

IMAGES IN EMERGENCY MEDICINE**Musculoskeletal**

A 75-year-old with left ankle pain

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1 | CASE PRESENTATION

A 75-year-old female with a history of smoking presented with left foot pain after a fall. She was cleaning her pool when she lost her footing while walking down a step. On extremity examination of her left ankle, there was plantar flexion weakness, a palpable dell at the insertion of the Achilles tendon, and a bony mass proximal to the gap (Figure 1). Left ankle radiographs were remarkable for an acute fracture of the posterior proximal aspect of the left calcaneus (Figure 2). Before surgery, the skin had become ecchymotic and edematous. The patient underwent open reduction with internal fixation with podiatric surgery. As there was enough bone remaining, 2 cannulated screws were placed to fix the fracture along with the attached Achilles tendon. The patient was discharged with a recommendation of non-weight-bearing status for the left lower extremity, a cast, and orthopedic follow-up in 2 weeks.

2 | DIAGNOSIS

2.1 | Achilles avulsion tongue-type fracture with skin tenting

Calcaneal fractures account for 1%–2% of all fractures. Calcaneal avulsion fractures account for less than 3% of calcaneal fractures.¹ The calcaneus is the largest tarsal bone; it supports axial load from the body. This report demonstrates a type 2 calcaneal avulsion fracture; a “beak fracture” where the tendon pulls on the tuberosity causing a horizontal



FIGURE 1 Palpable bony mass proximal to a palpable dell at the insertion of Achilles tendon of the left ankle without skin necrosis upon initial assessment.

fracture.² It also demonstrates a rare tongue-type fracture where the tuberosity splits into a superior and an inferior fragment.³

Patients often present with pain, swelling, and ecchymosis near the posterior aspect of the calcaneus. Patients can have skin tenting that

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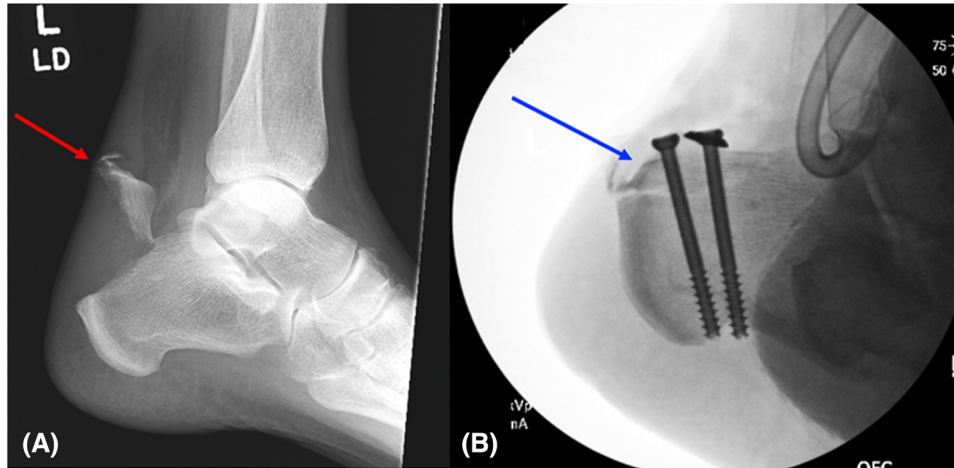


FIGURE 2 (A) Left ankle radiograph was remarkable for an acute fracture of the posterior proximal aspect of the left calcaneus (red arrow) with involvement of the Achilles tendon insertion site. (B) Intraoperative radiograph status-post 2 cannulated screws (blue arrow) driven into the left calcaneus.

can lead to skin necrosis if not treated.³ This woman had ecchymosis before surgery but did not have skin necrosis. It is important to assess these patients for neurovascular compromise and signs of other injuries. A plain radiograph is usually sufficient for diagnosis. Treatment depends on the severity. Fractures with skin tenting, neurovascular injury, or significant displacement will likely require open reduction and internal fixation in the operating room.⁴

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