PostScript

LETTER

Unstable proximal interphalangeal joint dislocations: another cause

Finger joint dislocations are a common sports injury which present in the accident and emergency department. Foremost among these injuries is the dorsal dislocation of the proximal interphalangeal (PIP) joint caused by a hyperextension injury. These dislocations may be classified as stable (types I and II) or unstable (type III).¹ Treatment depends on the stability of the joint, whereby stable dislocations may be treated by closed reduction but unstable dislocations require surgical intervention. We report the unusual case of an unstable PIP joint dislocation masquerading as a stable injury, which could have caused significant concern if closed reduction had been performed in the A&E setting.

A 74 year old right handed man presented in A&E following a fall on a road. Clinically, he sustained open volar wounds over his right ring and middle finger metacarpophalangeal (MCP) joints as well a dislocated PIP joint of his little finger. Radiographic examination showed stable transverse fractures of the proximal phalangeal bases of both right middle and ring fingers along with a dorsal dislocation of the PIP joint of the right little finger. On closer inspection of the x ray films, a compressive fracture of the head of the proximal phalanx of the right little finger was noted (fig 1). The patient was then referred to hand surgeons who attempted to reduce the PIP dislocation under general anaesthesia. At this time, it became obvious that the fracture dislocation was unstable which necessitated opening the joint. It was found that the patient had avulsed the collateral ligaments and volar plates along with the head of the proximal phalanx. This had resulted in an unstable PIP joint even after reducing the dislocation. Open reduction of the fracture was then carried out followed by K-wire fixation to stabilise the joint.

Figure 1 Radiograph of the patient's right hand.

The stability of the PIP joint is determined by the surrounding soft tissue structures, especially the collateral ligaments and volar plate. Classically, stable dorsal dislocations involve partial rupture of the collateral ligaments without a significant fracture component, whereas in unstable type III dislocations, the volar plate is avulsed with its insertion at the lip of the middle phalanx base. If more than 40% of its articular surface is involved, joint instability results. In our case, the function of the volar plate and collateral ligaments was compromised at their origin as opposed to their insertion. This uncommon presentation could be attributed to the age of the patient as most cases cited in the literature are in younger age groups. One possible explanation is that in the elderly population, the weakest link in the PIP joint is the osteoporotic bone and not the ligaments per se. From the treatment perspective in the emergency setting, it is important to look for radiographic signs of

proximal phalangeal fractures in addition to middle phalangeal fractures especially in the older age group. Closed reduction in the A&E setting is contraindicated in this instance.

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Reference

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