

A Case Report of Calcaneal Spur Fracture

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Abstract

Background: A calcaneal spur (also known as a heel spur) is a bony outgrowth from the calcaneal tuberosity. They are common findings on radiographic examination of the foot and ankle. They are a frequent cause of heel pain.

Case presentation: A 40 years old male patient presented with heel pain and unable to weight bearing of 4 hours duration. on physical examination there is heel tenderness otherwise it is unremarkable. Lateral ankle x ray suggests fractured calcaneal spur.

Conclusions: we reported fractured calcaneal spur as a rare cause of heel pain

Keywords: calcaneous; fracture; spur

Introduction

Calcaneal inferior spurs are bony outgrowth that can arise from multiple sites commonly in relation to the attachment of the Achilles tendon and/or plantar fascia. Compressive and traction forces are theorized to be the etiology behind their genesis. Blunt trauma to the plantar aspect of the foot can lead to calcaneal inferior spur fracture. Although the pathophysiology is poorly understood, studies in the literature postulate a positive relationship to increasing age, athletic activity, obesity, and osteoarthritis as well as possible genetic control [1].

An infracalcaneal heel spur is detected frequently on radiograph examination. It is a well-understood cause of plantar heel pain. Fracture of the infracalcaneal spur is rare. It is easily detected by radiographs and can be treated conservatively or if needed, surgically. On the other hand, if neglected, like any other fracture, it may progress to a non-union. A literature search and an exhaustive online search using various search engines indicated no reported fractures of a plantar calcaneal heel spur in Ethiopia and even in Africa yet. This is an unusual fracture and only single digits case reported in literature worldwide [2].

Case Report

A 40 years old male patient presented with heel pain and unable to weight bearing of 4 hours duration after he sustained falling down accident from height with his right foot. He is not athletic. His BMI is in normal range. no other comorbidity or relevant past medical history

Physical examination revealed right heel tenderness. no swelling, redness, laceration or abrasion. the range of motion of the ankle and foot joints are unremarkable. No signs of neurologic deficit. He had no other injuries in spine or hips in form of fracture or fracture dislocation.

We investigated him with ankle and foot x ray and the x ray revealed undisplaced fracture of infracalcaneal spur (figure 1).

Blood investigations was done (hemoglobin, erythrocyte sedimentation rate, uric acid, blood urea, and blood sugar) all within a normal limit.

We managed him conservatively with anti-inflammatory drugs, short leg cast and limitation of extended activities.

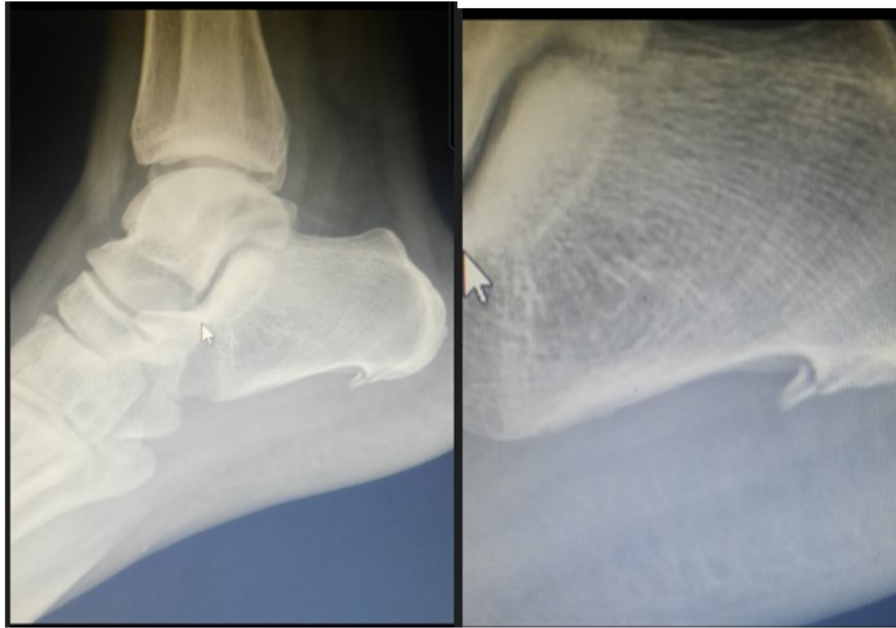


Figure 1: lateral ankle x ray showed non dispalced inferior calcaneal spur fracture

Discussion

A calcaneal spur (also known as a heel spur) is a bony outgrowth from the calcaneal tuberosity. Calcaneal spur is typically detected by X-ray examination. It is a form of exostosis, and it can be fractured as result of trauma as any other bone [3].

Calcaneal spur can develop on the plantar tuberosity and extend across the whole width of the calcaneus. It is a common finding and has been observed in 11 to 27% of asymptomatic persons, as well as 73% of patients presenting with heel pain [4].

Calcaneal spur is commonly found associated with heel pain due to plantar fasciitis. But the fracture of a calcaneal spur is extremely rare. In all the reported cases, the mechanism of injury was similar to our case, that is, a direct impact on the heel due to fall or an injury while swimming at a local pool and accidentally slipping [5,6].

Treatment is directed toward the causative factors. Initial treatment options for plantar heel spur may include padding and strapping of the foot, therapeutic orthotic insoles, oral anti-inflammatory drugs, extracorporeal shockwave therapy, and surgical excision (e.g., plantar fasciotomy and heel spur resection) [6].

In conclusion, to the best of my knowledge, this is the first case report of calcaneal spur fracture in Ethiopia, even in Africa. Clinicians need to consider fractured calcaneal spur as a cause of heel pain in their differential diagnosis when encountered with a patient with heel pain.

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