The "Key" to unlock a locked wrist

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INTRODUCTION:

Isolated acute distal radioulnar joint (DRUJ) dislocation is a rare injury that must be recognized and treated promptly to avoid disability associated with delayed diagnosis and management [1]. A thorough review of literature showed handful reported cases, and the cause for irreducibility varies.

REPORT:

Our article discusses a case of a 40-year-old laborer who presented with left wrist pain, deformity, and a locked forearm in pronation following a work-related injury. Radiographs revealed an isolated dorsal dislocation of distal ulna (Figure 1) that was irreducible under closed manipulation. We proceeded with open reduction and trans-articular pinning. Intraoperative findings noted invagination of the dorsal capsule, entrapment of Extensor Digiti Minimi (EDM) tendon and avulsion of Triangular Fibrocartilage Complex (TFCC) (Figure 2). Following the release of the capsule and EDM, the ulnar head was reducible and transfixed with a K wire, followed by an above elbow slab for 4 weeks. The avulsed TFCC was secured via trans-osseous sutures.

DISCUSSION:

Dislocation of the distal radioulnar joint without an associated fracture is rare. The TFCC is the primary stabilizer of DRUJ, composed of various structures that are not easily distinguishable on dissection [2]. Radioulnar articulation plays a vital role in the rotational movement of the forearm. Failure to recognize this injury results in loss of pronation and supination. Open reduction, restoration of anatomy and trans-articular pinning for soft tissue healing are essential.

CONCLUSION:

The key to reduce an irreducible DRUJ is open reduction followed by inspection and repair of the adjacent structures. A forceful reduction and trans-articular pinning will result in grave complications later. The importance of this case is to raise awareness that prompt assessment and open reduction is the primary key to unlock a locked wrist.

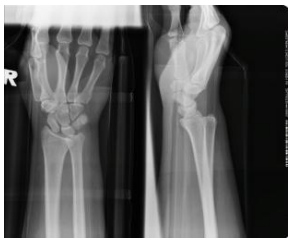

Figure 1: AP - Lateral Xray showing DRUJ dislocation

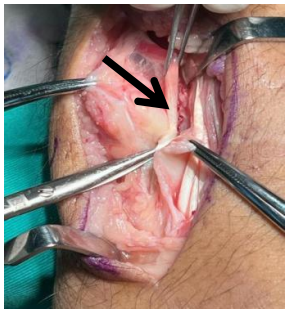

Figure 2: Interposed EDM underneath Ulna Head upon capsulotomy

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