

## **Rates of Complications and Readmissions: In-Patient versus Outpatient Open Reduction Internal Fixation of Calcaneus Fractures**

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**INTRODUCTION:** Calcaneus fractures are common injuries to the hindfoot. The safety of in-patient versus outpatient treatment in patients with calcaneus fractures remains unclear. The aim of the present study was to assess differences in wound complications and readmissions in operative calcaneus fractures treated with open reduction and internal fixation (ORIF) in an in-patient versus outpatient setting.

**METHODS:** Patients undergoing ORIF for calcaneus fractures from 2012 to 2020 were reviewed. Inclusion criteria were age greater than 18 years and an operative calcaneus fracture treated with the sinus tarsi approach (STA). Exclusion criteria consisted of a minimum of three months follow up, open calcaneal fractures or fracture dislocations, inpatients with polytrauma, and patients without a preoperative computed tomography (CT) scan. A total of 113 patients met inclusion criteria with 24 (21%) managed inpatient and 89 (79%) managed as outpatient. The primary outcomes were deep infection defined as return to the operating room for debridement with positive cultures and readmissions. Secondary outcomes included implant related pain and unplanned return to the operating room.

### **RESULTS:**

Inpatients had a higher percentage of ASA classification 3&4 patients (58.3% vs. 29.2%,  $p=0.008$ ). Outpatients had a longer delay in days between injury and definitive fixation (mean 8 (8.9 SD, 0-31 range) vs. 14 (12.4 SD, 0-91 range) days,  $p=0.009$ ). There were no statistically significant differences in the incidence of deep infections (8.3% vs. 4.5%,  $p=.606$ ), implant related pain (8.3% vs. 15.7%,  $p=.516$ ), return to the operating room (16.7% vs. 15.7%,  $p=1.0$ ), or readmissions (4.2% vs. 3.4%,  $p=1.0$ ) between inpatient and outpatient groups including in binary logistic regression models ( $p>.3$  for all).

### **DISCUSSION AND CONCLUSION:**

In our retrospective study of patients undergoing operative repair of isolated calcaneus fractures with STA, there was no increased risk of wound complications or readmissions when calcaneus fractures were treated in an outpatient setting.