

A Delayed Diagnosis of Tarsometatarsal Ligament (Lisfranc) Sprain in a Female College Soccer Athlete and Foot Rehabilitation

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Objective: To emphasize the importance of the correct treatment protocol and the proper rehabilitation exercises based on the patient's injury condition and healing process.

Background: A 22-year-old female division I soccer athlete underwent tarsometatarsal ligament repair to stabilize midfoot. Patient started feeling pain in the dorsal aspect of her left 1st and 2nd metatarsals at the beginning of the season, however, she reported no specific mechanism of injury (MOI). She continued to play soccer, and the pain got worse. Initial X-ray with non-weight-bearing (NWB), MRI, and bone scan indicated normal. A podiatrist performed an X-ray in a weight bearing position and diagnosed her with left medial midfoot instability. Treatments (cryotherapy, thermotherapy, and electrical stimulation) did not relieve pain. She finished the season with the condition. **Treatment:**

She was NWB for 3 weeks and walked with full-weight-bearing in a boot for next 4 weeks. The short-term goal was to increase ankle ROM and lower leg strength. The long-term goal was to successfully return-to-play by improving soccer specific skills and increasing flexibility. The rehabilitation session was 9 weeks. **Uniqueness:** There was no clear acute MOI. It was difficult to identify with initial diagnostic imaging. A proper rehabilitation exercise program resulted in a positive outcome. As a result, she successfully returned to play the next season. **Conclusion:** The rehabilitation protocol had positive effect, although the treatment was delayed due to the delayed diagnosis. Athlete had good compliance with rehabilitation program to decrease time to return to play.