Abstract Number: 11004

JOURNAL OF THE JFA Foot & Ankle

Risk factors for infection associated with calcaneal fracture in open reductions and internal fixations: A retrospective cohort

Eduardo Cezar Silva dos Santos[1], Cláudia Diniz Freitas[1]

1. Hospital Alemão Oswaldo Cruz, São Paulo, SP, Brazil

Correspondence: Cláudia Diniz Freitas. **Email:** dinizfreitas@hotmail.com

Introduction: The high rates of infections associated with open reduction and internal fixation (ORIF) of calcaneal fractures make it necessary to mitigate the risk factors for infection in this type of osteosynthesis. The objective of this study is to identify independent risk factors for fracture-associated infection (FAI) in ORIF of calcaneal fractures.

Methods: Retrospective and observational study using data extracted from the TriNetX global platform, including patients of both sexes with a confirmed diagnosis of calcaneal fracture and who underwent surgical treatment with ORIF. The International Classification of Diseases (ICD), version 11, code S92.0 was used. The level of statistical significance adopted in the analysis was 5% (0.05). The primary outcome assessed was infection associated with the fracture within one year after surgical treatment of the fracture.

Results: A total of 2,830 patients were selected for the study, with a mean general age of 50 years (SD ± 15), mostly men, 1,788 (63.8%). During the evaluation period, 181 patients had FAI within 1 year of surgical treatment. In the analysis of the risks of independent factors for FAI, the variables smoking [OR 1.8 (CI 0.02;0.06)], alcohol abuse [OR 1.6 (CI 1.0;2.6)], chronic kidney disease [OR 2.23 (CI 1.13;4.39)], overweight [OR 2.8 (CI 1.34;5.89)], fall from height [OR 2.18 (CI 1.47;3.25)] and open fracture [OR 2.13 (CI 1.07;4.23)] were statistically significant for the infection outcome.

Conclusion: The identification of risk factors is essential to avoid unfavorable outcomes in ORIF's of calcaneal fractures. Smoking, alcohol abuse, chronic kidney disease, being overweight, falls from height, and open fractures were independent risk factors for infection.

Keywords: Infections; Fractures, bone; Calcaneus; Surgical wound infection.

DOI: https://doi.org/10.30795/jfootankle.2026.v20.2046

This abstract was presented at the XXII Brazilian F&A Meeting 2026, held in São Paulo, Brazil, from April 18 to 21, 2026.