

Chronic PIP Joint Fracture-Dislocation Treated With Hemihamate Arthroplasty

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INTRODUCTION:

Treatment of chronic fracture dislocations of the PIP joint represents a hand surgical challenge. In hemi-hamate arthroplasty, the palmar joint surface is reconstructed using an osteochondral graft from the hamate and the immediate stability permits early movement. We report a case of chronic PIPj fracture dislocation treated with hemi-hamate arthroplasty.

REPORT:

30 years old gentleman with right hand dominant presented to hand clinic after 4 weeks of trauma to his right ring finger in which a dumb-bell dropped onto his ring finger. He seeks medical attention 4 weeks post trauma due to chronic swelling and pain with loss of ring finger motion. Radiograph of ring finger showed fracture-dislocation PIPj.

Open reduction to PIPj via a volar approach was done to assess the fracture. Intra-operative findings noted a non reconstructable comminuted volar lip injury of PIPj with dorsal dislocation. The volar lip of middle phalanx fracture involved 60% of the PIPj. The fracture fragments were removed and volar lip defect was measured accurately.

Hemihamate autologous bone graft was harvested from the same hand using a dorsal longitudinal incision centered at 4th CMCj. Identification of bifaceted hamate and accurate measurement of size are important steps in harvesting the graft.

The graft was fixed to volar PIPj with 3 1.0mm screws and immediate stability of PIPj achieved 10 to 110 degrees intraoperatively. Absent of V sign on lateral view on fluoroscopy indicated no dorsal subluxation of the joint.

Post operatively, short term immobilization of PIPj in 30 degrees flexion. Patient was advice

for passive ROM of PIPj for 2 weeks and active ROM onwards. At 6 weeks post op, patient achieved 15 to 100 degrees PIPj flexion.



Figure 1: Pre-op

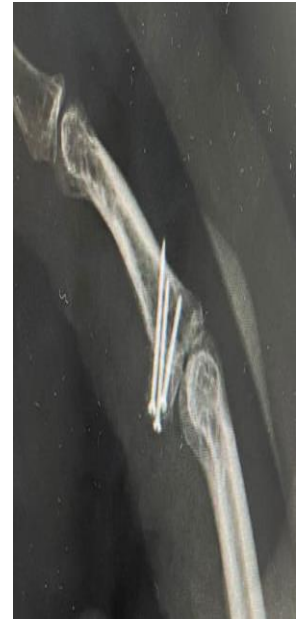


Figure 2: Post-op

CONCLUSION:

Hemi-hamate autograft arthroplasty represents an effective procedure to address severe PIP joint fracture dislocations. It restores the comminuted articular surface in chronic injuries.

REFERENCES:

1. Lindenblatt Hemi-hamate autograft arthroplasty for acute and chronic PIP joint fracture dislocations J Hand Surg Am. 2009 Sep;34(7)