

Peroneal Tendon Dislocation After Talus Fracture

Elizabeth Cho, Aidimer Perez, Frances Akwuole, Michael S Pinzur¹, Kamran S Hamid², Adam Paul Schiff

¹Loyola Univ Med Ctr, ²Loyola University Medical Center

INTRODUCTION:

Traumatic peroneal tendon dislocation (PTD) is known to occur with fractures of the pilon and calcaneus, however, the incidence of PTD after fractures of the talus has not been previously reported in the U.S.

METHODS:

This was a retrospective review of adult patients with operatively treated fractures of the talus treated at a level I academic trauma center between 2007 and 2021. Charts, radiographs, and advanced imaging, when available, were reviewed for patient demographics, injury characteristics, and complications including diagnosis of peroneal tendon dislocation.

RESULTS:

126 patients with 128 fractures of the talus (n=2 with bilateral fractures) were included. Incidence of peroneal tendon dislocation after talus fracture was 21.1% (n=27). Among isolated talus fractures only, incidence of peroneal tendon dislocation was 16.7% (n=10). Peroneal rupture was separately found in 3 instances (2.3%). Among 27 cases of PTD, 14 (51.9%) were diagnosed based on advanced imaging only (13 via CT scan and 1 by MRI), 4 (14.8%) by review of the operative report only, and 9 (33.3%) based on both imaging and the operative report. 89.3% (n=25) of PTDs were diagnosed during the initial course after injury, whereas 7.4% (n=2) were diagnosed in a delayed fashion several months after the injury. Three PTDs underwent delayed surgical intervention due to delayed diagnosis (n=1), or missed dislocation by the surgeon, although evident on injury scans (n=2). Lateral process fractures of the talus had increased odds of PTD (OR 3.1, 95% CI: 1.2-8.3, p=0.02), as well as fractures with a positive fleck sign on injury radiographs (OR 14.3, 95% CI: 4.0-50.7, p=0.0001). There was no association found between PTD and Hawkins classification, associated fractures, staged fixation, open versus closed reduction, or open versus closed fracture.

DISCUSSION AND CONCLUSION:

Peroneal tendon dislocation with fracture of the talus is relatively common and was identified in one out of five fractures within the studied cohort. Surgeons and radiologists should be cognizant of this injury, especially in the setting of a lateral process fracture and a positive fleck sign.