Volar dislocation of PIP joint with central slip fracture

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Exclusion criteria: Simple dislocation, open injury
Inclusion criteria: dorsal bony injury of ligament-box complex

Average age 50 year-old (13-73)

Pain, ROM (DIP, PIP), Postoperative complication
bone union injury pattern, Xp parameters in postoperative immediately and at final examination

Step-off (SO) Tilting angle (TA) Depth (D) Widening (W) Palmer shift of middle phalanx (PS)

F/U 299 days (62-649)

Illustrative postoperative Xp

Central slip fx Screw + pinning 1 Buttress pinning 1 Buttress pinning 2

Depressed bone fragment Intramedullary pinning

Col-avulse No fixation 3/3 No fixation 2/2

External fixation

At injury

Early-arthritis 4 0 3 1

ROM vs PS (Illustrative case; PS+)

At injury

ROM vs Col-avulse (case; Col-avulse +)

At injury

At injury

Mechanism of limitation of flexion and extension angle in PIPj

Transvers retinacular lig.

Failure of Ligament-box complex causes extension lag of PIPj?