International Journal of Integrated Medical Research
Volume 10 Issue 03 July-August-September 2023
https://doi.org/10.57181/ijoimr/vol10i03/130
ISSN (Online): 2393-9869, ISSN (Print): 2350-0360

RESEARCH ARTICLE

FIXATION OF FRACTURE FIFTH METATARSAL BONE BY CANNULATED SCREWS

Mohamed A. Safy
Orthopaedic Department Mataria Teaching Hospital EGYPT

Email: mohamedsafye1deen123@gmail.com

ABSTRACT

Background: Today, there is great difference regarding fixation of fracture of base of fifth metatarsal bone
Patients and Methods: Between March 2021 and June 2021a prospective study was bone on twenty patients (5 females and 15 males) with a mean age 40 years old (range 30-05 years), in Mataria Teaching Hospital. The mode of trauma was twisting injury in all patients. Patients were followed up for 4 months post operatively. All patients had under gone cannulated screws.
Results: 19 patients had excellent outcomes regarding AOFAS (Nopain, Complete union) only one patient had residual pain with non-union (It was a comminuted fracture case).
Conclusion: Fixation of fracture base of fifth metatarsal bone by cannulated screws is a very effective method of treatment with short hospital stay and rapid recovery period.

KEYWORDS: Jones Fracture, Cannulated Screws.

INTRODUCTION

Fracture of the base of fifth metatarsal bone is a very common type of fractures [(1)]. It occurs as a result of high amount of load to the external border of the foot with the ankle planter flexed [(2)].

Many cases were managed conservatively by below knee cast, but nowadays there is an increasing tendency towards open reduction, internal fixation [(3)], In this study fixation by cannulated screws was done [(3)]

PATIENTS AND METHODS

Between March 2021 and June 2021a prospective study was bone on twenty patients (5 females and 15 males) with a mean age 40 years old (range 30-05 years), in Mataria Teaching Hospital. The mode of trauma was twisting injury in all patients. Patients were followed up for 4 months post operatively. All patients had under gone cannulated screws.

Method

Scareful history taking, general and local examination were performed in all patients. A written consent was taken in all patients. Plain X-ray was done "(antero-posterior, lateral and oblique views) patients were followed up post operatively for 4 months by AOFAS [(4)]

General or spinal anesthesia was done. The patient was adjusted in a lateral position. Sterilization was done, and pneumatic tourniquet was applied. A lateral skin incision 2-3 cm was done at the base of fifth metatarsal. Blunt dissection was performed using sissors. A guide wire was applied after reduction of the fracture. Then a cannulated drill pit was performed. A partially threaded 4 mm cannulated screw was inserted. Postoperatively, a below knee slab was made. Strong analgesics, antibiotic and antioedematous drugs were given for all patients. The patients were discharged at the same day of surgery.

FIGURE 1- Site of Incision

FIGURE 2- During Entry of Cannulated Screw

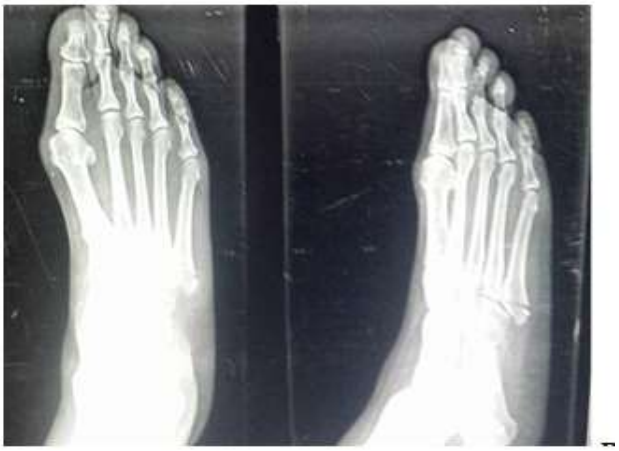

FIGURE 3- AP and Oblique Views Showing Fractur Base of Fifth Metatarsal Bone

FIGURE 4- Fixation by Cannulated Screw

FIGURE 5- AP View Showing Complete Union 4 Weeks Post-Operatively

FIGURE 6- AP View Showing Complete Union 8weeks Post-Operatively

RESULTS

All patients were followed up for 4 months postoperatively by AOFAS [4] 19 patients had excellent outcomes regarding pain, union. Only one patient had moderate pain with nonunion (comminuted case)

TABLE 1- Outcome of 20 Patients

Results	No.	%
Excellent	19	95%
Good	--	
Fair	1	5%

All of 19 patients had complete union with No pain. Only one case had fair result.

DISCUSSION

The young age in this study is 30 years old, and the oldest age is 50 years old and this is similar to Bssiooni *et al.* [5]

The ratio of females to males' number is (5:15) and this is Quiet different from Devries *et al.* [6] which was (2:18). The patients who had the excellent results were under the age of 45 years as Devries *et al* [6]. The mean follows up period was 4 months in comparison to Mohammed *et al.* [7] which was 6 months. All fractures were fixed with partially threaded cannulated screws (4 mm) as Orr, KO, Ostrum *et al.* [8,9,10] Rovinsky *et al.* [11] had used tension band fixation in their study but the results weren't good as cannulated screws.

In Metzl and Mologne[12,13] 4 patients has treated conservatively by below knee cost but 2 of them had developed non-union. The average time for union in our study was 6 weeks which was similar to Mahajan and Wang *et al.* [14,15].

CONCLUSION

Open reduction, internal fixation of fracture base of fifth metatarsal bone by cannulated screws is an effective method of treatment.

It leads to complete union, shout recovery, rapid return to normal daily activities.

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