The Wrist Whisperer: A Rare Case of Carpal Tunnel Syndrome Caused by Missed Lunate Dislocation

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INTRODUCTION:

Lunate dislocation is a rare but serious injury that can be difficult to diagnose in early presentation, leading to a high risk of missed diagnosis. The associated carpal tunnel syndrome is a major concern. This report presents a rare case of carpal tunnel syndrome caused by missed lunate dislocation.

REPORT:

A 21-year-old man with no known medical history presented to us with worsening numbness and persistent pain in his right hand following a fall onto an outstretched hand during a motor vehicle accident five weeks prior. Clinical examination showed reduce sensation over median nerve distribution with thenar muscle wasting, tenderness and limited range of motion in the right wrist. Radiographs confirmed lunate dislocation with ulnar styloid fracture. Open reduction and extended carpal tunnel release were performed, revealing lunate dislocation with scapholunate and lunate-capitate ligament injury. Four Kirschner-wire were inserted with a diamond shape configuration to maintain reduction, and an anchor suture was used to repair the scapholunate ligament (SLL). A below elbow back slab was applied postoperatively for four weeks. At two months post-surgery, the patient regained almost full wrist function and returned to work.

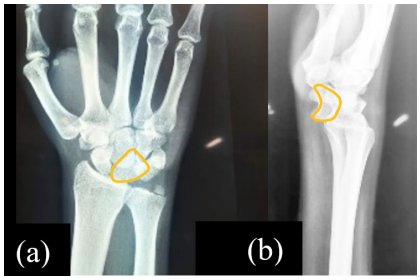

Fig. 1: Pre-operative radiographs; (a) Piece of pie sign in PA view; (b) spilled tea cup sign in lateral view

Fig. 2: Intra-operative findings revealed SLL injury repaired with anchor suture.

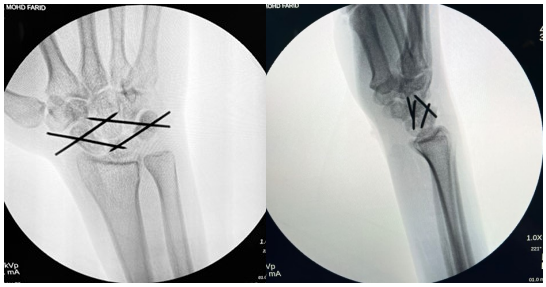

Fig. 3: PA and lateral post-operative radiographs.

CONCLUSION:

Early recognition of traumatic lunate dislocation is critical to prevent chronic pain, nerve entrapment, inflammatory arthritis, and long-term degenerative changes such as Scapho-lunate Advanced Collapse (SLAC), which can have devastating consequences. Acute total SLL injuries should be treated within four to six weeks after trauma with suture repair or re-insertion and pinning. Direct open repair with ligament sutures, or bony fixation with bone anchors supplemented by Kirschner-wire fixation and/or capsulodesis have shown good results in the short- and mid-term.

REFERENCES:

1. Andersson JK. Treatment of scapholunate ligament injury: Current concepts. EFORT Open Rev. 2017 Sep 19;2(9):382–393