

CASE REPORT

ULNOPALMAR DISLOCATION OF THE FIFTH CARPOMETACARPAL JOINT A RARE INJURY

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Volar dislocation of the carpometacarpal joint of the little finger is an uncommon injury. It is subdivided in ulnopalmar and radiopalmar dislocations. The injury can easily be missed on standard xrays. Closed reduction and K-wire fixation has commonly been used in the treatment, although closed reduction and casting has been reported. Only 10 cases of an ulnopalmar dislocation were published previously. We report a case of a simultaneous dislocation of the 4th metacarpophalangeal joint and an ulnopalmar dislocation of the 5th carpometacarpal joint. The combination of these injuries has not been reported yet. We review the available literature and discuss the methods of treatment.

Keywords : dislocation ; carpometacarpal joint ; metacarpophalangeal joint.

Mots-clés : luxation ; carpo-métacarpienne ; métacarpophalangiennne.

INTRODUCTION

A case of ulnopalmar dislocation of the carpometacarpal (CMC) joint of the little finger in combination with a dislocation of the 4th metacarpophalangeal (MCP) joint is presented.

We review the available literature and discuss the possible ways of treatment.

CASE REPORT

A 52-year-old man presented to the Accident & Emergency Department following a fall on his right hand. Clinical examination showed an angulated deformity of the MCP-joint of the 4th finger and

tenderness over the 5th CMC-joint and the radial styloid. Radiographs revealed ulnopalmar dislocation of the 5th finger at the carpometacarpal joint and dislocation of the 4th metacarpophalangeal joint. There was also an undisplaced fracture of the radial styloid (fig. 1). A closed reduction of the 4th MCP-joint was immediately done under ring-block in the emergency department. The 5th CMC-joint



Fig. 1. — Ulnopalmar dislocation of the 5th CMC-joint, dislocation of the 4th MCP-joint, fracture of the radial styloid. (a) AP view and (b) lateral view.

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Fig. 2. — Post reduction of 5th CMC-joint : Fixation with 2 percutaneous K-wires.
(a) pronation view and (b) lateral view.

was treated with closed reduction under general anaesthesia. As the reduction was unstable in volar and ulnar direction we decided to maintain the position with Kirschner-wires. Two percutaneous K-wires were inserted to fix the base of the 5th metacarpal with the hamate and the base of the 4th metacarpal (fig. 2). The hand was immobilized in a plaster back-slab. Plaster and K-wires were removed four weeks postoperatively and physiotherapy was started. Six months following injury the patient had full range of movement of the little finger and normal grip strength, the radiographs showed the reduction to be maintained (fig. 3).

DISCUSSION

Simultaneous dislocation of the carpometacarpal and the metacarpophalangeal joint is a rare injury. Two cases of concomitant CMC- and MCP-joint dislocation in a single finger have been reported yet, both of them with dorsal dislocation of the carpometacarpal joint (4, 9). The combination of an ulnopalmar dislocation in the carpometacarpal joint and dislocation of the metacarpophalangeal joint has to our knowledge not been published yet.

Dislocations of the fifth carpometacarpal occur more often to the dorsal than the volar side. Bora



Fig. 3. — 3-month follow-up : Reduction maintained.
(a) pronation view, (b) AP view and (c) lateral view.

and Didizian (2) suggested to take a lateral view in 30° of pronation of the hand to obtain an improved view of the 5th CMC-joint. Nalebuff (6) differentiated between radiopalmar and ulnopalmar dislocations. Berg and Murphy (1) found the hook of the hamate to deviate the metacarpal to either the ulnar or radial side. Tearing of all ligament and tendon attachments of the base of the fifth metacarpal results in radiopalmar dislocation (6). That might explain why previously reported cases of radiopalmar dislocations required open reduction and fixation either with arthrodesis or soft tissue repair.

The attachments of ligaments and tendons remain intact in the ulnopalmar dislocation (6); closed reduction was performed in all yet described cases. Roberts and Holland (8) described three patients in whom closed reduction was performed. The reduction failed in two patients and no further treatment was undertaken. The third patient was treated with a traction splint but partial redisplacement occurred after removal of the splint. Five other cases were treated with closed reduction and K-wire fixation to maintain reduction (3, 6, 7, 10). Berg and Murphy (1) first published a case where closed reduction of an ulnopalmar dislocation of the 5th CMC-joint was maintained in a splint without internal fixation. A second successful case of closed reduction and casting was described by Lintner and Rettig (5). We report another case of ulnopalmar dislocation of the 5th carpometacarpal

joint which was treated with closed reduction and percutaneous K-wiring. The clinical and radiological outcome after 6 months was satisfactory. We feel that percutaneous fixation with Kirschner-wires provides good postoperative outcome in volar dislocations of the CMC-joint of the 5th finger. If the closed reduction is stable, conservative treatment seems to be possible, but close follow-up is required as there is a risk of redisplacement and the patient must be warned of further intervention.

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SAMENVATTING

J. W. FISCHER, M. WASEEM, A. GAMBHIR, R. J. CREEDON. Een zeldzaam letsel : Ulna-volaire luxatie van het carpo-metacarpaal gewricht van de vijfde straal.

Volaire ontwrichting van het carpo-metacarpaal gewricht (ulno-volair of radio-volair) van de pink is zeldzaam. Het letsel kan miskend worden op standaard RX. De klassieke behandeling bestaat in gesloten reductie, gevogd van ofwel fixatie met kirchner pinnen ofwel eenvoudige gipsimmobilisatie. Tot op heden werden 10 gevallen van ulno-palmaire luxatie van het carpo-metacarpale gewricht gepubliceerd. De auteurs voegen hieraan toe een niet beschreven associatie van luxatie van het Vde carpo-metacarpale gewricht, geassocieerd met een luxatie van metacarpo-falangeale gewricht IV van dezelfde hand. De literatuur en de behandelingsmethodes worden besproken.

RÉSUMÉ

J. W. FISCHER, M. WASEEM, A. GAMBHIR, R. J. CREEDON. Luxation ulnopalmaire de l'articulation carpo-métacarpienne du 5^{ème} rayon, une lésion rare.

La luxation palmaire de l'articulation carpo-métacarpienne du petit doigt est une lésion peu commune. On distingue des luxations ulno-palmaires et radio-palmaires. La lésion peut passer inaperçue sur des radiographies standard. Le traitement habituellement utilisé a été la réduction à foyer fermé et la fixation par broches de Kirschner, mais certains se sont contentés d'une réduction suivie d'immobilisation plâtrée. Dix cas seulement de luxation ulno-palmaire ont été rapportés à ce jour. Les auteurs rapportent un cas de luxation ulno-palmaire de l'articulation carpo-métacarpienne du 5^{ème} rayon, associée à une luxation métacarpo-phalangienne du 4^{ème} rayon. Cette association de lésions est originale. Ils passent en revue les données de la littérature et discutent des méthodes de traitement.