

Fracture of the Fifth Finger Sesamoid: A Rare Injury

Abstract

Fracture of the hand sesamoid bones is rare. Fractures are usually missed initially. Mechanism of injury is usually reported as hyperextension and less frequently as direct compression of metacarpophalangeal joint. Fracture of the hand sesamoid bones has been usually reported in the thumb. We report a case of fifth-digit sesamoid fracture, treated conservatively. In 6 months of followup, the patient had a full range of motion without pain.

Keywords: Hand, hyperextension, sesamoid fracture, trauma

**Okan Aslantürk,
Emre Ergen¹**

Department of Orthopedic and Trauma Surgery, Malatya Educational Research Hospital, ¹Department of Orthopedic and Trauma Surgery, Inonu University Medicine Faculty, Malatya, Turkey

Introduction

Sesamoids are small, rounded bones and are usually located at metacarpophalangeal (MCP) joint level in the volar side of hands and the plantar side of feet. The prevalence of sesamoids has been reported in the literature as 98.2%–100% at MCP I, 2%–64.2% at MCP II, 0%–5.3% at MCP III, 0%–2.7% at MCP IV, and 0%–84.6% at MCP V.¹

Fracture of the hand sesamoid bones is a rare injury and is usually reported as a fracture of thumb sesamoids.^{2,3} Sesamoid fracture of the hand was first described by Skillern in 1915.⁴ A few cases of little finger sesamoid fractures have been reported.^{4,7} In this paper, we aimed to report a case of the fifth finger sesamoid fracture treated conservatively.

Case Report

A 37-year-old woman presented to our outpatient clinic with persistent pain at the base of the left little finger after hitting a table with outstretched hand 1 week ago. The patient had been initially treated with nonsteroidal anti-inflammatory drugs (NSAIDs) at another hospital. On physical examination, the patient had pain over MCP joint of the little finger with palpation; her range of motion was limited due to pain. Radiograph and computed tomographic (CT) scan of the hand showed fracture of radial sesamoid of the little finger [Figures 1 and 2]. The patient was treated conservatively with short-arm

cast splint immobilization wrist in 25° extension and MCP joint in 70° flexion for 3 weeks and NSAIDs. After splint removal, the patient underwent physiotherapy. At 6-month followup, the patient had full range of motion without pain. The patient's QuickDASH scores were 63.6, 31.8, 18.2, and 0 at the time of administration and 1 month, 3 months, and 6 months of followup [Table 1].

Discussion

Fracture of sesamoid bone of the hand is a rare injury and is difficult to diagnose in standard radiographs.^{3,6} Fractures are usually missed initially.⁶ Mechanism of injury is usually reported as hyperextension and less frequently as direct compression of MCP joint.³ Fracture of the thumb sesamoid at the level of MCP joint is the most commonly reported fracture of hand sesamoids.^{3,6} Little finger sesamoid fractures are rarely reported.^{3,5-7} There are only two case reports of the fifth finger sesamoid fracture.^{6,7}

The functions of sesamoid are to protect tendon, modify pressure, and reduce friction.⁸ They also act as a fulcrum point for tendons and stabilize the joint.¹ Sesamoids also have static and dynamic functions, especially in thumb.³

Treatment is not clear because of rarity of injury. Initial treatment is usually immobilization with short-arm cast for 2–4 weeks.^{3,5-7} If pain persists, surgical excision of sesamoid can be performed. In previously reported two cases of the fifth finger sesamoid fracture, the patient was treated with surgical excision due

Address for correspondence:

Dr. Okan Aslantürk,
Department of Orthopedic and Trauma Surgery, Malatya Educational Research Hospital, Özalper Mah, Turgut Özal Bulvarı No: 4, 44330 Malatya, Turkey.
E-mail: okaslanturk@hotmail.com

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Figure 1: Anteroposterior radiograph demonstrating fractured sesamoid (white arrow)

Table 1: QuickDASH scores of the patient

Followup time	QuickDASH score
Time of administration	63.6
1 month	31.8
3 months	18.2
6 months	0

to persistent pain.^{6,7} Because of their mechanical and protective functions, excision of sesamoids could result as decreased MCP joint motion.³ In our case, immobilization for 3 weeks' period was enough for treatment. Function of the affected hand was fully recovered at the 6th month.

Sesamoid injuries are rare injuries and can be easily missed on standard anteroposterior and lateral radiographs. Oblique radiographs and CT can be helpful for diagnosis. Initial treatment is cast immobilization, and surgical excision is a good option in case pain persists.

To our knowledge, this is the third case report of sesamoid fracture of the fifth digit and the first one fully recovered with only conservative treatment. Sesamoid fractures should be kept in mind in patients with hand trauma and can be treated conservatively with good results.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given

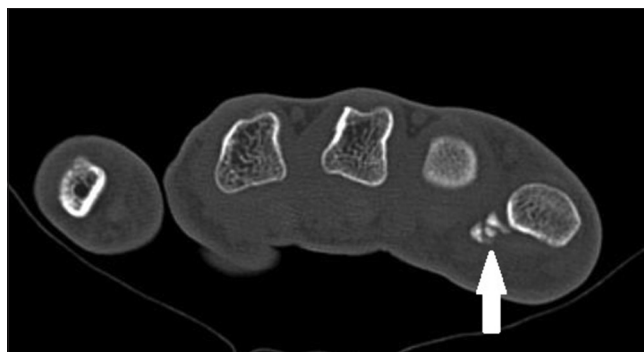


Figure 2: Computed tomography demonstrating fractured sesamoid (white arrow)

her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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