Background: A 21 year old, male collegiate football player presented complaining of right calf pain during a tackling drill. Despite the absence of a physical presence behind him, he described a feeling of "being struck in the lower leg" while in a dorsiflexed, weight bearing position. Patient denies prior history of pain and/or injury in the lower leg. Physical evaluation revealed a defect along the medial border of the Achilles tendon, pain with active plantar and dorsiflexion in the proximal aspect of the Achilles tendon, and a positive Thompson’s test. Athlete denied any numbness or tingling in the foot or lower leg. Limitations due to pain in AROM for plantarflexion (0-20°) and PROM in dorsiflexion (0-5°) were observed. MMT for PF 2-/5, DF 3/5, EV 4/5, INV 4/5 were noted. Upon re-evaluation one hour later, a repeated Thompson’s test was no longer positive, but increases in pain and swelling around the tendon defect were noted. A partial Achilles tendon rupture was then noted as the initial impression.

Differential Diagnosis: Achilles tendon complete rupture, Acute Achilles tendinitis, High ankle sprain, Gastrocnemius/Soleus strain, Gastrocnemius contusion, Tibial fracture.

Treatment: The athlete was referred to the team physician, and subsequent MRI confirmed a partial thickness rupture of the right Achilles tendon. The team orthopedist advised the athlete that based on the number of intact fibers, and the ability to plantarflex against resistance, a non-surgical treatment approach would be the best course of treatment. Initial treatment at that time involved cryotherapy, electrical stimulation, compression, and elevation, and the foot was placed in a walking boot with an inserted heel lift. Crutches were fitted to ensure pain free and partial weight bearing protection. The first week of rehabilitation consisted of cryotherapy, pain free AROM, and basic partial weight shifting exercises. Weeks 2-3 involved contrast bath, manual resistance, gait and balance training. By the end of the 4th week, the athlete discontinued the use of the walking boot, and FWB heel raises and resistance band exercises were initiated. At the start of week 7, the functional exercise progression including jogging, modified football drills and plyometrics was initiated. Normal gait and 4+/5 plantar flexion strength within 6 weeks post-injury following this non-surgical treatment and rehabilitation approach was successfully achieved.

Uniqueness: In contrast to typical Achilles tendon ruptures, this injury occurred in a twenty-one year old collegiate football player with a negative history for degenerative tendonosis. Although partial thickness tears of the Achilles tendon are infrequent, the sensation of being struck in the lower leg with a dorsiflexed ankle is more consistent with the more common full thickness tears. Very little literature exists describing partial thickness tears of the Achilles tendon. Furthermore, the conflicting Thompson’s test results and variable location of pain assisted in making the initial impression of a partial thickness versus a full thickness Achilles tendon tear.

Conclusions: Although uncommon, partial Achilles ruptures can occur in the collegiate athlete population, and as the signs and symptoms fluctuated in this case, the follow-up
examination was helpful in differentiating between a complete and partial thickness tear. The subsequent MRI confirmed the impression of the partial thickness tear. While normal gait and 4+/5 plantar flexion strength has been achieved, it remains to be seen how this athlete will respond to high intensity sport specific activities.  **Key Words:** Achilles tendon rupture, partial rupture, college football player