

Revisited: A Prospective Study on Functional Outcome of Internal Fixation of Tibial Pilon Fractures with Locking Plate using MIPO

RASHID ANJUM¹, VIKAS CHOUDHARY², VIVEK SHARMA³

Keywords: Definitive fixation, Diabetes mellitus, Gustillo-Anderson classification

Sir,

We read with great interest the manuscript by Arjun Ballal et al., entitled "A Prospective Study on Functional Outcome of Internal Fixation of Tibial Pilon Fractures with Locking Plate using Minimally Invasive Plate Osteosynthesis Technique" [1]. We appreciate the effort taken by the authors for conducting this study. However, we would like to draw attention of authors and elaborate on the following:

1. The authors have specified inclusion criteria as skeletally mature patients with fresh intra-articular pilon fractures satisfying Ruedi Allgower classification criteria. However, they have not mentioned anything regarding open fractures/Gustillo-Anderson classification which is very important determinant of outcome [2]. Plating is usually not undertaken in Type 3 Gustillo-Anderson fractures. Moreover, the authors have not even mentioned the number of open fractures in their study.
2. The authors have removed stitches at 10 days however, the standard protocol is to remove at two weeks and it is also advised to delay suture removal for three to four days in pilon fractures associated with soft tissue compromise [3].
3. Any co-morbidities like diabetes hampers the outcome in pilon fractures. Authors have not taken into account of any co-morbid condition.

REFERENCES

- [1] Ballal A, Rai HR, Shetty SM, Mathias LJ, Shetty V, Shetty A. A prospective study on functional outcome of internal fixation of tibial pilon fractures with locking plate using minimally invasive plate osteosynthesis technique. *J Clin Diagn Res.* 2016;10(1):RC01-04.
- [2] Teeny Steven M, Wiss Donald A. Open reduction and internal fixation of tibial plafond fractures variables contributing to poor results and complications. *Clinical orthopaedics and Related Research.* 1993;292:108-11.
- [3] Gupta RK, Rohilla RK, Sangwan K, Singh V, Walia S. Locking plate fixation in distal metaphysealtibial fractures: series of 79 patients. *Int Orthop.* 2010;34(8):1285-90.

PARTICULARS OF CONTRIBUTORS:

1. Clinical Fellow Paediatric, Department of Orthopaedics, COC, Mumbai, Maharashtra, India.
2. Senior Resident, Department of Orthopaedics, MMIMSR, Ambala, Haryana, India.
3. Professor, Department of Orthopaedics, MMIMSR, Ambala, Haryana, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Rashid Anjum,
Clinical Fellow Paediatric Orthopaedics, COC, Mumbai, Maharashtra, India.
E-mail: raashidanjum@gmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **May 08, 2016**
Date of Peer Review: **May 26, 2016**
Date of Acceptance: **May 26, 2016**
Date of Publishing: **Oct 01, 2016**

AUTHORS' REPLY

We first of all thank the readers of our article and who were kind enough to point out the aforementioned queries. We hereby answer the questions pointed out by them:

1. A total of two patients with Gustillo-Anderson type I fractures presented to us. Both of them underwent wound debridement and external fixation on the day of presentation with fibular plating. Definitive fixation (locking plate fixation with MIPO technique) was done 10 days later after the appearance of 'wrinkle sign' of the skin. Both these cases had satisfactory functional outcome with no complications. There were no cases of open Gustillo-Anderson type II and III in our study. All the others were closed pilon fractures.
2. We performed suture removal in all our cases on post-operative day 10, only after confirming skin healing. In our centre, initially alternate suture removal is done on day 10 and skin is examined for wound gaping and only then complete suture removal is done. In our series no wound gaping was noted in all the cases on day 10 and hence, suture removal was done. The skin ulceration was noted in two patients on week six of review who were non-diabetic and non-hypertensive.
3. We had made a mention in the materials and methods that co-morbid conditions of diabetes mellitus and hypertension were addressed. We had a total of three patients who presented with associated diabetes mellitus. The blood glucose levels were closely monitored and the hospital physician was consulted to manage the levels. In fact, all of them had well controlled glucose levels even before the injury as they were on medications for management of diabetes mellitus prior to the fall. One of the three diabetic patients was also a hypertensive whose blood pressure was also well controlled after the consultation was taken from the cardiologist. No other co-morbidities were noted.

We hope we have answered all the questions to the reader's satisfactions.

Thanking you
Arjun Ballal