

Letter to the Editor: The Incidence of and Demographic Disparities among Fifth Metatarsal Fracture Nonunions

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To the editor,

We read the study by Flaherty et al.¹ with great interest. Fractures of the fifth metatarsal have always posed a dilemma to orthopedic surgeons regarding management and rehabilitation. The authors have published a large retrospective case series of 1,000 cases, which provides valuable insight to the management of these fractures. We would like to discuss the following points with the authors.

The authors have not provided data on the associated injuries along with the fifth metatarsal fracture and the nature and extent of soft tissue injuries. We would request the authors to clarify whether only isolated injuries of the fifth metatarsal were included or patients with associated injuries of the foot and ankle or any other long bone fractures/systemic injuries were also included in the study cohort, as these might have a bearing on the management of this injury and the postdischarge weight-bearing and the rehabilitation protocol.

As per the demographic comparison among various groups, the patients suffering from zone 2 injury had significantly higher mean weight as well as a significantly higher percentage of females when compared to zones 1 and 3. Both these factors were also seen to have significantly increased nonunion rates. Do the authors feel the higher rates of nonunion in zone 2 injuries (28%) could have been a confounding factor for these significant findings?

As per the authors, there was a highly significant difference in the mean weight between union and nonunion groups ($p = 0.002$). In Table 2, (Flaherty et al., 2023) the mean weight of the union group is 74.9 ± 18.5 kg as compared to 74.9 ± 21.4 kg for the nonunion group. We request the authors to clarify whether such a statistically significant difference was seen with the same mean value or whether it's a mistakenly reported value.

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Based on a comparison of the treatment protocol, the authors observed significantly lower union rates in zone 2 fractures among the patients treated conservatively. On the contrary, they observed no difference of union rate among all zone 2 fractures on the basis of treatment. A possible confounder for this could be the low percentage (8.9%) of fractures treated operatively in this study cohort. Based on the above facts, would the authors recommend a lower threshold for opting for operative management of such fractures? If not, what would be the authors' recommended direction for future research on this topic?

We would like to thank the authors for their valuable research and look forward to their reply.

REFERENCE

1. Flaherty A, Akhbari B, Ghaednia H, et al. The incidence of and demographic disparities among fifth metatarsal fracture nonunions. *J Foot Ankle Surg Asia-Pacific* 2023;10(1):8–12. DOI: 10.5005/jp-journals-10040-1275