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.

![CT-scan and 3D reconstruction of the fracture of hamate bone](image)

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

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

![Postoperative X-ray images of right wrist](image)

**Fig. 4. Postoperative 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.

References