

ABSTRACT

TITLE: Outcome analysis for closed intraarticular displaced calcaneal fractures with calcaneal locking plate.

BACKGROUND: The management of calcaneal fractures range from closed treatment to open reduction internal fixation with different fixation. The radiological and functional outcome of 15 closed intraarticular, Sander's type II and III calcaneal fractures fixed with locking calcaneal plate by extensile lateral approach was done. Properly selected cases with proper timing of surgery accepted results are achieved with few complications.

Key words: Calcaneum Fractures, locking plate, internal fixation, Sander's

MATERIALS AND METHOD

This study was conducted in Government Thanjavur Medical College Hospital from 2013 to 2015. 15 male patients with displaced intra articular fractures of calcaneum were selected and treated with open reduction and internal fixation with locking compression plate. Most (number) of them from fall from height. Few (number) had history of Road Traffic Accident. All the patients were evaluated with X-ray of the calcnaeum — axial, lateral and AP views along with CT scan. The patients for whom open reduction and internal fixation with locking

plate was planned were treated by limb elevation, ice application and crepe bandage to reduce the edema. Injection tetanus toxoid was given to all patients. Except for a few (number) due to gross edema most of the patients were operated within 10-14 days of injury. All the patients were given preoperative antibiotics. In this study, we followed the Sander's classification to classify the fractures.

RESULTS: Bony union occurred in all 15 patients. Two patients had superficial wound infection which settled with appropriate antibiotics. Two patients had superficial wound dehiscence among that one healed by secondary intention, other patient went for implant removal after radiological evidence of fracture union. None of the patients had compartment syndrome, heel pad problems, peroneal tendinitis and a reflex sympathetic dystrophy. The results of this study were analyzed using the AOFAS score at sixth and 12th week. In this study 10 patients(66.6%) showed good results, four patients(26.6%) showed fair results and one patient (6.6%) had poor result. In our study we encountered the following complications like superficial wound infection and minor wound dehiscence in two patients, one patient developed deep infection, inadequate reduction in two patients. Implant was removed in one patient with deep seated infection.

CONCLUSION: To conclude intra articular calcaneal fractures are complex fractures which are difficult to stabilize and manage. The reason behind the improved results with open reduction and internal fixation in our series may be due to less traumatic techniques and stronger but malleable implants. Also locking plates for calcaneum decrease the need for bone graft, allow early weight bearing and it provides rigidity especially in osteoporotic cancellous bone. High cost and steep learning curve are the present limitations.