Tidsskriftet
DEN NORSKE LEGEFORENING

Hamate bone fractures

MEDISINEN I BILDER

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The image shows a longitudinal fracture in the body of the hamate with subluxation of the fifth carpometacarpal joint in a man in his forties after a fall.

Hamate fractures are rare, accounting for about 2–4 % of all carpal fractures (1). Diagnosis

and treatment are often delayed because clinical findings are limited and the fracture may be difficult to detect on conventional X-ray images. CT is therefore recommended in the case of continued pain in the ulnar region of the wrist following a negative X-ray (1, 2). Fractures are divided into fractures of the body and of the hook. Injuries are caused by axial compression of the hamate bone through the fourth and fifth metacarpals, both of which articulate with the hamate bone. This can result in subluxation of carpometacarpal joints four and five, with a coronal fracture line through the hamate bone, most commonly the dorsal part. The fourth and fifth carpometacarpal joints allow about 30° of motion, and are important for grip strength. Healing without step formation and without subluxation of the carpometacarpal joint is therefore important to reduce the risk of osteoarthritis. Isolated, non-displaced fractures of the body are usually considered to be stable and can be treated by cast immobilisation, while it is recommended that displaced fractures be reduced and fixed with pins, or alternatively with plates or screws, with simultaneous reduction and fixation of the subluxated carpometacarpal joint.

Given appropriate treatment, the prognosis is good. The most common long-term consequence is pain with heavy strain (2), which may be due to the development of osteoarthritis, which is always a risk after an intra-articular fracture. This patient first underwent a closed reduction and pin fixation procedure. The fracture healed, but the patient developed post-traumatic osteoarthritis in both the fourth and the fifth carpometacarpal joints, and one year after the injury underwent a procedure to stiffen the fourth and fifth carpometacarpal joints with plate fixation.

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Published: 1 February 2021. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.20.0699
Received 2.9.2020, first revision submitted 16.11.2020, accepted 30.11.2020.