

Management Of A Comminuted Talus Fracture With Headless Compression Screws: A Case Report

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INTRODUCTION:

Comminuted talus fractures present unique challenges in orthopedic trauma due to the complex anatomy and limited blood supply. They are relatively rare but can lead to significant morbidity due to their intricate nature and role in ankle and subtalar joint function. Comminuted talus fractures require careful management to prevent complications such as avascular necrosis and post-traumatic arthritis. Open reduction and internal fixation are the gold standard, and headless screws have gained attention for providing stable fixation with minimal prominence and irritation.

REPORT:

A 36-year-old woman presented after a motor vehicular accident with a suspected talus fracture. CT-scans confirmed a comminuted talus fracture involving the body, neck, tibiotalar, and subtalar joints. The patient underwent surgery with a medial malleolus osteotomy combined with the anterolateral approach for full visualization of the fracture site. Comminuted fragments were meticulously reduced and temporarily fixed with K-wires. Headless compression screws, chosen for stability and a low-profile design, were used to traverse and compress the fragments. Postoperatively, the patient was monitored in the ward for five days, and weight-bearing was strictly prohibited. After transitioning to a removable cast, the patient was discharged uneventfully. Postoperative care focused on protecting the initial fixation during the early healing phase, with gradual transitioning to weight-bearing based on fracture consolidation and inclusion of physical therapy for functional recovery.



Clinical pictures : (A) X-rays AP/lateral/mortise views – Suspicious fracture line traversing taller neck (B) CT images coronal, sagittal and axial views - confirms presence of comminuted talus fracture. (C) Post fixation

CONCLUSION:

Comminuted talus fractures pose challenges due to the bone's unique blood supply and anatomy. Headless compression screws offer advantages in reducing soft tissue irritation and providing dynamic stability for optimal fracture healing. The presented case demonstrates positive outcomes, emphasizing the need for tailored treatment plans based on fracture characteristics and individual patient factors.

REFERENCES:

1. Rammelt, S., & Zwipp, H. (2009). Talar neck and body fractures. *Injury*, 40(2), 120-135.