

## FOOT PAIN IN A RECREATIONAL ATHLETE

**A.M. Manison, D.C., CCSP<sup>®</sup>, CCEP; J.H. Manison, M.D.; W. Moreau, D.C., DACBSP<sup>®</sup>**  
**Columbia Advanced Chiropractic, LLC; Columbia, MD**

Category: Clinical case paper

**HISTORY:** A 26-year-old recreational runner and basketball player presented with bilateral heel and foot pain. This pain began two weeks prior when he was playing basketball; however, the patient admits to intermittent heel and foot pain since high school. He describes the pain as a “stabbing” sensation, 6 to 9 out of 10 in severity and greater in the right foot than the left. The pain is exacerbated by any weight-bearing activity, especially getting out of bed in the morning, and the patient has been unable to partake in any sports. The patient reports trying over-the-counter foot orthotics without benefit. He was also evaluated by a podiatrist who recommended injections, which the patient declined.

**PHYSICAL EXAMINATION:** Inspection of the feet revealed significant rigid pes planus of the right foot. Moderate tenderness of the medial calcaneal tubercle was noted bilaterally, with the right side worse than the left. Foot and ankle ranges of motion were within normal limits and pain-free. Forceful dorsiflexion of the right foot revealed moderate pain.

**DIFFERENTIAL DIAGNOSIS:** The differential diagnosis (DDX) of foot and heel pain is broad and includes the neurological, skeletal, and soft tissue etiologies. This patient's DDX included the following:

1. Plantar fasciitis
2. Plantar fascia rupture
3. Nerve entrapment syndrome
4. Stress fracture
5. Fat pad syndrome
6. Heel bruise
7. Tendonitis
8. Bursitis

**TESTS AND RESULTS:** AP, lateral, and oblique non-weight-bearing plain-view radiographs of the right foot, obtained by the podiatrist, showed no fracture or bony lesion. MRI of the right foot was obtained to assess soft tissue and bone pathology. Imaging demonstrated inflammation of the plantar fascia, as well as a 2mm superior proximal tear of the central band of the plantar fascia. Bone marrow edema within the calcaneus was also noted.

**FINAL WORKING DIAGNOSIS:** Plantar fascia disruption with resultant plantar fasciitis and associated bone bruising.

**TREATMENT:** The patient was referred to an orthopedist, who placed the right foot in a protective boot to allow healing of the fascial tear. After 5 weeks, he returned for rehabilitative care. At this time, he still complained of mild to moderate pain in the morning, and he had not yet returned to physical activity. Treatment consisted of a four-step protocol of (1) chiropractic

extremity manipulation; (2) soft tissue techniques (e.g. Graston Technique<sup>®</sup>, Active Release Techniques<sup>®</sup>); (3) Low Dye taping; and (4) functional orthotics (i.e. foot held in neutral talonavicular position). Seven treatments were provided over the course of seven weeks. The patient reported 80% improvement of his symptoms, and he was able to return to athletic activity. At the 3-month follow-up, he remained pain-free and continued to run and play basketball without incident.