

Floating Proximal Phalangeal of a Long Finger: A Rare Case Report

Mohamed JIDDI^{1*}, Mohamed Habbab¹, Mostapha El kasseh¹, Mohamed NASSIRI¹, Abdessalam ACHKOUN¹, RACHID CHAFIK¹

¹Department of Orthopedic Surgery, Ibn Tofail Hospital, University Cadi Ayyad, MARRAKECH, MOROCCO

DOI: <https://doi.org/10.36347/sasjs.2025.v11i10.019>

| Received: 11.09.2025 | Accepted: 23.10.2025 | Published: 30.10.2025

*Corresponding author: Mohamed JIDDI

Department of Orthopedic Surgery, Ibn Tofail Hospital, University Cadi Ayyad, MARRAKECH, MOROCCO

Abstract

Case Report

Floating proximal phalangeal of a long finger with palmer displacement is an exceptional injury. This case report illustrates a 32-year-old male patient who suffered simultaneous bipolar palmer dislocation of the metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joint of the left 3rd left finger due to traffic accident. We present the clinical manifestation, radiographic findings, and the outcome of our management. During the period of writing this case report, we didn't find any exact similar study. For this reason, reporting and analyzing resembling cases will allow us to insight and compare ours finding. It seems that different factors seem to contribute to this condition, and it is generally diagnosed using X-rays. Further, closed reduction by external maneuvers is successful in the majority of the cases, but surgery may be necessary in instable or irreducible dislocations.

Keyword: Dislocation, metacarpophalangeal, interphalangeal, bipolar, floating, finger.

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Bipolar dislocation of a phalanx is a rare entity in traumatology, while simultaneous palmer dislocation of both proximal interphalangeal (PIP) and metacarpophalangeal (MCP) joints of the 3rd finger is considered unique.

Dislocation of the MCP joint is rare due to the protective role of the volar plate against hyperextension and the collateral ligaments preventing radial and ulnar deviation.

The index finger is the most commonly affected by MCP joint dislocation. However, the middle finger is more prone to MCP dislocation when subjected to ulnar stress during hyperextension. Dorsal dislocation is the most common type for MCP joints. PIP joint dislocations typically occur dorsally; however, volar dislocations are associated with a higher risk of complications and more challenging reductions [1-3].

This type of injury can be caused in different circumstances and mechanisms, especially severe ones, including road traffic accidents and sports injuries.

Given the rarity of this condition, there is a limited amount of documented cases and research, and its management remains poorly defined. Therefore,

sharing and examining individual cases can offer valuable insights into its treatment and potential results.

We describe a case of simultaneous bipolar palmar dislocation of the MCP and PIP joints in the left third finger of a young adult resulting from a road traffic accident, and discuss the treatment outcomes in comparison with the available literature. In our case, under wrist block anesthesia, an immediate closed reduction was performed using external techniques, including gentle traction and slight flexion of the finger. Ultimately, the 3rd finger was immobilized using a hand and finger splint for a duration of 3 weeks. Then, functional rehabilitation was initiated, with a gradual approach aimed at restoring optimal hand function.

CASE REPORT

A 32-year-old male, active patient, admitted to the emergency room following a road traffic accident, causing closed severe trauma to his left third digit. The mechanism of injury involved forced hyperflexion of the metacarpophalangeal joint, followed by active flexion.

Clinical examination revealed swelling, stepladder deformity and limited mobility of the middle finger, as well as rotational malalignment, with pain upon palpation of the metacarpophalangeal joint. There was neither any neurovascular nor skin damage.

Unfortunately, in the rush of the emergency room, no clinical images were taken initially.

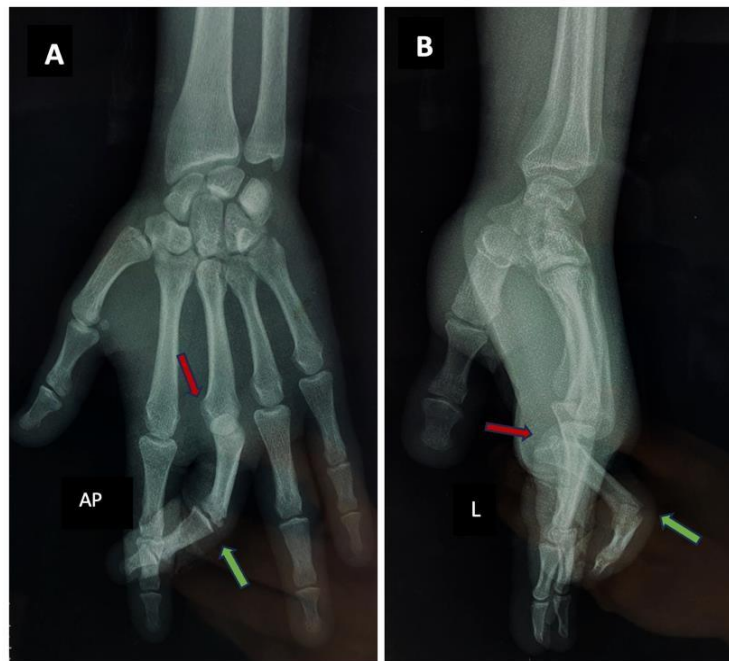


Figure 1: Anteroposterior (A) and lateral (B) view of the patient's left hand showing palmar dislocation of MCP (red arrow) and PIP (green arrow) of the 3rd finger

X ray examination of the finger revealed a particular and uncommon injury, with a palmar dislocation of the MCP and the PIP joints of the 3rd finger associated with an avulsion fracture of the head of the proximal phalanx, giving the appearance of a floating phalanx (Figure 1).

Immediate close reduction, under wrist block anesthesia, was attempted using external maneuvers, including gentle traction with slight flexion of the finger.

Once done, the reduction was tested to confirm joint stability and eliminating associated injuries, that may change the therapeutic strategy. After all, immobilization of the 3rd finger by a hand and finger splint was carried out for 3 weeks.

Following the reduction and immobilization, a control X-ray was performed to assess the success of the reduction (Figure 2). The joint was properly aligned and stable, and no complications were found.

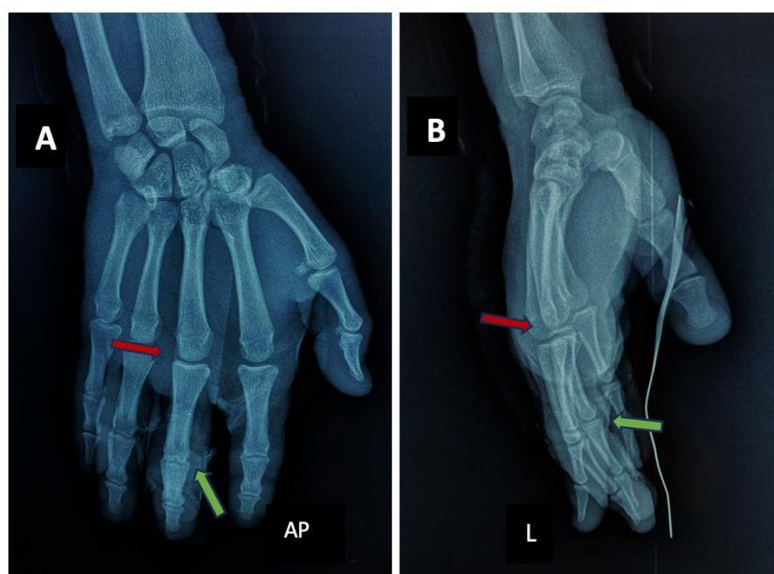


Figure 2: Anteroposterior (A) and lateral (B) views of the left hand after closed reduction of the 3rd finger (MCP: red arrow, PIP: green arrow) under local anesthesia, followed by immobilization splint

Therefore, functional rehabilitation was started in the 3th week, progressively, in order to achieve the best possible hand function to allow a timely and unlimited return to daily activities, especially for this young active patient.

After two to three months of physical therapy doing hand and finger exercises, such as finger stretch, foam ball pinch or towel squeeze, the patient felt improvement, with a strength hand and fingers, normal range of motion and above all pain relief. However, he still reported some discomfort in his 3rd finger while using his hand after a long working day.

DISCUSSION

Simultaneous dislocation of the MCP and PIP joint or the PIP and DIP in the same finger, giving the appearance of a floating phalanx, is a rare entity. In literature, it was first mentioned more than 100 years ago by Bartels [4]. However, we didn't find any case with a volar simultaneous double dislocation of a phalanx in the middle finger.

It is most often linked to high-energy trauma especially sports accidents. In cases of a sport injury, it usually occurs in male athletes. The hand is vulnerable to an injury due to a ball. Damage to the ring and little finger, of the dominant hand, where the ligament is fragile [5].

Several mechanisms have been identified in the literature as potential causes of this condition. Dorsal phalangeal dislocations are the most common. Generally, the injury occurs due to an acute hyperextension force to the fingertip, which tears the volar capsule and results in dorsal dislocation of the joint. Some studies have also noted associated injuries, including phalanx fractures or tendon ruptures [6,7,8].

In some literature reviews, we found some isolated volar MCP dislocations caused by hyperflexion, with palmary directed translational force acting on the proximal phalanx, making interposition of the dorsal capsule within the joint space [9,10].

Yet, our case stands out due to the injury mechanism, which involved hyperflexion in two neighboring joints of the same finger, following a traffic accident.

Clinically, swelling and deformation are the most reported signs. They are often sufficient to provide orientation, but x-ray in both AP and lateral view is essential to confirm the diagnosis, the displacement and objectivate the associated lesions [11,12].

Once the diagnosis has been made, the lesion must be treated immediately to prevent vasculo-nerve complications, although these have not been seen or reported in the literature [13].

Then, closed reduction using external maneuvers is the treatment of choice. In most cases, axial traction of the finger is sufficient for optimal reduction [14,15]. This is then followed by stability testing.

Thus, surgical treatment is generally considered only in the event of neglected or open dislocation, the presence of ligamentous or tendon lesions or associated fractures [16,17].

Treatment options include immobilization, buddy-strapping, dorsal or volar-blocking splints for an average of 3 weeks. In most cases, immobilization in an intrinsic position is recommended. However, in some reports, finger splint with early mobilization also gave good functional results, especially to prevent joint stiffness [18,19].

Overall, whatever the therapeutic strategy chosen, the goal is to regain solid, stable, mobile and indolent joints with a functional hand, as soon as possible.

CONCLUSION

Simultaneous palmer dislocation of the metacarpophalangeal and proximal interphalangeal joints of the middle finger is considered extremely rare and even unique. The knowledge of the anatomy of finger joints makes the management simpler.

Reduction by external maneuvers is generally the rule in the majority of the cases. But nevertheless, open surgery reduction is indicated in some complex dislocations with associated injuries or failure of external maneuvers.

Early reduction, followed by appropriate immobilization and sufficient rehabilitation, can achieve a good functional outcome.

Due to the rarity of this condition, further research is needed to better understand this condition and to improve its management.

REFERENCES

1. Hile D, Hile L: The emergent evaluation and treatment of hand injuries. *Emerg Med Clin North Am.* 2015, 33:397-408. 10.1016/j.emc.2014.12.009.
2. Sundaram N, Bosley J, Stacy GS: Conventional radiographic evaluation of athletic injuries to the hand. *Radiol Clin North Am.* 2013, 51:239-55. 10.1016/j.rcl.2012.09.015.
3. Taqi M, Collins A: Finger Dislocation. [Updated 2022 Nov 20]. In: StatPearls [Internet, Treasure Island (FL): StatPearls Publishing; 2025
4. Bartels M. Traumatische Luxationen. *Arch Klin Chir* 1874 ; 16 : 636-654
5. Loupasis, G.; Christoforakis, J.; Aligizakis, A.. Simultaneous Double

- Interphalangeal Dislocation in a Finger. *Journal of Orthopaedic Trauma* 12(1):p 70- 72, January 1998
6. Van Ransbeeck H, De Smet L. Double dislocation of both interphalangeal joints in the finger. Case report and literature review. *Acta Orthop Belg*. 2004 Feb;70(1):72-5. PMID: 15055322.
 7. Uysal MA, Akçay S, Öztürk K. Simultaneous double interphalangeal joints dislocation in a finger in a teenager. *J Clin Orthop Trauma*. 2014;5(2):107-109.
 8. Betz RR, Browne EZ, Perry GB, Resnick EJ. The complex volar metacarpophalangeal-joint dislocation. A case report and review of the literature. *J Bone Joint Surg Am*. 1982;64(9):1374
 9. Michael B. Wood, James H. Dobyns, Chronic, complex volar dislocation of the metacarpophalangeal joint: Report of three cases, *The Journal of Hand Surgery*, Volume 6, Pages 73-76,
 10. Kabbani KT, Dimos K, Kosmas D, Kampani N, Papathanasiou G, Tsiomita E, Chouskoglou M. Volar Metacarpophalangeal Dislocation of Fingers: Review of the Literature. *J Hand Surg Glob Online*. 2021 May 2;3(4):228-232
 11. Sbai M. A., Rejeb H., El Mchirgui M., et al. Simultaneous dorsal dislocation of the proximal and distal interphalangeal joints in the middle finger: a case report. *Shafa Orthopedic Journal*. 2017
 12. Ramzi Z, Chafik R, Madhar M, Elhaoury H, Najeb Y. Volar metacarpophalangeal joint dislocation: A case report. *Hand Surg Rehabil*. 2018;37(4):259–60.
 13. Kamnerdnakta S, Huetteman HE, Chung KC. Complications of Proximal Interphalangeal Joint Injuries: Prevention and Treatment. *Hand Clin*. 2018 May;34(2):267-288. doi: 10.1016/j.hcl.2017.12.014. PMID: 29625645; PMCID: PMC5891829.
 14. Hutchison JD, Hooper G, Robb JE (1991) Double dislocations of digits. *J Hand Surg Br* 16(1):114–115
 15. Fred F. Nathan, Allen P. Schlein, Multiple dislocations of a single finger, *The Hand*, Volume 5, Issue 1, 1973, Pages 52-54,
 16. Kesgin E. Simultaneous double of both interphalangeal joints dislocation of same finger in a volleyball player: A case report. *J Surg Med*. 2017; 1(2): 36-37.
 17. Vasiliadis, A. V., Maris, A., Tsatlidou, M., Bray, E., & Metaxiotis, D. (2021). Double Interphalangeal Joint Dislocation of the Finger in Adolescent Athletes: A Review of Two Cases and the Relevant Literature. *Case reports in orthopedics*, 2021, 6684553.
 18. Kim YS, Song HS, Kim HM, Chung E, Park IJ. Simultaneous double dislocation of the interphalangeal joint in a finger. *Arch Orthop Trauma Surg*. 2009;129(10):1387- 1390.
 19. Abdelaal, A., Edwards, T., & Anand, S. (2016). Simultaneous dislocation of both the proximal and distal interphalangeal joints of a little finger. *BMJ case reports*, 2016, bcr2015213914.