FRACTURE-DISLOCATION OF THE HAMATOMETACARPAL JOINT
A CASE REPORT

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A case of carpometacarpal dislocation involved
dorsal dislocation of the fourth and fifth metacarpal,
associated with a fracture of the hamate. Reduction
and Ki-wire fixation resulted in good hand function.
Keywords: hamate; carpometacarpal dislocation;
wrist.
Mots-clés: luxation carpo-métacarpienne; poignet; os crochu.

INTRODUCTION

Dislocations of the carpometacarpal joints, except
for those of the first ray, are uncommon injuries. Recently two different authors reviewed
the published cases (6, 7) and recollected respectively 215 and 143 patients.
We treated a patient with a dorsal dislocation
of the fourth and fifth metacarpal, associated with
a fracture of the hamate.

CASE REPORT

A 34-year-old man hit his right (dominant) fist
against the wall. Swelling and pain occurred
immediately, but he was able to finish his working
day.
He was seen 6 hours later with massive swelling
of the hand and wrist. The radiographs (plain and
tomograms) revealed a dorsal dislocation of the
fourth and fifth metacarpals, fracture of the base
of the fourth metacarpal and comminution of the
dorsal cortex of the hamate (fig. 1, 2).
Three days later, when most of the swelling had
subsided, an exploration revealed that the fourth
and fifth metacarpal were still attached to each
other and both were dorsally dislocated. The
articular surface of the hamate was partially
depressed and two bone fragments of the hamate
were avulsed and still attached to the fifth metacarpal by the ligaments.
Reduction was achieved by simple longitudinal traction on the corresponding fingers, but the
reduction was very unstable, and Ki-wire fixation
was necessary (fig. 3).
The patient returned to his previous job as a
mechanic after 4 months. Clinical examination
one year later revealed a grip of normal power
and normal mobility of wrist and fingers. He was
completely pain free, even after heavy manual
labor. On xray the joint space remained un-
changed.

DISCUSSION

Diagnosis of carpometacarpal (CMC) dislocation is often missed because of the absence of
obvious physical and radiological features. The
use of additional diagnostic techniques is imperative; lateral tomograms are useful tools for an
exact diagnosis of these lesions.
Although reduction is often easily achieved, it
usually is unstable and requires complementary
fixation (2, 3). Two recent publications (6, 7)
review the published cases. Dislocation of the two
"mobile" metacarpals is the most frequent com-
bination, accounting for about 12.5% of the
carpometacarpal dislocations.

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The association with hamate fractures is not as frequent as the association with fractures of the base of the fifth metacarpal (resembling Bennett's fracture), but several isolated cases have been published (1, 5, 8). To our knowledge only 3 series have been reported (2, 3, 4).

The diagnosis is often overlooked (2, 3) for several months. Three mechanisms of injury have been proposed (3). In this case axial loading transmitted along the metacarpal shaft seemed obvious.

Cain et al. (2) proposed a classification system: Type I is a CMC dislocation without carpal fracture (Ia) or with a small dorsal chip fracture (Ib), type II is a CMC dislocation with a major fracture affecting only the dorsal aspect of the carpal bone, and type III is a coronal carpal fracture involving both the CMC and midcarpal joint.

This case is a type II lesion. Types II and III are unstable, and open reduction with restoration of the articular surface is recommended (3) to prevent redislocation and late carpometacarpal osteoarthritis. The key to success is early diagnosis, and according to Garcia-Elias et al. (3) lateral tomographs are the most effective method of diagnosis.

REFERENCES


**SAMENVATTING**

*L. DE SMET. Fractuur-luxatie van het hamatometa-
carpaal gewricht. Een gevalsstudie.*

Een geval van carpometacarpale luxatie wordt gepubliceerd. De vierde en vijfde metacarpalia waren naar dorsaal geluxeerd met geassocieerde fractuur van het os hamatum. Reduktie en verpenning leidden tot een goede handfunktie.

**RÉSUMÉ**

*L. DE SMET. Fracture-luxation de l’articulation carpo-
métacarpienne.*

Un cas de luxation carpo-métacarpienne est publié. Les quatrième et le cinquième métacarpiens étaient luxés en arrière avec fracture associée de l’os crochu. La réduction et l’embrochage furent suivis d’une bonne récupération fonctionnelle.