

CASE CONFERENCE

GENERAL DATA

- ✘ 44 Y/O male
- ✘ Occupation: doctor
- ✘ Underlying disease: HTN under medication control
- ✘ Information from the patient himself

CHIEF COMPLAINS

- ✘ Left wrist painful and swelling post golf injury for 4 months

PRESENT ILLNESS

- ✘ Left hypothenar eminence discomfort and tenderness this January after playing golf
- ✘ Pain and swelling this February at the same area
- ✘ Subcutaneous bone instable and movable
- ✘ Pain aggravated recently
- ✘ No trauma history

PHYSICAL EXAMINATION

- ✘ Left hypothenar eminence pain and tenderness
- ✘ Movable mass under hypothenar eminence after gripping
- ✘ No numbness over wrist or ulnar site
- ✘ No weakness noted

OPD X-RAY



- ✘ Pre-op diagnosis: left hamate hook fracture
- ✘ 2011/05/31 admission
- ✘ 2011/06/01 osteotomy of hamate hook
- ✘ Post-op diagnosis: neglected hamate hook fracture
5th flexor tendon partial tear

Hood of hamate fracture in our hospital

patient	age	sex	Trauma mechanism	Initial treatment	Secondary treatment	Diagnostic image
8428793	38	Male	Traffic accident	conservative	Nil	Radiography, CT
8581625	60	Male	Stress fracture(golf)	conservative	Excision	Radiography, CT
10000208	25	Male	Stress fracture(ball)	conservative	Excision	Radiography
10451022	25	Male	????	conservative	Nil	Radiography, CT
20273828	31	Male	Crushed injury by gas	conservative	nil	Radiography, CT

All radiography had initial missed-diagnosis reports!!!



Back



back



back



back

HOOK OF HAMATE FRACTURE

- ✘ Rare, 2%-4% of the carpal fractures, more common than the body
- ✘ common in golfers and in tennis, racquetball, and baseball players
- ✘ typically occurs on the nondominant hand
- ✘ overlooked easily and often presenting with secondary sequelae

UpToDate 19.1; Browner: Skeletal Trauma, 4th ed.
Marx: Rosen's Emergency Medicine, 7th ed

SYMPTOMS AND PE FINDINGS

- ✘ pain over the hypothenar eminence(especially 1 cm distal and radial to the pisiform)
- ✘ Painful flexion of the ring and small fingers
- ✘ Pain is exacerbated with wrist dorso-ulnar deviation because of fragment movement.

UpToDate 19.1; Browner: Skeletal Trauma, 4th ed.
Marx: Rosen's Emergency Medicine, 7th ed

SYMPTOMS AND PE FINDINGS

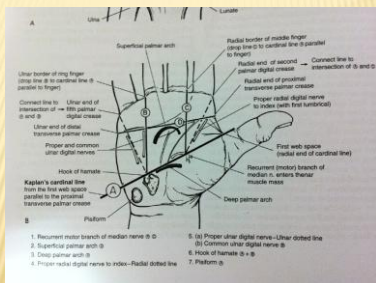
- ✘ Maybe associated decreased grip strength
- ✘ paresthesia in the 4th and 5th digits(Guyon' s canal) or mild carpal tunnel syndrome

UpToDate 19.1; Browner: Skeletal Trauma, 4th ed.
Marx: Rosen's Emergency Medicine, 7th ed

- ✘ Mechanism:
 - direct force: the force of the swing transmitted directly
 - indirect force: an avulsion injury through the transverse carpal and pisohamate ligament attachments to the hamate hook
 - both

Guha AR, Marynissen H.
Stress fracture of the hook of the hamate.
Br J Sports Med. 2002;36:224–225.

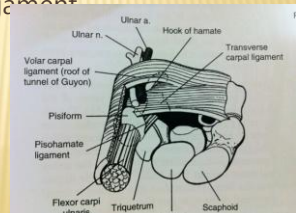
SURFACE ANATOMY



Surgical Exposures in Orthopaedics

Guyon canal

- ✘ transverse carpal ligament to the aponeurotic arch of hypothenar muscles
- ✘ roof is formed by volar carpal ligament and pisohamate ligament
- ✘ Containing ulnar n. and ulnar a.



Surgical Exposures in Orthopaedics

Radiographic Findings

- ✘ Plain film, including PA, lateral, supinated oblique(45°), and carpal tunnel views(best), about 71%
- ✘ If suspicion is high and plain films are not conclusive, CT is useful(100%)

Scheufler O, Andresen R, Radmer S, et al.
Hook of hamate fractures: critical evaluation of
different therapeutic procedures.
Plast Reconstr Surg 2005;115(2):488-97.

TREATMENT

- ✘ A trial of immobilization with a short arm cast for first 1-2 weeks
- ✘ Referred to surgery if high functional demand, evidence of tendon, neurovascular injury or non-union after immobilization

UpToDate 19.1; Browner: Skeletal Trauma, 4th ed.
Marx: Rosen's Emergency Medicine, 7th ed

TREATMENT

- ✘ Fragment excision: gold standard, early to rehabilitation, desirable to laborers and athletes
- ✘ ORIF: grip strength recovery???
- ✘ Bone grafting: restitution of the functional aspects as ORIF
- ✘ Low-intensity pulsed ultrasound: time consuming

Scheufler O, Radmer S, Erdmann D, Germain G, Peter G, Andresen R.
Therapeutic alternatives in nonunion of hamate hook fractures: personal experience in 8 patients and review of literature.
Ann Plast Surg. 2005 Aug;55(2):149-54.

- ✘ Thanks for your attention!