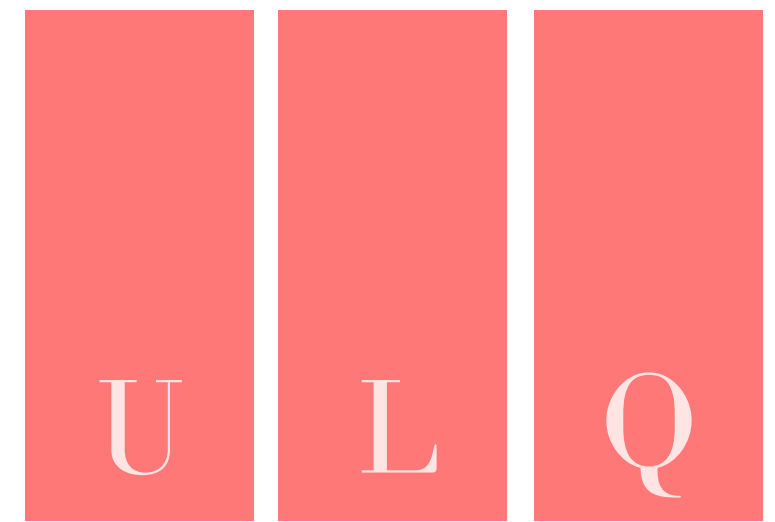


UPPER LIMB QUEENSLAND

24/7 Hand, Wrist, Elbow + Shoulder
Trauma Service



Current Practice: PIPJ Volar Plate Injuries

Mechanism of Injury: Hyperextension of the PIPJ and/or dorsal dislocation of the PIPJ

Role of Volar Plate: PIPJ stability and preventing hyperextension

Associated injuries: Collateral Ligaments, Central slip, Middle/Proximal Phalanx Fracture

Differential Diagnosis: FDP Avulsion Fracture, Pilon Fracture/Dislocation

Type 1 + 2: Volar plate +/- Collateral Ligament Injury



Stable PIPJ (assess collateral ligaments, volar plate and central slip tendon)
No PIPJ dislocation
Partial or complete tear of the volar plate (bony avulsion or soft tissue)

*Differential Diagnosis: FDP avulsion injury
See on following page.*

Stable PIPJ: <10% of articular surface affected:
Buddy strap affected finger to adjacent finger

Stable PIPJ: 10-30% of articular surface affected:
Dorsal extension blocking splint with PIPJ at 20° flexion if available OR buddy strap and review with ULQ specialist

Review with ULQ specialist or hand therapist



Type 3 + 4: Volar Plate + Dorsal Dislocation +/- Middle or Proximal Phalanx Fracture



Dorsal dislocation +/- middle or proximal phalanx fracture
Unstable PIPJ - fracture affecting >30% of the articular surface
- compromised lateral stability (collateral ligaments)
- no end feel with hyperextension (volar plate)

*Differential Diagnosis: Pilon fracture
See on following page.*

Review with ULQ specialist immediately

Current Practice: PIPJ Volar Plate Injuries

Differential Diagnosis

FDP Avulsion



The FDP tendon can avulse from the volar distal phalanx, become caught at the A3 pulley, and masquerade as a volar plate avulsion fracture.

Assess FDP tendon function (DIPJ flexion). The "volar plate avulsion" may instead be a FDP avulsion injury.

Requires surgical management - Review with a ULQ specialist immediately

Pilon Fracture Dislocation



Can look like an innocuous volar plate injury on imaging.

The difference between a volar plate injury and a pilon fracture dislocation is: *the joint remains dorsally subluxed even with the PIPJ in flexion.*

Look for the "v" sign formed by the middle and proximal phalanx at the dorsal PIPJ

Requires surgical management - Review with a ULQ specialist immediately

