

The Extruded Talus With Traumatic Transection of the Flexor Hallucis and Digitorum Longus Tendons: A Case Report

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PURPOSE

The extruded talus is a high-energy, open total dislocation of the peritalar joint complex with historically poor outcomes such as avascular necrosis (AVN), infection and arthrosis. We present a unique case of an extruded pan-talar dislocation with associated transection of the long flexor tendons of the ankle.

CASE STUDY

A 30-year-old male with no significant past medical history presented as a polytrauma from a motor vehicle collision. On physical exam, he was neurovascularly intact with a large medial traumatic wound with an extruded pan-talar dislocation. There was periosteal stripping and transection of the long flexor tendons. The patient underwent open reduction with irrigation and debridement of his open fracture-dislocation. Intraoperatively, the flexor hallucis and digitorum longus were transected with complete shear of the deltoid ligament complex. Given there was retraction of the proximal ends of the long flexor tendons, we utilized the distal tendon stumps to create a make-shift deltoid sling which was secured to the medial malleolus with non-absorbable suture. Intra-operative stress demonstrated a stable talus within the mortise. Patient had an uneventful post-operative course with minor superficial wound dehiscence which healed in 1 month with local wound care. There were no radiographic signs of AVN or hindfoot arthritis at latest follow-up. There were mild functional complaints which consisted of weakness in ankle and hallux plantarflexion.

CLINICAL IMAGE



Figure 1: Clinical picture of open pan-talar dislocation

IMAGING



Figure 2: Ankle radiographs demonstrating an open pan-talar dislocation and final follow-up radiograph after I&D and primary re-implantation of talus

DISCUSSION

Traumatic extrusion of the talus is an uncommon injury representing around 2.0% of all talar injuries¹. Historically, these injuries were treated with primary talectomy and tibiocalcaneal arthrodesis due to high rates of infection, which ranges from 11%-40%, and AVN.

Recently, there has been a trend for treatment to consist of primary reimplantation of the talus with thorough irrigation and debridement. Interestingly, Patil et. al found no difference in baseline demographics, range of motion, AOFAS scores or complication rates between patients undergoing primary reimplantation versus primary talectomy¹.

Even with re-implantation, the risk of hindfoot arthritis and collapse which may require secondary procedures remains prevalent. Boden et. al found 14/16 patients (88%) with pan-talar dislocations developed osteonecrosis and 7 (44%) developed arthrosis at one of the peritalar articulations².

CONCLUSION

Extruded pan-talar dislocations are a challenging pathology for the foot and ankle surgeon to treat. Traumatic transection of the flexor tendons of the ankle could be a consequence that the surgeon should be aware of.

REFERENCES

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