

Distal Tibial Osteochondral Lesion in a Collegiate Women's Basketball Player

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Background: A female, DIII women's basketball player presented on October 6, 2017, a couple of days before the beginning of the season with right foot and ankle pain that occurred inferior and posterior to her medial malleolus with no known MOI. The athlete's pain persisted and she was restricted from play. An x-ray was ordered which showed a stress reaction on the right medial tibia. She was placed in an AFO and after two weeks, she was then allowed to progress back into play as tolerated. After a couple of weeks of participating with activity as tolerated, her pain persisted and an MRI was scheduled. The MRI showed "focal increased signal intensity in the distal medial tibia and medial malleolus adjacent to the articular margin suspicious for an osteochondral lesion." She was then placed on crutches and an AFO for six weeks with no activity and another ankle MRI was scheduled to focus on the lesion. The second MRI showed a distal tibial osteochondral lesion and a CT scan was ordered.

Treatment: After the first x-ray and diagnosis of a stress fracture to the right medial tibia, the athlete was placed in an AFO, where she was allowed to swim and bike. When she started to progress back into play without the AFO, she was unable to tolerate it. This placed her back into the AFO where she was only allowed to participate without it in activities such as light shooting and the stationary bike. After the first MRI, an US guided injection was used by the doctor but the athlete reported that there were no improvements following the injection. She was then placed on crutches and in an AFO for another 6 weeks.

Uniqueness: The case is unique because due to the location of the osteochondral lesion, it had a presentation of a stress reaction^{1,3} and there is no known MOI².

Conclusion: Distal tibial osteochondral lesions only occur in 2.6 % of all osteochondral lesions of the ankle which already makes them rare². Typically, if an osteochondral lesion is to occur, it will most likely present at the talar dome³. Osteochondral lesions, in general, are associated with ankle sprains but this athlete had no known MOI¹.

References:

1. Beck BR. Tibial stress injuries: An aetiological review for the purposes of guiding management. *Sports Med.* 1998; 26 (4): 265-279.
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3. You JY, Lee GY, Lee JW, et al. An osteochondral lesion of the distal tibia and fibula in patients with an osteochondral lesion of the talus on MRI: Prevalence, location, and concomitant ligament and tendon Injuries. *AJR.* 2016; 206:366-372