



Case Report

# Volar Dislocation of the Metacarpophalangeal Joint of the Ring Finger Complicated with Chondrolysis: A Case Report and Review of the Literature



## 病例报告及文献探讨: 无名指掌指关节掌侧脱位引起软骨溶解

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### ABSTRACT

Volar dislocation of the metacarpophalangeal joint is rare injury. In the literature consulted only seven cases of isolated volar dislocation of the metacarpophalangeal joint of the ring finger have been published. Chondrolysis associated with the metacarpophalangeal joint dislocation has not been reported in the English literature. In this paper, an unusual case of volar dislocation of the metacarpophalangeal joint is presented and a review of the literature is described.

### 中文摘要

掌指關節掌側脫位是一種罕見病例，一共只有7例病例在无名指发表在文献上。在英文文献上没有病例是无名指掌指關節掌側脫位引起软骨溶解。我们在本文中报告了这一个不常见的无名指掌指關節掌側脫位及探讨文献。

### Introduction

Volar dislocation of the metacarpophalangeal joint (MCPJ) is rare. Most of the dislocations are dorsal. Open reduction is necessary if closed reduction has failed. We report a case with volar dislocation of the MCPJ of the ring finger with open reduction.

### Case report

A 49-year-old right-handed lady suffered from an injury to the right hand after she slipped, fell, and landed on the floor on her right hand. On examination, there was a 2-cm superficial laceration over the palmar surface of the proximal interphalangeal joint of the right middle finger, with preservation of the flexor tendon. The MCPJ was swollen. Neurovascular examination was normal. X-ray of the right hand showed closed volar dislocation of the MCPJ of the right ring finger without fracture (Figure 1).

An emergency operation with suturing of the right middle finger wound and an attempt at closed reduction of the right ring finger

MCPJ was performed under X-ray screening (Figure 2). The MCPJ was stable only in the range of 40 to 80 degrees of flexion of the MCPJ with volar pressure applied. Due to the instability, open reduction was performed via a volar approach under general anaesthesia. Both radial and ulnar sides of the collateral ligaments were ruptured. The volar plate was ruptured and was found jammed in the MCPJ. A cartilage defect was found over the dorsal area of the proximal phalangeal base. Part of the interposed volar plate was excised and the collateral ligaments were repaired with a nylon suture. After the repair, the MCPJ was still unstable and dislocated volarly with extension beyond 40 degrees. An axial K-wire was inserted to splint the MCPJ in 70 degrees of flexion (Figure 3). Splintage was given postoperatively for protection.

The K-wire was removed 4 weeks after the operation. The patient was referred to physiotherapy for active and passive mobilization. However, she developed complex regional pain syndrome after the operation. Stiffness of the all fingers was noted with pain. One year after the operation, there was limited range of motion over the MCPJ (5 to 10 degrees). Subsequent X-ray showed chondrolysis of the ring finger MCPJ (Figure 4). She reported to be pain free over the affected MCPJ and could cope with daily activity.

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**Figure 1.** X-ray showing closed volar dislocation of the MCPJ of the right ring finger.



**Figure 2.** X-ray showing persistent volar dislocation even on splintage.

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