

LIGAMENTOUS RECONSTRUCTION OF CHRONIC TRAUMATIC THUMB CARPOMETACARPAL DISLOCATION

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Introduction: Thumb carpometacarpal (CMC) dislocation is rare and frequently missed or misdiagnosed. Neglected dislocation or incomplete reduction of the thumb CMC cause chronic instability, muscle imbalance, decreased grip force and articular degeneration of the joint.

Discussion: A 30-year-old gentleman presented to us with persistently right wrist pain and dysfunction for 4 weeks. He fell on his outstretched right hand during a traffic collision. Clinical examination revealed prominent bony swelling and tenderness at the base of right thumb with restricted movement. Radiographs demonstrated dislocation of right thumb CMC joint with no fracture (Figure 1). Figure 1. Right thumb CMC dislocation. After one unsuccessful attempt of closed reduction, patient was planned for open reduction. Intraoperatively, fibrous tissue was noted below the first metacarpal bone which was removed. Dorsal capsuloligamentous complex reconstruction was done, reinforced by a slip of flexor carpi radialis tendon with anchor sutures. Joint was stabilized using a K-wire with thumb in abduction and extension, protected with thumb spica for 6 weeks. Hand therapy was commenced after removal of the k-wire and plaster (Figure 2). Figure 2. Post operatively radiographs showed anatomical reduction of the right thumb CMC joint. Patient gained painless, complete range of movements of the right thumb with no instability by 6 months. The grip strength measured by Jamar hand dynamometer was 20kg postoperatively (opposite hand 21kg), while pinch grip was 5.8kg (opposite hand 8kg). Radiographs showed no evidence of subluxation (Figure 3). Figure 3. Radiographs 6 months postoperatively.

Conclusion: Careful assessment and high index of suspicion is required to identify thumb CMC dislocation. Stability of CMC joint is provided by the specific anatomical configuration of CMC joint and ligamentous attachment. Repair of capsuloligamentous tear is treatment of choice for instability after reduction of thumb CMC dislocations if failed closed reduction. Post-operative physiotherapy is key to the excellent functional outcome.