Allograft reconstruction of a chronic tibialis anterior rupture

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Introduction: The tibialis anterior (TA) plays an important role in dorsiflexing and inverting the foot. Although relatively rare, the tibialis anterior is the third most commonly ruptured tendon of the lower extremity. Most common mechanisms of injury include direct trauma, indirect trauma, an applied dorsiflexory force, and spontaneous rupture. This case study highlights the secondary tendon repair of a chronic tibialis anterior tendon rupture utilizing a peroneus longus allograft.

Case Report: Patient is a 74 year old male with diabetic neuropathy and peripheral vascular disease (PVD). Mechanism of injury was a slip off a curb to the left lower extremity 10 months prior to surgery. Six weeks after the injury he noticed a decrease in strength on the affected side. Physical examination revealed a defect along the left tibialis anterior tendon and lack of dorsiflexion strength especially with isolation of the TA. Surgical reconstruction was performed using a peroneal tendon allograft.

Discussion: Acute ruptures of the TA usually involve young individuals with a high activity level, whereas chronic ruptures usually occur in older patients with a history of diabetes, gait abnormalities, and poor coordination. Unfortunately, the delay in diagnosis may result in a widening gap of the tendon preventing a direct tendon repair. Surgical treatment has been found to restore function even with delay of diagnosis, making it preferred for physically active patients who are surgical candidates.