

Carp-Metacarpal Dorsal Partial Spatula Dislocation: About One Case

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DOI: [10.36347/sjmcr.2022.v10i12.018](https://doi.org/10.36347/sjmcr.2022.v10i12.018)

| Received: 26.09.2022 | Accepted: 31.10.2022 | Published: 20.12.2022

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Abstract

Case Report

Carp-metacarpals dislocations are rare traumatic lesions following high-energy trauma and are most commonly observed in young people. If untreated causes joint degeneration and instability, is usually unstable and treated by variable methods, open or closed. The spatula form is often accompanied by fractures of the metacarpals. We report the case of a case of dorsal carp metacarpal partial spatula dislocation. This is a 24-year-old patient, admitted for blunt trauma to the right hand, the clinical examination noted hand edema. Radiological assessment showed partial dorsal carp metacarpals spatula dislocation associated with a fracture of the base of the 5th metacarpal. The patient underwent closed manual reduction and transverse inter metacarpals pinning with two pins. Rehabilitation was started at the 3rd week, pin removal at 45 days. The clinical, radiological and functional results at 3 months were satisfactory with good muscle strength, return to work at 12 weeks. Rare lesions, often unrecognized, especially in polytraumatized patients, metacarpal dislocations have a good functional prognosis if they are treated appropriately and early.

Keywords: Dorsal carp metacarpal partial spatula dislocation, pinning.

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INTRODUCTION

Carp-metacarpal dislocations are rare, especially in the four long fingers [1]. With a frequency of 1% of traumas and wrist, they follow violent traumas a rule of the young subject [1, 2]. Incomplete spatula dislocations are more frequently dorsal than palm or divergent and are often accompanied by fractures of the metacarpals [3]. We report the case of a 24-year-old patient who presented with a partial dorsal spatula dislocation fracture following a road traffic accident and received emergency care.

MEDICAL OBSERVATION

This is a 24-year-old, military, right-handed patient with no known pathological history who was admitted to the emergency room of our department for blunt trauma to the right hand following a road traffic accident (pedestrian hit by a truck). This resulted in pain with absolute functional impotence of the right hand. Clinical examination in the emergency room noted significant edema with dorsal and radial

deformity of the right hand figure 1. (a-b). There were no vascular-nervous disorders or skin opening. The standard AP and profile radiograph of the right wrist showed partial dorsal spatula dislocation associated with a comminuted fracture of the base of the fifth metacarpal figure 2 (a-b). The patient was admitted to the operating room where he underwent closed reduction under regional anesthesia by external maneuvers (traction in the axis of the fingers followed by direct manual pressure on the base of the metacarpals) followed by a transverse inter-metacarpal pinning with two pins under an image intensifier figure 3(a-b). The control radiograph was satisfactory figure 4(a). Immobilization of the wrist with a plaster splint was performed for 6 weeks with removal of the pins at the end. The progressive active rehabilitation of the fingers began as early as 3 weeks postoperatively, keeping the splint between sessions. At 3 months follow-up, the functional result was satisfactory with good muscle strength and complete recovery of wrist and finger mobility. Work resumed for 2 months.

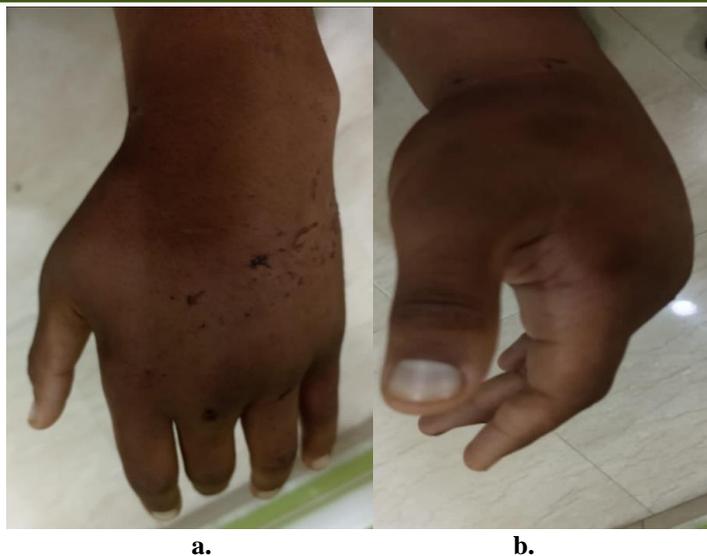


Figure : 1 (a-b) : Demonstrate noted edema with dorsal and radial deformity of the right hand



Figure : 2 (a-b) Front and profile wrist X-ray in favor of a partial dorsal spatula dislocation plus a fracture of the base of the fifth metacarpal

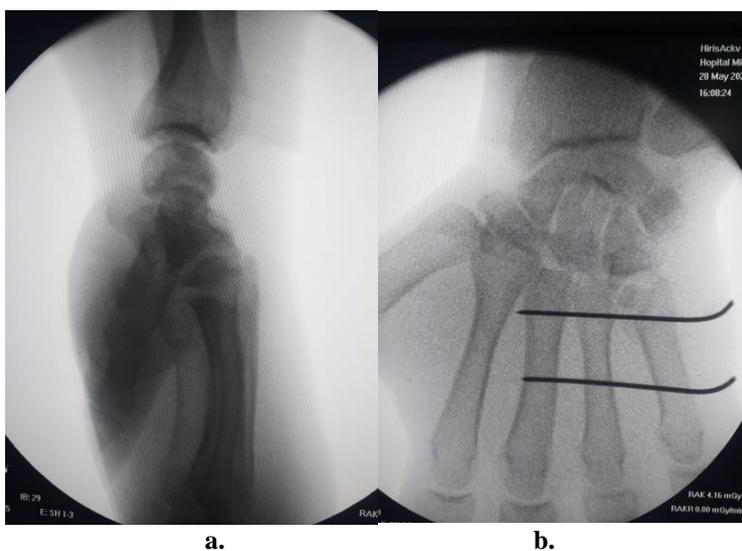


Figure : 3 (a-b) Closed reduction under anesthesia by external manoeuvre



Figure: 4 - Transverse inter metacarpal pinning with two pins under image intensifier

DISCUSSION

The carp metacarpal joint is a very stable joint, thus requiring high-energy trauma to disorganize it. This makes carp metacarpal dislocations rare. Especially on the last four fingers [1]. The clinical diagnosis is sometimes made difficult because of the edema which sets in very quickly, thus masking the deformation, or when the trauma occurs in the context of polytrauma. X-rays make it possible to make the diagnosis, it is essential to perform a strict lateral view showing the direction of displacement of the metacarpal bases and an oblique view revealing the mobile or fixed metacarpals and a frontal view [4]. However, standard X-rays are not always sufficient, hence the frequent use of CT to better analyze the lesion [4, 5]. Costagliola and there. Classify carp metacarpal dislocations as isolated spatula, partial spatula, and complete spatula dislocations [6]. Orthopedic reduction is usually possible when the dislocation is recent and less than ten days old. Reduction followed by open-hearth stabilization via the dorsal approach is essential for the majority of authors, in particular to lift an incarceration or in the event of a diagnostic delay. In the event of residual instability or recurrence, stabilization can be obtained by intramedullary, oblique or cross pinning, thus securing the dislocated metacarpal(s) to the carpal bones and/or to the neighboring healthy metacarpal [7]. If the inter-metacarpal ligaments are not broken, it is recommended to synthesize the metacarpals fixed to the carpus, and if they are broken, the synthesis of the mobile metacarpals to the fixed ones [8]. After reduction and stabilization, most authors recommend immobilization in a cast in the intrinsic position for 5 to 6 weeks [9]. The majority of authors agree on the fact that removal of the pins around the sixth week should be followed by functional rehabilitation of the wrist and fingers [5, 10]. The treatment of these lesions gives good results when it is undertaken correctly in an emergency [11, 12]. The presence of associated lesions,

the persistence of subluxations and soft tissue lesions are factors of poor prognosis [5]. Residual pain, decreased grip strength and mobility of the fingers, subluxations and secondary displacement are the complications most often reported in the literature [11]. Lawlis and Gunther report that the results obtained in patients with carp metacarpal dislocation of the four rays were better than those of patients with second and third ray dislocation [13].

CONCLUSION

Spatula dislocations are rare lesions, often overlooked, especially in polytraumatized patients. Only imaging can make the diagnosis. The functional prognosis depends on the associated lesions, and the earliness of appropriate treatment.

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