CHRONIC PLANTAR FASCIITIS IN A DIVISION I FEMALE BASKETBALL PLAYER

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Introduction

In this review, a 20-year-old, female, women’s basketball player reported to the athletic training room complaining of a “sharp pain” on the medial aspect of her right heel approximately three months following the resolve of previous plantar fasciitis. It was observed that the athlete had pre-disposing biomechanical risk factors that needed to be corrected in order for a successful treatment outcome. The significance of this review is to educate other health care professionals on the importance of treating the “cause of the cause” in addition to the use of conservative treatment.

Purpose

One domain of athletic training is prevention. This case review demonstrates the importance of early detection of biomechanical risk factors. Monitoring an athlete’s biomechanics and making any necessary interventions could decrease the risk of injury in athletic populations.

Background

- 20-Year-Old Female
- 5’8, 135lbs
- Sophomore Collegiate Shooting Guard
- Right Foot Dominant
- Previous History of Resolved Plantar Fasciitis
- Pes Planus
- Hyperpronation During Walking Gait
- Genu Valgum
- Hip Abductor Weakness (4/5) MMT
- Tight Calf Muscles
- Did Not Attempt Any Previous Self-Treatment
- No Medications

Differential Diagnosis

- Calcaneal Stress Fracture
- Bone (Heel) Spur
- Sever’s Disease
- Tendinitis

Clinical Evaluation

- History indicated “sharp” pain during athlete’s first steps out of bed in the morning.
- Point tender on medial calcaneal tubercle and plantar surface of right foot.
- Limited dorsiflexion, 4°
- Negative tuning fork and special tests (i.e. Anterior Drawer, Talor Tilt, Percussion, Compression, Kleiger’s.)
- Craig’s Test- 17°, indicating femoral anteversion.
- Multiple trigger points located within the gastrocnemius.
- MMT indicated weakness in the hip abductor region (4/5)

Treatment

- Naproxen to control inflammation; 250mg bid.
- Continuous ultrasound in combination with dexamethasone used prior to practices.
- Self myofascial release with a lacrosse ball to address trigger points- 5”
- Stretching of the posterior compartment and neural glides to increase flexibility- 10°-15°
- Strengthening of the intrinsic foot musculature for stability (Ankle 4-way, Toe-Taps, Towel Scrunches, etc.)
- Posterior joint mobes of the talocrural joint to improve dorsiflexion- 3 x 8 oscillations
- A low-dye tape job was also implemented for additional support until orthotics arrived.

Treatment Continued...

Athlete was referred to the team physician for an initial evaluation, which later included an MRI to rule out potential stress fracture or bone spur. Orthotics were eventually ordered, and a dorsiflexion night splint was prescribed by the athlete’s team physician. A strengthening program was also implemented for the hip complex, core, and back to address biomechanical risk factors. During this time of the athlete’s treatment, she would strengthen three times a week, post-practice.

Implications

Per year, plantar fasciitis affects 2 million people in the United States and results in approximately 1,000,000 visits to physicians, 62% which are to primary care physicians. Plantar fasciitis is among the top 5 diagnoses of foot and ankle pain in runners, as well as in professional football, baseball, and basketball players. The annual cost of treatments for this disorder is between $192 and $376 million. It affects several people who seek medical care and is one of the most common complaints in podiatric practice, with higher prevalence in females.

Conclusion

This case review presents a problematic case of chronic plantar fasciitis that involves the need for biomechanical correction. Implementing the use of orthotics, correct footwear, proper rehabilitation, and a dorsiflexion night splint helped establish a successful treatment plan for this athlete. The athlete in this case has returned to participation without further complication.