

Outcome of Open Reduction and Internal Fixation of Calcaneal Fractures.

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"Master of science" in orthopedic surgery

By

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ABSTRACT

Introduction: The treatment of intra-articular fractures of the calcaneus remains controversial. Different approaches and methods of fixation are used aiming at anatomical reduction and achieving good functional outcome.

Patients and methods: In this series 22 patients with 25 fractures (3 patients were bilateral) were treated by open approach and internal fixation through extensile lateral approach in Fayoum University Hospital. This study was conducted from September 2014 to September 2015. Patients were followed up clinically and radiologically at least for 24 weeks with maximum follow up period 66 weeks and mean follow up 39.4 ± 13.6 weeks. Radiological assessment was done by measurements of Bohler's and Gissane angles. Functional outcome was assessed using AOFAS ankle / hindfoot score.

Results: The mean follow up Bohler's angle was 22.56 ± 10.30 in degrees and the mean follow up Gissane angle was 120.64 ± 9.76 in degrees. The mean AOFAS ankle/hindfoot score was 80.64 ± 12.25 . Complications included superficial wound infection in six cases, sural nerve injury in two cases treated conservatively, wound dehiscence in

one case managed with repeated dressings, complex regional pain syndrome (CRPS) in one case that responded well to physiotherapy and pregabalin, prominent hardware in one case treated by removal of screws, implant failure in one case. The time elapsing between the trauma and operation was found to correlate significantly to AOFAS ankle / hindfoot score.

Conclusion: Open reduction and internal fixation using a lateral approach for intra-articular calcaneal fractures allows successful fracture fixation with restoration of calcaneal anatomy, confirmed by radiographic imaging and giving best functional outcomes.

Key Words: intra-articular fractures of the calcaneus - internal fixation – lateral approach.