

Abstract Number: 18251

Functional clinical outcome of the conservative treatment of calcaneal fractures in patients with diabetic neuropathy

Claudia Diniz Freitas¹, Eduardo Araújo Pires¹, Carlos Eduardo Roncatto¹, Roberto Atílio Lima Santin¹

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

ABSTRACT

Introduction: Calcaneal fractures are potentially serious in diabetic patients with foot insensitivity. The consensus is that surgical treatment involves a high risk of complications in these cases, and conservative treatment is the option of choice because it allows monitoring of the onset of pressure ulcers and the degree of hindfoot collapse, which usually occurs as Charcot arthropathy progresses.

Objective: To retrospectively evaluate the mid-term functional clinical outcome of conservative treatment of calcaneal fractures in diabetic patients with advanced peripheral neuropathy associated with loss of protective foot sensitivity.

Methods: Fifteen patients (16 feet), 12 men and 3 women, whose mean age at the time of the calcaneal fracture was 53 years (ranging from 34 to 70 years) were retrospectively evaluated after conservative treatment with total contact casting. We considered a functional clinical outcome good when the foot was plantigrade and ulcer-free and the patient could wear deep footwear with custom-made insoles for insensitive feet. The outcome was considered acceptable when the patient had residual deformity requiring custom-made polypropylene ankle-foot orthosis (AFO) braces. The outcome was considered poor when extremity amputation was required, when the patient was unable to bear weight on the foot during gait due to hindfoot instability as a result of the fracture, or when the patient showed recurrent ulcer due to bone prominence resulting from fracture malunion.

Results: After a mean follow-up time of 40 months (ranging from 12 to 168 months), we assessed a good outcome in 10 feet, an acceptable outcome in 2 feet with braceable residual deformity, and a poor outcome in 4 feet, 3 of which had recurrent ulcers in the foot support area and another that required amputation due to severe infection.

Conclusion: Conservative treatment with total contact casting efficiently produced plantigrade, shoeable or braceable feet without pressure ulcers in approximately two-thirds of our small series of patients with diabetic foot insensitivity who suffered calcaneal fracture.

Keywords: Arthropathy; Diabetes; Arthropathy, neurogenic.

