Background: During a regular season game, a 20-year-old male collegiate division I basketball player landed on an opponent’s foot after an offensive rebound. He inverted his right ankle but did not feel or hear a “pop.” He had experienced a grade one ankle sprain on the same ankle during preseason play. Upon evaluation, the athlete showed no signs of deformity. He was point tender over the anterior talofibular, calcaneofibular, and posterior talofibular ligaments. Passive range of motion (ROM) was within normal limits; however, active ROM was limited in plantarflexion and dorsiflexion. Manual muscle testing elicited soreness, but was within normal limits. All neurological tests were normal. An anterior drawer test was positive with increased laxity when compared bilaterally. The talar tilt test was negative. Differential Diagnosis: Ankle syndesmosic sprain, tarsal stress fracture, osteochondritis dissecans (OCD), lateral ankle sprain, anterior impingement with exostosis.

Treatment: The team physician ordered an X-ray due to the athlete’s previous history of ankle sprains. Radiographs were negative for fractures but revealed bone spurs that were deemed asymptomatic. The athlete was given a walking boot for two days. He completed rehabilitation for a lateral ankle sprain that consisted of ice and compression, proprioception exercises, calf raises, calf stretches, and stability and agility exercises. Four days post injury, the athlete participated in a competition for approximately twenty minutes. He did not compete in subsequent competitions secondary to pain, weakness and an inability to complete prior practices. He was returned to a boot and was told to rest, other than when engaged in rehabilitation exercises as previously noted. Two weeks post injury the athlete was released to practice. Two months after the initial injury he experienced another ankle sprain during practice, at which point the previously noted bone spurs were concluded to be the cause. Rehabilitation was implemented for a second time and bone spur debridement surgery was scheduled for when the athlete was out of season. An MRI and a second X-ray were performed. The findings defined distal anterior tibial exostosis and exostosis at the dorsal aspect of the talonavicular joint, as well as medial bone impingement at the talar dome. No talar OCD was discovered. He was able to participate until the time of surgery despite pain or discomfort.

Uniqueness: Impingement with exostosis and fragmentation is commonly noted in athletes who repetitively participate on hard surfaces. The uniqueness of this case was the surgery performed to clean the joint space. Traditionally, an arthroscopic procedure is used to debride the area between the tibia and the talus. This procedure was used in conjunction with the use of an open excision due to the rare situation of exostosis between the talus and navicular. The operation was successful in debridement and the athlete is now completing the final stages of his four-week rehabilitation in order to return for the upcoming season. Conclusion: Ankle impingement and secondary bone spurs are a result of recurrent sprains. This case illustrates that bone spurs may form in unsuspecting surfaces within the joint such as between the talus and navicular. Conservative treatment was initially implemented because the bone spurs were asymptomatic. The arthroscopic and open excision procedures performed helped decrease the athletes discomfort and prevent future ankle sprains. Key Words: anterior impingement, exostosis, talocrural joint, syndesmotic sprain, osteochondritis dissecans