

Talocalcaneal Coalition

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ABSTRACT

CASE HISTORY: A 13-year-old male lacrosse athlete presented with gradual onset right ankle pain. Symptoms began at age ten, including multiple ankle sprains. The physician suspected plantar fasciitis and advised gel inserts, NSAID pain relievers, and physical therapy to no avail. The pain persisted as sports became more demanding. His performance continued to decrease, and gait became labored and disjointed, with an occasional limp. **PHYSICAL EXAM:** Lower extremity examination showed no varus or valgus deformities in the coronal plane. The symptomatic foot dorsiflexion was 20/35, with the knee flexed and extended. Manual strength test scores for plantarflexion, dorsiflexion, inversion, and eversion were 5/5. No hindfoot motion was observed. Lateral lunge test exhibited abduction of the foot with hip external rotation. Labored gait and a lack of coordination upon ground impact were observed during running. **DIFFERENTIAL DIAGNOSES:** Subtalar Joint Fracture, Calcaneal Stress Fracture, Achilles Tendonitis, Plantar Fasciitis. **TESTS & RESULTS:** A multiplanar MRI revealed a fibrous coalition of the talocalcaneal facet (TC). Medial facet was conjoined. Mild sprains were observed for both the anterior talofibular and calcaneofibular ligaments. Joint effusion from stress-related mild osseous edema was found at the calcaneus. **FINAL DIAGNOSIS:** Talocalcaneal coalition **DISCUSSION:** TC is a fibrous connection between the talus and calcaneal bone. The coalition locks the hindfoot in the valgus position. The deformity usually forms around 13-14 weeks of fetal development, and 75% of TC cases are asymptomatic until adolescence. TC accounts for 45% of all tarsal coalitions and is often bilateral. **OUTCOME OF THE CASE:** Surgical excision of fibrous coalition with autograft buttock fat was performed, followed by four months of physical therapy. Rehabilitation started with aquatic therapy. After four weeks, he had a normal gait and progressed to unilateral movements. Followed by reactive, plyometrics, and unpredictable loads training. **RETURN TO ACTIVITY AND FURTHER FOLLOW-UP:** After four months, the athlete returned to sport at a pre-operation performance level and continued to show improvement.