An estimated 28,000 ankle injuries occur in the United States each year. An athlete, 20 to 40 percent of acute ankle injuries progress to chronic issues. It has been reported there are approximately 27,000 ankle sprains daily in the United States. If each ankle sprain results in 10 to 20 x 1000 years of perceived pain or instability, then 100 year lifespan, this would result in 2.7-5.4 million years of perceived pain or instability. These injuries also only suggest that only 60% of all ankle sprains were accurately diagnosed on the first clinical evaluation. This case is unique because this patient was not on a high school or collegiate sports team. Pain, swelling and discoloration were the initial complaints. The physician evaluated the ankle both in and out of weight bearing. Examination revealed tenderness to palpation, range of motion to the ankle was full, and no ankylosis noted. Initial treatment included ice, compression, elevation, and NSAIDs. After 48 hours, the athlete was examined by a second physician and a second musculoskeletal exam was performed. The second physician found no pathologic findings and diagnosed the injury as an ankle sprain. The athlete was referred to a surgeon and after a year of non-operative treatment, the athlete was referred to me for further treatment. The diagnosis prior was a sprain but I felt it was more likely a tear. The case was closed and the patient had full return to activity.

An Introduction to the Lateral Ankle Triad in a Collegiate Football Athlete

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Abstract

Background: Lateral Ankle Triad represents an ankle injury syndrome that is common in football players. The present case report describes a unique presentation of Lateral Ankle Triad in a collegiate football athlete. This case report seeks to present clinical symptoms, examination, and the treatment of Lateral Ankle Triad in an athlete.

Case Report

A 19-year-old NAIA football player presented to the physician with a chief complaint of pain in the right ankle after a practice protest. The athlete described the injury as a sudden twisting of the ankle followed by a loud pop at the time of injury. The athlete complained of pain and stiffness after practice. Examination revealed swollen, painful ankle, with palpable tenderness on the posterior malleolus, and increased pain on range of motion. The athlete was unable to bear weight on the right ankle and had decreased plantarflexion and dorsiflexion. Initial treatment included rest, ice, compression, elevation, and NSAIDs.

Mechanism of Injury: A common injury to the ankle is lateral ankle sprains that usually occur as a result of a sudden twisting or rolling motion of the ankle. This can be from either a contact or non-contact situation. Approximately 85% of sprained ankles involve the lateral ankle ligament (Garrett, 1977). During practice the wide receiver was constantly complaining of pain and stiffness in his right ankle. As the athlete was going up for the ball during a play the athlete landed with his foot in plantarfexion and inversion causing a strain on the ATFL and a sprain of the peroneal longus.

Clinical Examination: An evaluation was performed to assess the athlete's post-injury condition. The athlete was unable to bear weight on the right ankle. The athlete was placed in a non-weight-bearing cast for 6 weeks. After the removal of the cast, the athlete underwent rehabilitation. The rehabilitation protocol consisted of submaximal isometrics, hip abduction and adduction, squats/ lateral step, lunges, and proprioceptive training. The athlete was also introduced to calf raises, bicycle, stair climber, vertical squats, front lunges, and paced walking. The athlete was then referred to a physical therapist for further rehabilitation.

Rehabilitation and Results

Following the evaluation of the athlete and the cohort screening, the athlete was diagnosed with a Grade 2 tear in the Anterior Talofibular Ligament, the Calcaneofibular Ligament, and the Peroneal Tendon. The athlete was referred to a specialist for further evaluation and treatment. The athlete underwent arthroscopy of the right ankle and posterior malleolus. The surgery included debridement of the capsule, repair of the peroneal tendon, and repair of the lateral ankle ligaments. The athlete was discharged with a cast and instructed to return to activity at 6 weeks. At the time of follow-up, the athlete had full return to activity and was able to perform all sports activities.

Discussion

Chronic lateral ankle instability is a documented complication following 10-30% of significant ankle sprains. Some reports suggest that chronic instability remains after the lateral ankle as few as 20-40% of the time leading to high re-injury rates with increased repetitive use of the same unstable ankle. Not all ankle sprains are ankle because of severity and mechanism, which is important to consider when individualized treatment plans and injury prevention are established. The mechanism of injury may be created in a different manner, but similarly consists of forceful plantarflexion and inversion of the ankle in relation to the lateral aspect of the lower leg. Physical examinations that include a thorough history, physical examination, special tests, and clinical findings are imperative in a proper and accurate diagnosis. Once a diagnosis is hypothesized, radiographic findings may be necessary for some patients depending on severity and confidence of the diagnosed injury. Conservative treatment is followed and created with a rehabilitation protocol that is specific to the sports medicine staff in conjunction with the surgeon. The uniqueness of this injury was the Grade 2 tear in his Anterior Talofibular Ligament, the Calcaneofibular Ligament, and the Peroneal Tendon as compared to the athletes extensive lateral ankle sprain history. From the initial onset to full functional return to play, the athlete followed the assigned rehabilitation program from the sports medicine staff with no time loss during this process.

Conclusion

This case highlighted the diagnosis and treatment of an athlete suffering from a complication due to injury and not having proper rehabilitation. The case further highlighted the treatment completion that was completed to assist the athlete. This case examined a peroneal tendon tear and a lateral ankle sprain involving the ATFL and the CFL. These injuries are all common amongst athletes, however seeing as three injuries at once is not so common.

References


