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Hook of Hamate Removal in Collegiate Baseball Player

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BACKGROUND

A 20-year-old male baseball player was batting when he swung and missed the ball. The athlete felt a pop and a very sudden jolt of pain in his left wrist. At the time of evaluation, he complained of pain primarily in the hypothenar region of the hand, which worsened with gripping, grasping, and trying to hold something. The athlete denied any numbness or tingling into the hand or fingers. The athlete had full flexion and extension of his left hand and wrist. He did have mild pain (2/10) with resisted flexor digitorum superficialis and profundus function of the fourth and fifth digits, particularly while ulnar deviating the wrist. His extensor carpi ulnaris tendon and sub-sheath are not tender and intact. The distal radioulnar joint is stable. The hook of the hamate is quite tender with palpation. The ulnar nerve, motor, and sensory functions are intact.

DIFFERENTIAL DIAGNOSIS

Palmar Carpal Ligament Tear, Flexor Retinaculum Tear, Pisohamate Ligament Tear, Ulnar Flexor Profundus Tendon Rupture or Tenosynovitis.

RELATED LITERATURE

Surgical excision as treatment for the hook of the hamate fractures, is shown to be safe and allows a relatively rapid return to play. In one research article, it was found that there is a higher incidence of complications. These complications included, transient ulnar nerve dysfunction and there is a group of patients with delayed return to play and continued discomfort.¹

TREATMENT

Initially the athlete was removed from activity and applied ice to the injury. Later on, he was referred for an X-ray of the wrist as well as a carpal tunnel view. On the carpal tunnel view, there is a very subtle lucency at the base of the hamate hook that is concerning for a probable hamate hook base fracture. At this point in time, the doctor recommended getting a CAT scan to better evaluate the hamate hook. The next day the athlete had a CAT scan done of the injury and was seen a day later by the doctor to review it. The CAT scan demonstrated a complete fracture of the hamate hook with slight distraction and a minimal displacement. After prolonged discussion, the doctor recommended excision of the hamate hook. They believed this will allow the most predictable return to play for the athlete.

UNIQUENESS

This case is unique because hamate hook fractures are not seen very often. When they are seen, it is seen more in athletes and specifically the ones who are participating in racquet sports or baseball especially.

CONCLUSIONS

When it comes to fractures in the hand, it might be a good idea to get them fixed or removed. If not, later on in life, there could be persistent pain, or they could lead to tendon issues, if not healed properly. Mobilization could possibly be decreased and affected if not properly taken care of.

CLINICAL APPLICATION

When the athlete was performing rehabilitation for his hand, make sure to focus on the hand, wrist and forearm. All of the muscles that were not used during the down time of the injury, need to be strengthened.

REFERENCE

1. Bansal, A, Carlan, D, Moley, J, Goodson, H, and Goldfarb, C. (2017). Return to Play and Complications After Hook of the Hamate Fracture Surgery. *J Hand Surg Am, Vol 42*.

KEY WORDS: *hook of hamate, fracture, complications, recovery time*