

# Basic principles in the treatment of finger dislocations

Ville Alanen

Helsinki University Central Hospital

The adaptability of the hand is dependent of the linear linkage of articulations by which power is transmitted from the forearm to the fingertips. Because of our dependency on the hand in our everyday tasks the joints are vulnerable to external force, which may rupture the capsule and ligament systems.

## *PIP joint*

Dislocations of the PIP joint are the most common ligament injuries in the hand. The injuries vary from a mild hyperextension to unstable fracture-dislocations. The PIP joint dislocation is dorsal, lateral or volar, typically dorsal.

The reduction of the dorsal or the lateral dislocation is easy. The decision on the treatment mode is based on the stability of the joint. Active stability means that the joint doesn't dislocate during active full flexion and extension. Passive stability is determined by bending the joint in lateral direction and by straining in AP direction.

If the joint is stable in active movement the treatment is early active mobilisation. Immobilisation is not the treatment of PIP dislocation. Unstable cases need operative treatment.

Volar dislocation is a rare injury and the reduction may be difficult due to the condyle buttonholing through the lateral and central bands of the extensor apparatus. The way to achieve this is distraction in a position where both MP and PIP joints are flexed.

## *DIP joint*

The dislocation of DIP or thumb IP joint is often present with a skin wound. This kind of open injury needs operative debridement and irrigation. An X-ray after reduction is a must. Stable dislocation injuries are treated again with early mobilisation.

## *MP joint*

MP joint dislocates normally dorsally. In X-rays a widening of joint space or a clear dislocation is seen. Making difference between simple subluxation and complete (complex) dislocation is of importance. In subluxation the volar plate has glided on the condyle but is not interposed. In this case the finger is 60 – 80 degrees hyperextended. This injury is treated with early mobilisation and a splint, which prevents extension. A careless reduction attempt can change a simple subluxation to a complete dislocation, where the interposition does occur and these cases must be treated operatively.

## *Reference*

Dray GJ, Eaton RG: Dislocation and Ligament Injuries in the digits. Green's Operative Hand Surgery 5th edition. Green D, Hotchkiss R and Pederson WC, editors. Churchill Livingstone; 2005.