



Hand Swelling due to Missed Coronal Fracture of the Body of the Hamate and Hamate-Triquetral Dislocation

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Abstract

Post trauma hand swelling needs in-depth examination and imaging to diagnose fracture dislocations. High index of suspicion is needed to diagnose unusual pattern of fracture. Early diagnosis of hamate fracture dislocation is helped by CT examination, and early treatment of these injuries result in satisfied patients with good functional outcomes.

Introduction

Fracture of the body of Hamate is classically caused either by a direct blow or crush injury. Sometimes often confused with Hamulus proprium which represent an ossification centre that has failed to fuse, but Coronal fractures of the body of the hamate are extremely uncommon and can easily be missed. Hamate-triquetral dislocation is even rarer.

Case Presentation

We present the case of a 20 year old right handed man who attended the A&E department with ulnar sided left wrist pain after a fall abroad the previous week to presentation. Examination and X-rays at the presentation time were inconclusive but at the fracture clinic he was tender over the hamate (Figure 1). A CT scan showed coronal fracture of the hamate with hamate-triquetral dislocation (Figure 2). Closed reduction of the hamate-triquetral and stabilisation with K-wire from the 5th to 3rd metacarpal was performed. The fracture was fixed dorsally with a 3-hole 2.0 mm plate. At 3 weeks wires and cast were removed and hand therapy initiated (Figure 3 and 4). After 6 months the plate was removed. Two months post plate removal the patient returned to work and was discharged.

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Received Date: 09 Sep 2016

Accepted Date: 16 Oct 2016

Published Date: 18 Oct 2016

Citation:

Sajjad Athar M, Georgiana Dana Z, Ashwood N, Kitsis C. Hand Swelling due to Missed Coronal Fracture of the Body of the Hamate and Hamate-Triquetral Dislocation. *Ann Clin Case Rep.* 2016; 1: 1157.

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Discussion

Normally a hamate fracture can be identified in a PA view of the wrist. A fracture of hook of



Figure 1: Pre operative X-rays.



Figure 2: Pre operative CT scan.



Figure 3: Post operative X-rays.



Figure 4: Post operative X-rays after removing K-wire.

hamate can be seen a carpal tunnel view or in a supination oblique view. It is extremely difficult to look and identify a coronal fracture of hook of hamate in routine radiographs. CT is the best way to diagnose these fractures. Coronal fractures of the hamate are so rare that they are not included in Milch's classification [1]. Ebraheim et al.

[2] described 3 patterns of coronal fractures of the hamate. Although Lunotriquetral dislocation is known Hamate triquetral dislocation is almost unknown. In fact there is only one paper which has cited the combination of fracture of hamate with dislocation of hamate-triquetral as it is extremely rare [3].

Conclusion

There are variety of causes and differential diagnosis for ulnar sided wrist pain. A fracture of hamate is one of them so it should always be looked at. Pain and deformity of the ulnar side of carpus with inconclusive radiographs must lead to the suspicion of hamate injuries [4]. A CT scan is almost the investigation of choice in these circumstances. When diagnosed early and treated promptly they end up in favourable outcome.

References

1. Henry Milch. Fracture of the hamate bone. *J Bone Joint Surg Am.* 1934; 16: 459-462.
2. Ebraheim NA, Skie MC, Savolaine ER, Jackson WT. Coronal fracture of the body of the hamate. *J Trauma.* 1995; 38: 169-174.
3. Sullivan KL, Karasick D. Case report 397: Fracture of the hamate in its coronal plane and dislocation of the hamate-triquetrum. *Skeletal Radiol.* 1986; 15: 593-596.
4. C. Cano Gala, D. Pescador Hernández, D.A. Rendón Díaz, J. López Olmedo, J. Blanco Blanco. Fracture of the body of hamate associated with a fracture of the base of fourth metacarpal: A case report and review of literature of the last 20 years. *Int J Surg Case Rep.* 2013; 4: 442-445.