

# Scaphotrapezio-trapezoidal dislocation

## A case report

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A complex hand injury with scaphotrapezial dislocation and dislocation of the trapezoid, third, fourth, and fifth carpometacarpal joints occurred when a motorcyclist was involved in a road accident. The extent of the injury was initially overlooked. Com-

bined injuries of the carpus and carpometacarpal joints can easily be missed at radiographic examination. The true lateral radiograph of the wrist is necessary in the diagnosis of complex wrist injuries.

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A 30-year-old motorcyclist was multiply injured in a road accident involving a motor car. On arrival at hospital his left forearm and hand were markedly swollen, with deformity. There was a 1 cm wound over the dorsum of the second metacarpal. Wrist and hand radiographs showed a fracture of the second metacarpal, and dorsal dislocations of the 3 ulnar carpometacarpal joints. On the same day the dislocated rays were reduced onto the carpus and held with 2 Kirschner wires. The second was fixed with a plate. Intraoperative radiographs were deemed satisfactory, but postoperatively these radiographs were reviewed and felt to be suggestive of scaphotrapezial and trapezoidal dislocation. On the following day the patient underwent reoperation and the trapezium and trapezoid were both found to be dorsally dislocated with the scaphoid. The trapezium was reduced onto the trapezoid and held with a Kirschner wire. The trapezium/trapezoid were then reduced onto the scaphoid and capitate and held with 2 Kirschner wires.

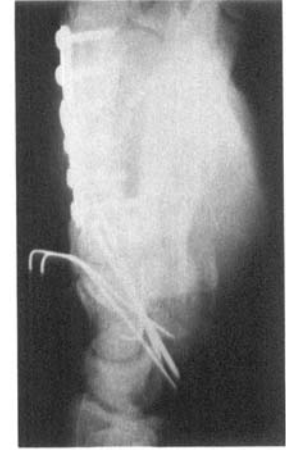
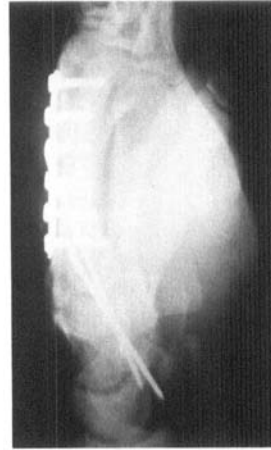
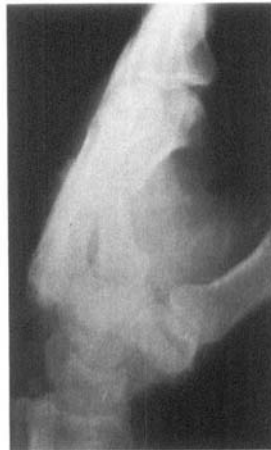
At 6 weeks the Kirschner wires were removed. At 9 months he had a 20-degree lack of wrist extension but otherwise had regained a full range of wrist movement. He subsequently went on to take up a job as a driver.

## Discussion

Although some 23 cases of scaphotrapezial dislocation have been described, scaphotrapezial dislocation with dislocation of the trapezoid (scaphotrapezoidal trapeziotrapezoidal capitotrapezoidal dislocation) has not

been reported. Scaphotrapezial dislocation usually occurs as a result of direct trauma to the hand, although it may be caused by indirect trauma through the thumb (Ehara et al. 1988). It may also occur as part of the perilunar series of dislocations involving hyperextension, intercarpal supination and ulnar deviation of the wrist (Johnson 1980). Isolated dorsal dislocation of the trapezoid occurs as a result of flexion and rotation of the second metacarpal, due to impact to the dorsal surface of the distal portion of the second metacarpal (Stein 1971).

Dorsal carpometacarpal dislocations are more common, usually result from direct force (Fayman et al. 1988) and are associated with fractures of the bases of the metacarpus because of their reinforcement by the strong interosseous ligaments (Hartwig and Louis 1979). The radiographic interpretation of scaphotrapezio-trapezoidal injuries is difficult because of the complex anatomy of the joint. We experienced some difficulty in diagnosing this injury. Postoperative review of the AP operative radiograph is suggestive of scaphotrapezial dislocation. On the true lateral radiograph there was loss of the normal angle between the second and fifth metacarpus (Parkinson and Paton 1992). With an intact second carpometacarpal joint and a fifth carpometacarpal joint which had been openly reduced, this finding was suggestive of subluxation or dislocation of the trapezoid. These findings were confirmed at surgery. The true lateral radiograph of the wrist is useful in the complex injuries of the wrist prior to complex imaging procedures.

**Scaphotrapezio-trapezoidal dislocation.**

The 3 ulnar carpometacarpal joints are dislocated with a midshaft fracture of the second metacarpal.

Day 1 postoperatively. Scaphotrapezial and trapezoid dislocations.

Following reoperation. Near anatomic position has been achieved.

**References**

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