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FRACTURE OF HAMATE BONE: CASE REPORT

Summary. *Fractures of the hamate bone are quite rare. The presented clinical case refers to a patient with a type 2b fracture according to the classification of Hirano and Inoue.*

Key words: *hamate bone, hamate fracture.*

Abbreviation: ORIF — open reposition and internal fixation; K — wires — Kirschner wires.

Introduction

Fractures of the hamate bone are quite rare, constituting about 2% of all carpal fractures [1, 2]. However, two classifications have been created for them. Milch's classification distributes fractures of hamate bone in two main types of fractures: type 1 — fracture of the hook of the hamate and type 2 — fracture of the body of the hamate. *Hirano and Inoue* further refine the Milch's classification as sub-divided body fractures into type 2 coronal fractures of the body (with subtypes 2a dorsal oblique fractures and 2b splitting fractures), and type 3 — a transverse fracture of the body [3]. Moreover, they differentiated each type 2a fracture as a dorsal oblique or a splitting fracture (Fig. 1).

Case report

We report the case of a 19-year-old male, who injured his right wrist during street brawl. Initial X-ray films of the right hand was made in Emergency Center 12 hours after the trauma demonstrated a type 2b fracture of the hamate (Fig. 2).

A computer tomography study with a 3D reconstruction was performed. The results are represented on Fig. 3.

An operative treatment was performed and was inserted metal osteosynthesis K-wires. Treatment continued with cast immobilization for 35 days (Fig. 4).

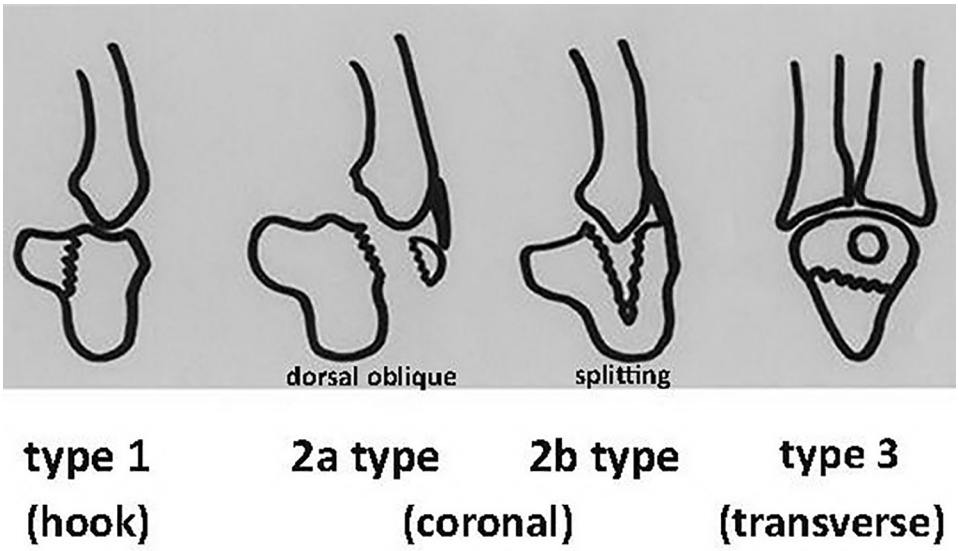

Fig. 1. Classification of hamate fractures (after Hirano and Inoue, 2005)

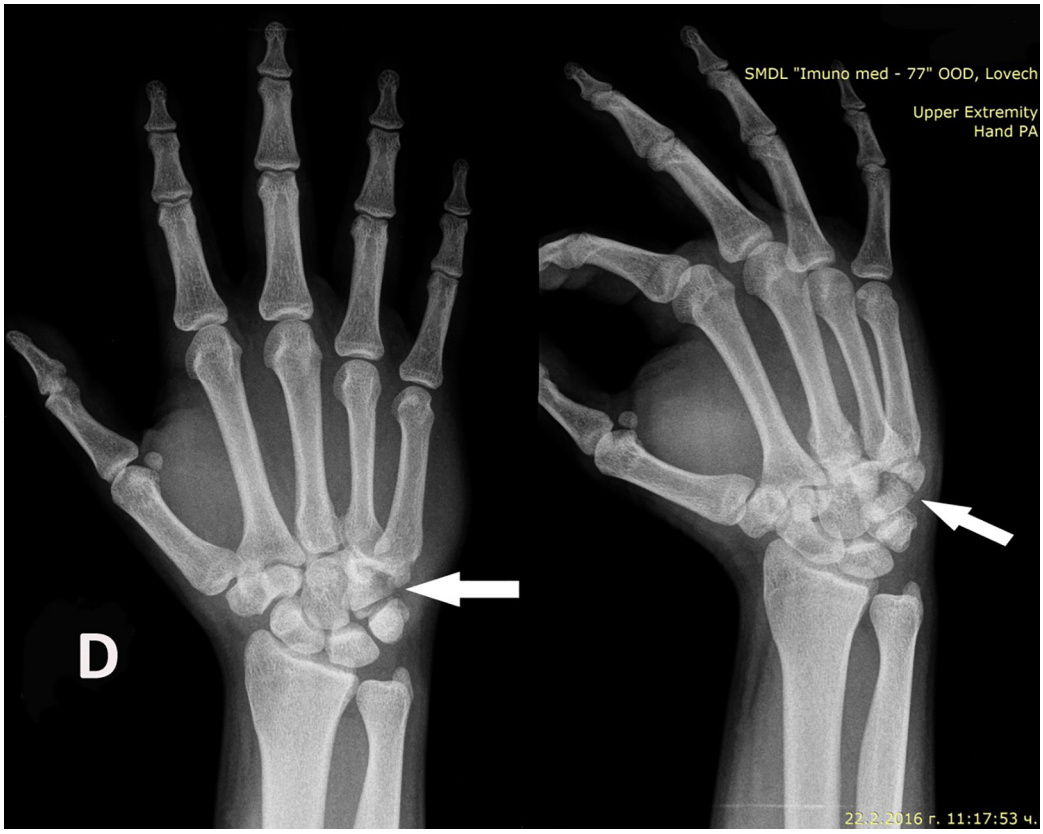

Fig. 2. X-ray images of right wrist

Discussion

The type 1 fractures are often the result of repeated micro trauma to the hook during sports involving swinging clubs, bats, or racquets and direct trauma too. *Kapickis and al.* even suggest that their frequency will grow as the popularity of rocket sports and golf increases [4]. The mechanism of fracture in type 2 fractures is direct trauma.

Hirano and Inoue describe 11 fractures of the type 2a all of them were occurred with a clenched fist against a wall or floor. Five cases were treated with closed reduction and percutaneous pinning and the remaining six received ORIF with screws or K-wires [3]. In our case was performed a surgical treatment ORIF with K-wires. Coronal fractures of the body of the hamate are frequently associated with ulnar CMC joint dislocations [5]. In our case was not established CMC dislocation.

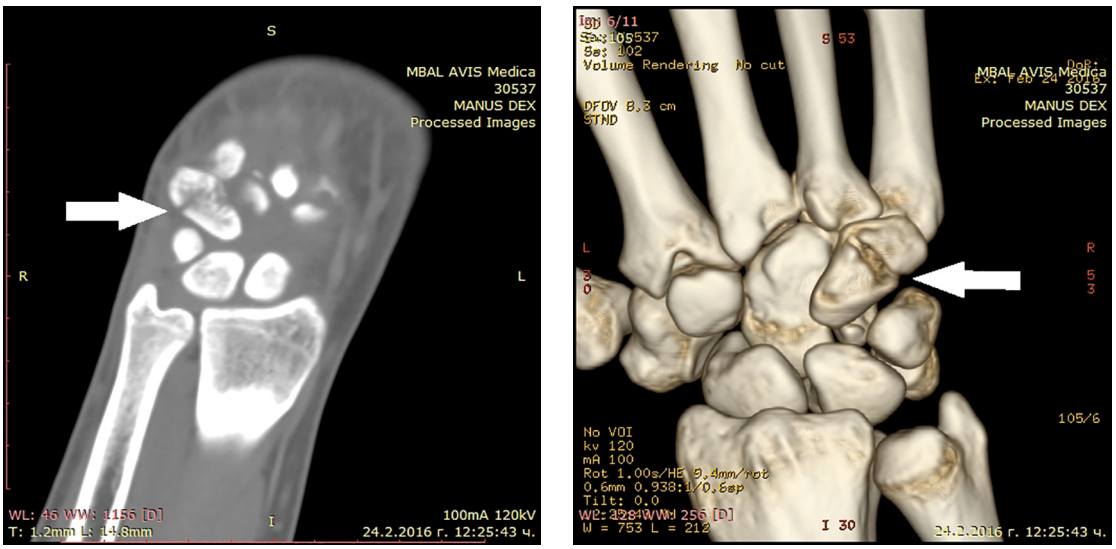

Fig. 3. CT-scan and 3D reconstruction of the fracture of hamate bone

Fig. 4. Postoperative X-ray images of right wrist

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