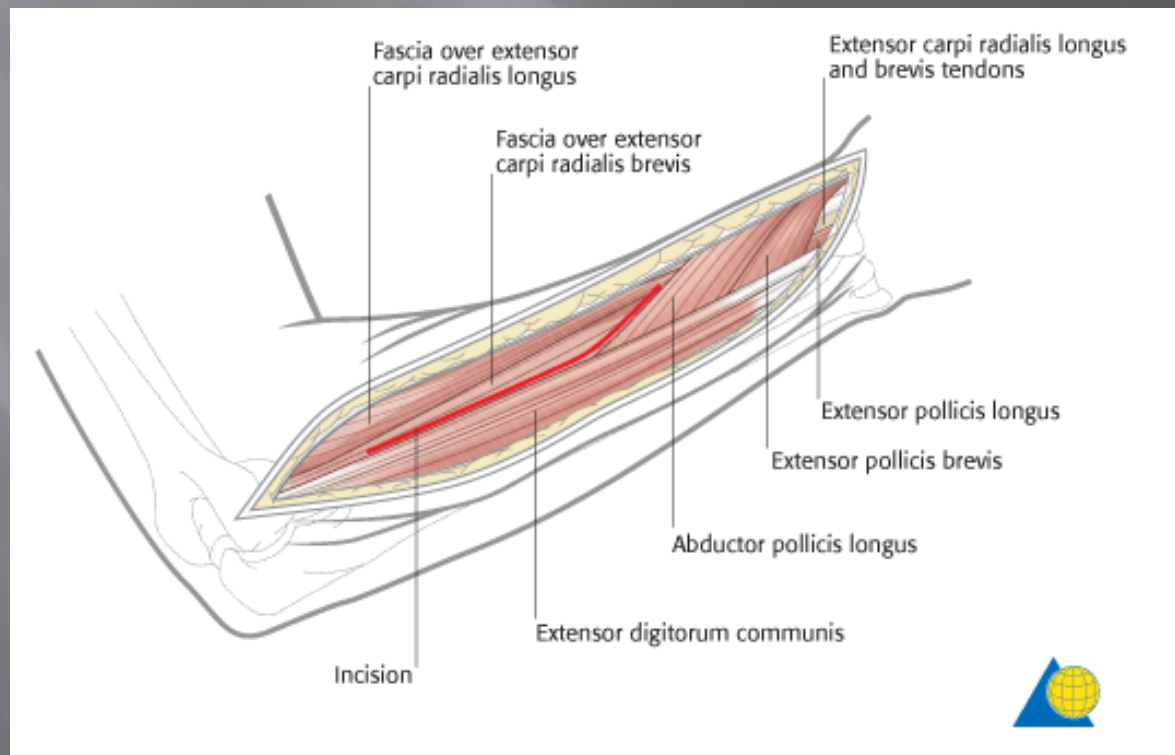
Henry approach

- Interval between BR (radial nerve) & PT / FCR (median nerve)



Thompson approach

- Interval between ECRB (radial nerve) and EDC / EPL (PIN)



Ulnar approach

- ▣ Subcutaneous
- ▣ Interval between ECU (PIN) & FCU (ulnar nerve)

Clinical evaluation

- ▣ Pain
- ▣ Swelling
- ▣ Deformity (displaced / undisplaced)
- ▣ Pulse
- ▣ Neurological deficit
- ▣ Compartment syndrome
- ▣ Open closed
- ▣ Associated injury (elbow & wrist)
- ▣ Comminution

Radiological evaluation

- ▣ AP
- ▣ Lat
- ▣ Include wrist and elbow

Monteggia fracture dislocation

- ▣ Ulnar shaft fracture
- ▣ Radial head dislocation
- ▣ Risk of PIN injury



Galeazzi fracture

- ▣ Radial shaft fracture
- ▣ Disruption of distal radioulnar joint



Essex-Lopresti Injury

- ▣ Fracture of radial head
- ▣ Disruption of interosseous membrane
- ▣ Injury to DRUJ



Conservative management

- ▣ Isolated radius / ulnar
- ▣ undisplaced

Surgical management

- ▣ Exfix
- ▣ ORIF with plates (non-locking / locking)
- ▣ nails



Complications

- ▣ Compartment syndrome
- ▣ Nerve injury
- ▣ Infection
- ▣ Non-union
- ▣ Malunion
- ▣ Radioulnar synostosis

Any questions...