Not Just an Ankle Sprain: The Rare Case of a Talar Osteochondral Lesion in a Collegiate Football Player

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Background

In September 2018, a 21-year-old, male, Division 1 collegiate football player sustained an inversion injury to his left ankle. He presented to his athletic trainers with pain on his lateral ankle around the anterior talofibular ligament. He reported having a history of mild pain in his left ankle for several years that did not affect his ability to play football. The athlete reported being a type I diabetic who was currently using insulin. He did not present with any edema and reported mild pain only with cutting and lateral movements in practice. His ankle range of motion was within normal limits and had no functional deficits in performance. These findings indicated a mild ankle sprain. His pain continued to progressively worsen over the next two weeks, which prompted the athletic trainer to refer the athlete to the team physician who ordered a radiograph to rule out a fracture.

Radiographic Findings

Radioographic findings revealed an articular cartilage defect and spurring on the medial dome of the talus. Because of the abnormal radiographic findings, the physician ordered an MRI. The MRI revealed a large lesion on the talus with substantial loss of cartilage and bone indicating chronic arthritic changes.

MRI Findings

The arrows depict the large lesion on the talus with chronic arthritic changes and substantial loss of cartilage and bone. (Left: sagittal view) (Right: Frontal view)

At this time, the athlete’s pain had progressively increased to the point where he developed an antalgic gait, and had extreme tenderness at the medial talar dome. A subsequent CT scan revealed a large osteochondral lesion on the superior medial articular surface of the talus (1.7 cm anteroposterior, 1.0 cm mediolateral, 0.4 cm deep), in addition to multiple small bony fragments, prominent subchondral cystic changes.

Surgical Repair of Talar OCD

Surgery included open debriedment of the osteochondritis dessicans with bone graft and cartilage transplantation, micro fractures of the tibia, and excision of three loose bodies.

Deep Vein Thrombosis Complication

The surgery was performed in Atlanta, GA and the athlete had to fly to and from Atlanta and Ithaca. Throughout the course of his recovery, the athlete was put on tight diabetic control to ensure that proper healing was not impeded by poor control of blood sugar. He was at increased risk for developing a DVT because diabetes, air travel, post-operative, and immobilization so the surgeon ordered him to take aspirin before and after the surgery to decrease his risk. Despite these efforts, upon cast removal, the athlete reported substantial calf pain, which warranted a Doppler study that revealed a deep vein thrombosis in one of his left paired peroneal veins. He was prescribed anticoagulation medication (Xarelto) and healed without further intervention.

Case Outcome

As of December 2018, the athlete was weight-bearing in the boot and had graduated from his University. He is no longer under the care of the sports medicine staff. Currently, he resides in North Carolina and is undergoing physical therapy, but his recovery status with regard to his return to full function has not yet been established.

Clinical Bottom Line

What presented like the most common injury, a lateral ankle sprain, resulted in the discovery of an extremely rare injury, osteochondritis dissecans of the talar dome. Lateral ankle sprains have a prevalence of 2/1,000 person/years¹ whereas osteochondritis dissecans of the talus has a prevalence of 2/100,000,000 person/years² To put this into perspective, we are 100,000 times more likely to encounter an ankle sprain than this rare type of injury. This case emphasizes the importance of referral and imaging if an injury is recalcitrant. In this case, the athlete’s pain was increasing and his gait was becoming more compromised despite treatment efforts. Although this specific injury is rare, this case emphasizes the importance of having a broad perspective and exploring differential diagnoses in order to provide the best care for our athletes.

References


Images taken from:
- http://myankle.co.uk/conditions/ankle-arthritis/