An Uncommon Fracture of the Thumb: Two Cases of Sesamoid Fracture

Ahmet Köse¹ Murat Topal¹ Recep Dinçer¹

¹TC SB SBÜ Erzurum Bölge Eğitim ve Araştırma Hastanesi Ortopedi ve Travmatoloji Kliniği, Yakutiye/ Erzurum, Turkey

Address for correspondence Ahmet Köse, MD, TC SB SBÜ Erzurum Bölge Eğitimve Araştırma Hastanesi, Erzurum, Atatürk Mahallesi, Çat Yolu Caddesi 25040, Yakutiye/Erzurum, Turkey (e-mail: kose.ahmet.46@hotmail.com).

J Hand Microsurg 2018;10:59–60

Fractures of the sesamoids of the thumb, which are usually overlooked in examination, are rare injuries. Localized swelling, pain, and restricted motion can develop in the thumb after the injury. The ulnar and radial sesamoid bones of the thumb are avascular structures with pretendinous location. Therefore, fractures have a predisposition to avascular necrosis. Good outcomes are obtained with early diagnosis and conservative treatment. Incorrect or delayed diagnosis can cause chronic pain. Thus, early diagnosis and treatment are very important for these fractures.^{1,2} With the aim of raising awareness of isolated thumb sesamoid fractures and emphasizing the importance of physical examination and radiologic evaluation in cases of thumb trauma, two cases are presented in this paper.

A 21-year-old male volleyball player presented at the polyclinic with pain in the right hand thumb. After a sports accident, the patient was evaluated in the emergency department with a diagnosis of soft tissue injury 10 days before the orthopaedic polyclinic visit. On palpation of the volar aspect of the thumb metacarpophalangeal (MCP) joint, there were severe pain and swelling. Ultrasonography (USG) and computed tomography (CT) images were taken to

confirm the fracture observed on posteroanterior (PA) and lateral radiographs and in respect of additional pathologies. The patient was diagnosed with isolated sesamoid fracture, and he underwent a conservative treatment with analgesic and anti-inflammatory medication and a brace with the MCP joint kept in 30-degree flexion for 3 weeks. After this brace

Fig. 1 Ultrasonography view for case 1.

Fig. 2 Three-dimensional (3D) reconstructed computed tomography image for case 2.

received
May 29, 2017
accepted after revision
October 23, 2017
published online
November 29, 2017

©2018 Society of Indian Hand & Microsurgeons

DOI <https://doi.org/10.1055/s-0037-1608746>.
ISSN 0974-3227.

treatment, a wrist brace supporting the thumb and physical therapy were applied for 4 weeks. After a mean 7 weeks of treatment, full bone union was determined radiologically. A pain-free, functional thumb was achieved with normal range of movement.

A 34-year-old housewife presented at the polyclinic 7 days after the trauma with complaints of persistent pain in the right hand following a fall on the open hand. Physical examination revealed severe pain and swelling on palpation of the volar aspect of the thumb MCP joint. USG and CT images were taken to confirm the fracture observed on PA and lateral radiographs and in respect of additional pathologies. The patient was diagnosed with isolated sesamoid fracture, and she underwent aforementioned conservative treatment and physical therapy. After a mean 7 weeks of treatment, radiolucency was noted in the fracture line radiologically. However, a pain-free, functional thumb was achieved with normal range of movement. (► **Figs. 1, and 2**)

Sesamoid fractures generally occur as a result of forces pushing the thumb into hyperextension or occasionally from direct trauma. Physical examination is very important in the

diagnosis. Restriction in thumb extension and pain, swelling, and ecchymosis on palpation of the volar aspect of the MCP joint are significant findings.^{1,2} In the radiologic evaluation, two-directional radiographs may not be sufficient for evaluation of the sesamoids. For a patient with suspected sesamoid fracture, oblique radiographs and, if necessary, USG and CT evaluation must be ordered.^{1,3}

Conflict of Interest

None.

References

- 1 Deabate L, Garavaglia G, Lucchina S, Fusetti C. Fracture of the radial sesamoid bone of the thumb: an unusual fracture. *Chin J Traumatol* 2011;14(05):309–311
- 2 Shaw M, Lyburn ID, Torreggiani WC, Watura R. Comminuted fracture of the ulnar sesamoid of the metacarpophalangeal joint of the thumb: an uncommon injury. *J Emerg Med* 2003;24(04):437–439
- 3 Pracoń G, Walentowska-Janowicz M, Nowicki P, Płaza M, Sudoł-Szopińska I. Radial sesamoid fracture of the second MCP joint—a case report. *J Ultrason* 2015;15(60):96–101