

A Case Study on Tarsal Tunnel Syndrome With Complications In a Soccer and Softball Player

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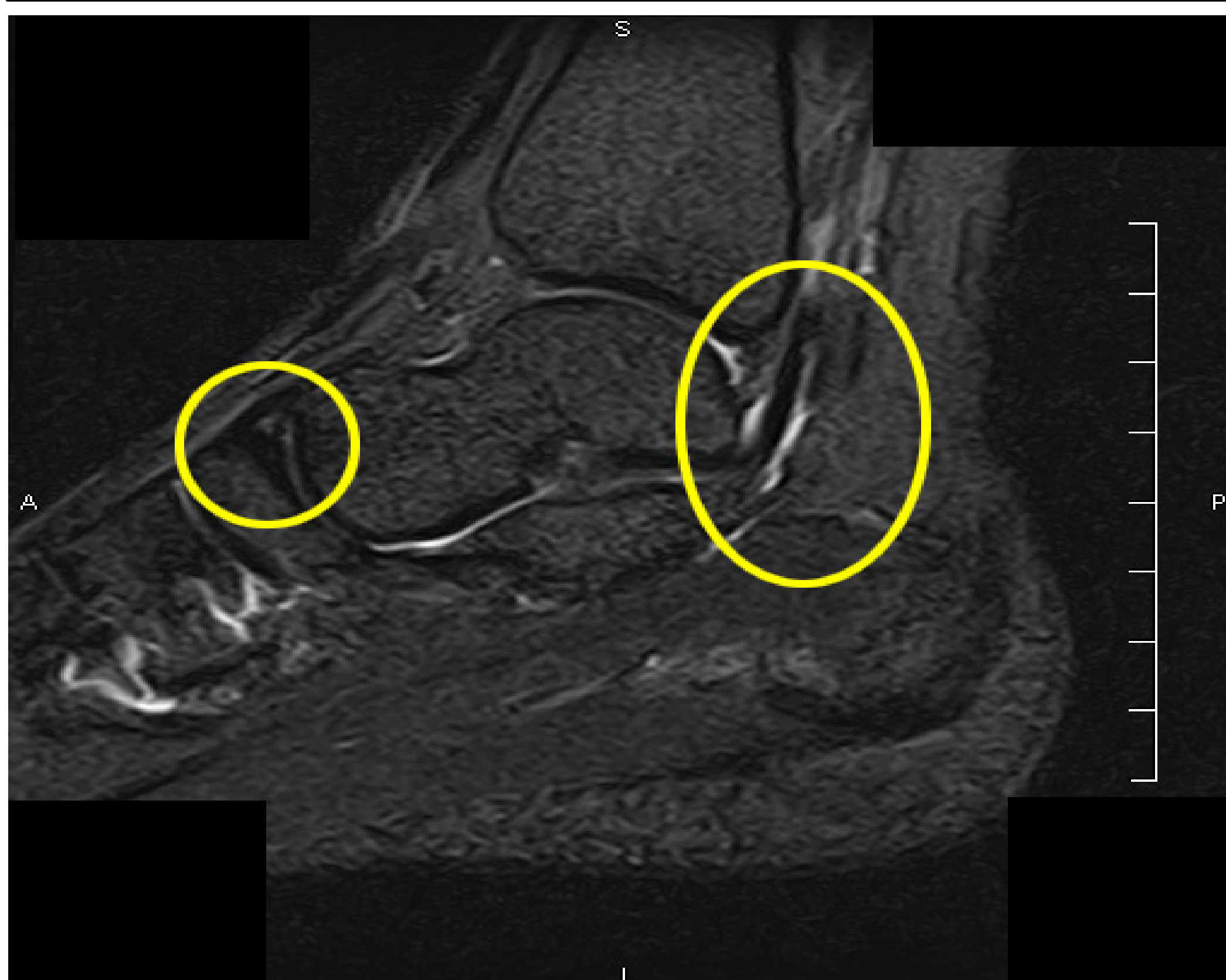
Purpose

The purpose of this case study is to highlight a tarsal tunnel diagnosis while incorporating the importance of secondary trauma exacerbating overall ankle and foot conditions. Highlighting compounding injuries within this study shows the importance of diagnostics and proper evaluation techniques.

History

The focus of this study is an 18 year old female soccer and softball player. In September of 2012 she reported to the Manchester University Athletic Training room with pain and numbness on the medial side of her left ankle. Both complaints were intensified with activity. Her symptoms worsened as the season continued. She had similar symptoms in her right foot with her left limiting activity.

MRI Imaging



Diagnosis

In mid-September of 2012, the athlete first experienced pain and numbness on the medial aspect of her left ankle. Upon initial examination the symptoms were thought to be caused by tarsal tunnel syndrome. Originally her symptoms were managed with taping and the use of a walking boot. In late September she was forced out of a soccer match due to numbness and pain. After visiting with the team physician the original differential diagnosis of tarsal tunnel syndrome was confirmed. With treatment the athlete made it through the end of the season. Her symptoms were relieved with rest until softball season started. In mid-February she received cortisone shots in both ankles. After the shots, her pain increased and it was found she had a bone spur in her left ankle. When sent for a second opinion, it was suggested flexor digitorum longus tenosynovitis might be the cause of inflammation. She was sent for an MRI and afterward scheduled surgery for a tarsal tunnel release. Prior to surgery the Surgeon suspected left tarsal tunnel syndrome and tenosynovitis as well as the possibility of a flexor hallucis longus tear.

Treatment

When athlete first complained of her symptoms, they were managed with taping and a walking boot. After meeting with the physician initially, she was given medicine to reduce inflammation and nerve pain. In November she visited a physician of podiatric medicine and received custom orthotics. When she started playing softball and her symptoms began to trouble her, she had cortisone injections in both her feet. This relieved her symptoms of tarsal tunnel syndrome in her right foot but it made her pain in the left foot worsened. After this method was unsuccessful, treatment was altered to taping, iontophoresis, and attempting to put less pressure on her foot while she was wearing shoes. On May 21, 2013 following the softball season the athlete proceeded with surgical intervention of the left ankle, which included a tarsal tunnel release. During her surgery she also received a flexor hallucis longus release. Due to extreme venous congestion in her ankle the surgeon cauterized multiple veins to reduce congestion. During her surgery it was also found she had fractured navicular bone. After surgery she attended physical therapy from May 24th to August 7th.

Complications

The subject had multiple complications that affected her tarsal tunnel syndrome. She had a bone spur as well as tenosynovitis of her flexor hallucis longus in her left foot. Around her medial plantar nerve she had an extremely congested venous complex in her left foot as well as a fractured navicular bone. She also has nerve entrapment in her right foot, as well as a fractured navicular bone. All of her complications exacerbated her tarsal tunnel syndrome and limited her ability to function.

Prognosis

Athlete has continued playing soccer and softball at this time. She still has some numbness over her scar and on the top of her foot. She has moved to turf shoes when playing soccer because they provide more space for her feet. She still has symptoms in her right foot and receives injections for pain relief. Surgery on her right foot may be imminent due to pain.

Reference

David Porter, MD- Surgeon
Methodist Sports Medicine