

## KAPLAN'S DISLOCATION IN PAEDIATRICS: A CASE REPORT

Vinodharan Nagaretnam<sup>1</sup>, Kishaani Pathamanathan<sup>2</sup>, Mohamad Sallehuddin Hassan<sup>2</sup>

<sup>1</sup>Universiti Putra Malaysia, <sup>2</sup>Hospital Sultanah Bahiyah

**Introduction:** Kaplan's dislocation or complex dislocation of metacarpophalangeal joint (MCPJ) is an uncommon injury caused by hyperextension of the MCPJ. It most commonly involves the index finger

**Discussion:** 8-year-old boy presented with pain and deformity after accidentally spraining his right index finger. The MCPJ was painful in extension with limited motion. The metacarpal head was prominent and puckering the palmar skin. There was no wound and neurovascular status was intact. Plain radiograph revealed dorsally dislocated MCPJ. Closed manipulative reduction with axial traction was unsuccessful, and proceeded with open reduction. Volar approach used. Intraoperatively, the head of metacarpal displaced volarly, buttonholed by the lumbricals radially, flexor tendons ulnarly, and the volar plate was trapped in the joint. By lifting out the volar plate, the MCPJ was reduced and stable on full passive motion. Dorsal blocking slab applied for 2 weeks, which was then converted to thermoplastic splint and started range of movement exercise. At 2 months post surgery, patient gained full range of motion.

**Conclusion:** Complex MCPJ dislocation is either due to trauma itself with interposition of volar plate or iatrogenic when improper reduction technique applied. Traction applied during reduction will cause entrapment of volar plate and buttonhole effect to metacarpal head. Therefore, correct reduction technique by flexion of wrist and MCPJ will relax the tendon, followed by dorsal pressure on base of proximal phalanx will mostly be successful and surgery can be avoided. In conclusion, correct reduction technique in MCPJ dislocation will have a good outcome, however, an improper technique will convert a simple MCPJ dislocation to a complex one.