CASE SERIES: A “LISFRANC” INJURY OF THE HAND

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Introduction: Carpometacarpal (CMC) fracture-dislocations accounts for <1% of documented hand injuries1. The disruption of the proximal transverse metacarpal arch makes it comparable to the Lisfranc injury of the foot. Two patients with dorsal variant of dislocation were treated at our centre.

Discussion: Both cases were male patients with right hand dominance and involved in a road traffic accident with similar mechanism of injury; a direct axial blow to a clenched right hand. Both patients presented with pain and gross swelling of the right hand with intact neurovascular status. Radiographs showed a fracture-dislocation of 2nd, 3rd, 4th and 5th CMC joints. Closed reduction was achieved by applying longitudinal traction and direct pressure over the dorsum of base of metacarpals. Reduction was maintained with multiple 1.4mm intramedullary Kirschner wire (K-wires) passing through the CMC joint. The second case was placed on a cross wrist external fixator with transverse K-wires to restore the normal metacarpal parabole. Both patients returned to work after 5 months. CMC joints are anatomically stable saddle joints due to its bony geometry, strong ligamentous support and dynamic stabilization provided by long extensors and flexors. CMC joint dislocation often occur in high energy trauma, as evidenced by the cases mentioned. It involves a direct axial load and shearing of the base of metacarpals in a flexed position. Intramedullary K-wiring is often the treatment of choice2.Spanning augmented external fixation has been discussed as a method to help achieve ligamentotaxis. Early postoperative physiotherapy improves the functional outcome of the patient.

Conclusion: CMC fracture dislocations are rare and should not be missed. Adequate radiographs must be taken and early fixation should be attempted for a better outcome. K wires and/or external fixators are effective treatment options