

Scaphocapitate Fracture Syndrome

Rajagopal AR, Toyat SS, Syahril RA, Muhammad Nawawi RF

Hand and Microsurgery Department, Hospital Selayang, Selangor.

INTRODUCTION:

Scaphocapitate fracture syndrome is a rare type of perilunate instability. First described by Fenton in 1956 who later coined the term “naviculo-capitate fracture syndrome”¹, Monahan and Galasko introduced the current term of “scaphocapitate fracture syndrome”². This injury is described as transverse fracture of both scaphoid and capitate with rotation of proximal capitate to 90° or 180°.

REPORT:

We present a 35 years old, right hand dominant, who presented with right wrist pain and tenderness on palpation following a motorvehicle accident. Radiograph showed a carpal fracture, but exact pattern was unclear, necessitating computed tomography (CT) scan of the right wrist, which demonstrated capitate fracture with its proximal fragment flipped 180° and a scaphoid fracture. (Figures 1)

He underwent open reduction, scaphoid and capitate screw fixation through dorsal wrist approach. Intra-operatively, proximal capitate fragment was inverted, reduced and fixed with headless compression screw, followed by diamond k-wiring. Post-operatively, splint was applied and K-wires removed at 6 weeks post-operation.



Figure 1: Pre and Post operative images

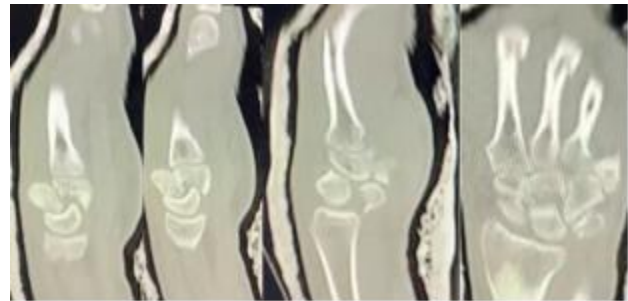


Figure 2: Preoperative CT scan

Discussion

Capitate fracture represent only 1.3% of carpal bone fractures, of which only 0.6% of these are the scaphocapitate fracture syndrome type, with only approximately 40 cases described in literature. Of these, a delayed diagnosis was seen in about 25% of cases. If in doubt regarding diagnosis, additional radiographs should be ordered or CT scan.

Many authors believe this fracture is a variety of trans-scaphoid, trans-capitate perilunate fracture-dislocation³, hence the decision to perform diamond k-wiring to stabilize the carpal bones in our patient. Current literature supports open reduction, anatomical reduction and internal fixation as the treatment of choice, with the aim of reducing probability of vascular necrosis, post traumatic arthritis and non-union which are associated with these fractures.

Reference

1. Fenton RL. The naviculo-capitate fracture syndrome. *J Bone Joint Surg Am* 1956;38-A(3):681–684
2. Monahan PR, Galasko CS. The scapho-capitate fracture syndrome. A mechanism of injury. *J Bone Joint Surg Br* 1972;54(1):122–124
3. Pandit R. Proximal and palmar dislocation of the lunate and proximal scaphoid as a unit in a case of scaphocapitate syndrome. A 32-month follow-up. *J Hand Surg [Br]* 1998;23(2):266–268