

Rare Case of Traction Sural Neuropathy due to Acute Achilles Tendon Rupture

HEATHER LYSTAD, & KENNETH VITALE, FASCM

Department of Orthopedic Surgery; University of California, San Diego; San Diego, CA

Category: Professional-in-Training

Advisor / Mentor: Vitale, Kenneth (kvitale@health.ucsd.edu)

ABSTRACT

Sural nerve injury (SNI) is a reported complication of acute Achilles tendon rupture (ATR), primarily iatrogenic in operatively managed cases. The sural nerve typically runs along the lateral border of the Achilles tendon. Its branches provide sensory information from the lateral foot and ankle. Given its proximity to the Achilles tendon, sural nerve-related complications in operatively managed cases are a known adverse outcome. However, the incidence of SNI in conservatively managed cases is thought to be much less common. Most patients recover to normal sensation by one year of injury to the sural nerve. **CASE DESCRIPTION:** A previously healthy 30 y.o. male presented with acute onset right posterior lower leg pain that occurred while running. He was clinically diagnosed with a complete ATR. Additionally, the patient reported numbness and tingling in the right lateral hindfoot since the time of injury. **CLINICAL COURSE:** The patient opted to pursue conservative management for his ATR with an accelerated functional rehabilitation protocol. However, he continued to endorse minimally improved sensory deficits in the sural nerve distribution nearly one year post-injury. The patient felt these symptoms were negatively impacting his return to full physical function, prompting further testing. Nerve conduction studies were consistent with an isolated right sural sensory neuropathy that was chronic and axonal in nature. Nonsurgical management and conservative treatment were recommended, including a discussion regarding the natural history of nerve healing and the available treatment options for nerve injuries. **CONCLUSION:** SNI associated with ATR likely results from traction on the nerve at the time of injury. Prior literature has focused on the incidence of sural nerve injury in the setting of operative repair of ATR. This case highlights the rarity of SNI in the absence of surgical repair and the importance of assessing for SNI in all cases of acute ATR.