

Irreducible Dislocation of Thumb Interphalangeal Joint -Novel Reduction Technique

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INTRODUCTION:

Strong collateral ligaments, volar plate, and both flexor and extensor tendons make thumb interphalangeal joint (IPJ) dislocation a rare injury. This dislocation however is frequently missed and challenging to reduce. We described a case of thumb IPJ dislocation, and our novel reduction technique.

REPORT:

A 74-years-old man, had right thumb injury after an alleged motor vehicle accident. Examination revealed a short transverse wound over the volar aspect of the right thumb IPJ with expose head of the proximal phalanx. However, distal sensation and perfusion are intact. Right hand radiograph demonstrated dorsal dislocation of the right thumb IPJ with no fractures seen.

Several attempts of thumb IPJ reduction under digital block had failed. Eventually, open reduction and k-wiring of the right thumb IPJ was performed under general anesthesia. Intraoperatively, the distal phalanx was dislocated dorsally and radially. Flexor Pollicis Longus (FPL) tendon is intact but translated medially and dorsally, entrapped in between the IPJ preventing reduction. Both collateral ligaments were torn. A curved artery forceps was hooked over proximal surface of distal phalanx, between FPL and extensor pollicis longus tendon, followed by gentle distal traction and cantilever over head of proximal phalanx. Reduction was done at single attempt. Avulsed volar plate was repaired and 1.2mm K-wire was inserted across IPJ to further stabilize the joint considering ruptured collateral ligaments. K-wire was kept for 2 weeks, followed by physiotherapy. Patient regained stable IPJ afterwards with acceptable flexion of 0-45 degree.



Figure 1: Hand radiograph showed right thumb IPJ simple dislocation



Figure 2: Radiograph showed reduced right thumb IPJ and K wire inserted

CONCLUSION:

¹Thumb IPJ dislocation can be resistant for reduction secondary to entrapment of structures like volar plate, osteochondral fragment, FPL, and sesamoid bone. Practitioners should be aware of possible causes of failed thumb IPJ reduction and be prepared for open reduction if necessary.

REFERENCES:

1. Naito, K., *et al.* Irreducible dislocation of the thumb IPJ due to displaced FPL tendon: case report and new reduction technique. *Arch Orthop Trauma Surg* **134**, 1175–1178 (2014)