Os Trigonum Syndrome and Excision in a Collegiate Football Player
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**Background:** A 19-year-old male football player underwent Os Trigonum excision surgery after conservative treatment of Os Trigonum Syndrome was unsuccessful in relieving posterior ankle pain. Athlete first reported pain in the posterior ankle after football practice, describing a sharp, pinching pain when pushing off and “kick stepping”. Initial evaluation found point tenderness on distal Achilles tendon at its insertion and in retrocalcaneal space. Swelling and mild ecchymosis was noted around distal Achilles tendon. ROM was full; pain reported last 10° of active and passive plantarflexion; strength normal. Talocrural and subtalar joint stability intact bilaterally. Chief complaint was increased pain in posterior ankle during passive and active plantarflexion that increased during repetitive stepping when blocking. **Differential Diagnosis:** Achilles tendinitis, retrocalcaneal bursitis, flexor hallucis longus tendinitis and/or strain, tibialis posterior tendinitis, peroneal tendon subluxation, posterior talofibular ligament sprain, tarsal tunnel syndrome. **Treatment:** Initial treatment for Achilles tendinitis included rest, ice cup, prone calf stretch, calf foam rolling, friction massage, and electrical stimulation. Swelling decreased but athlete still complained of pain when pushing off toes, specifically during “kick step” motion performed during pass blocking on the offensive line. Fluoroscope x-rays showed accessory bones on posterior aspect of both right and left tali indicating bilateral os trigonum. Athlete participated as tolerated and limited repetitive foot work during practice. He was taped with arch tear-drop taping and dorsiflexion strapping to reduce end range plantarflexion during activity. Therapy continued throughout season, treating for pain and ankle mobility. After season, athlete was referred to a podiatrist. An MRI revealed an os trigonum bilaterally of the synchondrosis between accessory ossicle and talus, indicating posterior ankle impingement and OS Trigonum Syndrome. Surgery was performed to remove accessory bone. Athlete was placed in a non-weight bearing splint post-operative initially, then into a cam walking boot for 3 weeks. Treatment three weeks post-op included moist heat pack, heel-toe walk on treadmill, joint mobilization, towel drags, and stork stance. After pain-free aggressive rehabilitation, subject was cleared for participation. **Uniqueness:** Os trigonum is a small accessory bone on posteriolateral aspect of talus and os trigonum syndrome results from inflammation of tendons in posterior ankle joint and refers to pain in the posterior ankle joint\(^2,3\). Os trigonum is most often bilateral\(^2\) however, the athlete’s right ankle was acutely symptomatic for posterior ankle pain, most probable from the forceful, repetitive hyperplantarflexion. The “kick step” is a unique technique for offensive linemen, essentially performed as the lineman pushes and slides repeatedly off of the instep and heel of foot. **Conclusion:** Os trigonum is rare, occurring in approximately 7% of the population\(^2\). Athletes are at a higher risk of injuring this structure due to forced plantar flexion, dorsiflexion and repetitive microtrauma. Both conservative and surgical treatment can be effective in treating os trigonum syndrome. **Relevant Evidence:** Diagnosis of os trigonum syndrome can be difficult as symptoms and clinical findings often mimic those related to tendon pathologies of the flexor hallucis longus, posterior tibialis, and peronal longus tendons. Corticosteroid injection is often administered as initial treatment for os trigonum syndrome, evident by decreasing pain, while excision has shown to provide complete resolution of symptoms\(^1\). **Word Count:** 539