PARTIAL PLANTAR FASCIA RUPTURE IN A MALE COLLEGIATE FOOTBALL PLAYER

Background: A 23-year-old male collegiate football tight end was injured during practice while participating in a drill. The athlete accelerated while changing directions, placing stress on the plantar fascia of his left foot. He reported sensing a sharp burning pain in the arch of his left foot, especially in the area just distal to his heel. The athlete reported a history of discomfort in the same area describing symptoms of plantar fasciitis; however, he had not reported the pain to the athletic trainer until this particular event. The athlete also reported the pain had never been as severe as it was from this injury. Upon palpation, no palpable defects were present; however, the athlete was point tender, particularly at the origin of the plantar fascia on the plantar surface of the medial tuberosity of the calcaneus and 3cm proximal to the insertion of the plantar fascia at the distal metatarsal heads. Active range of motion (ROM) was within normal limits. Passive dorsiflexion of the left foot exacerbated the pain felt in the plantar fascia. Manual muscle testing demonstrated that strength was also within normal limits. Dermatomes, myotomes and reflexes of the lower leg were within normal limits. Differential Diagnosis: Plantar fasciitis, plantar fascia rupture, heel spur, longitudinal arch sprain. Treatment: The athlete was immediately removed from participation and was treated with ice-cup massage and manual stretching to control pain. After practice, the athlete was placed in a walking boot and was given crutch walking instructions. The athlete was given a night splint to keep the plantar fascia on a stretch to control the pain of the first steps in the morning. The following day, the athlete was referred to the team physician, who recommended both x-rays and an MRI. The radiograph was negative for heel spurs, while the MRI revealed a partial rupture of the plantar fascia. Since it was only a partial rupture of the plantar fascia, the treatment was very similar to that of plantar fasciitis. Early treatment began with cryotherapy to help control inflammation and pool workouts to help maintain ROM with minimal weight bearing. Treatment progressed to ground exercises, including calf raises and ankle pumps, ice-cup massage and myofascial release using a wooden roller, and marble pick ups. Therapeutic ultrasound was also utilized. Within a week, the athlete was able to jog with minimal symptoms. Within eleven days, the athlete was able to take part in limited football activities. Two weeks post injury, the athlete was removed from limited activity due to soreness from a two-a-day practice. Treatment continued until one month post injury, at which point the athlete was asymptomatic and cleared from treatments. The athlete has remained symptom free and has not received treatment since being cleared. Uniqueness: The mechanism of injury is common of plantar fascia rupture. However, the predisposing conditions of the injury are somewhat uncommon. Plantar fasciitis is most commonly seen in runners, older athletes with degenerative fascial tissue, athletes who play on hard surfaces, and in overweight athletes. The athlete in this case is a fit football player who plays on grass. Furthermore, plantar fascia ruptures usually occur secondary to corticosteroid injections for the management of plantar fasciitis, which the athlete had not received. Conclusion: Treatment of plantar fascia ruptures is dependent upon clinical presentation and MRI imaging. In this case, the athlete responded favorably to conservative treatment. When an athlete complains of acute plantar foot pain an athletic trainer should consider a plantar fascia rupture as a potential diagnosis.