

Zone 2 5th Metatarsal Fractures Treated Nonsurgically Have Similar Time to Healing to those Treated Operatively

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INTRODUCTION: The purpose of this study was to quantify the time to clinical and radiographic healing in Zone 2 proximal 5th metatarsal (MT) fractures and to compare these outcomes between Zone 2 fractures treated surgically and nonsurgically.

METHODS: A retrospective cohort study of all Zone 2 metatarsal fractures seen at a single large, urban, academic medical center between December 2012 and April 2022 was performed. Zone 2 injuries were defined as fractures entering the proximal 4-5 MT articulation on the oblique radiographic view. Clinical healing was characterized by the return to baseline ambulatory function without discomfort and a lack of tenderness on physical examination. Radiographic healing was defined as complete osseous consolidation.

RESULTS: A total of 374 patients with Zone 2 proximal 5th MT fractures were included in the analysis. The mean age of patients was 53.8 +/- 16.6 years, and 74.3% were female. In total, 93.3% of patients with Zone 2 metatarsal fractures were treated nonsurgically. In the nonsurgical group, 6.6% experienced delayed bony union with incomplete radiographic healing after 6 months, compared to 16.0% of the operative group ($p = 0.095$). However, by 1-year post-injury, 98.9% of patients who underwent nonsurgical management and 96.0% of operative patients demonstrated radiographic union. Two patients failed nonsurgical management and underwent operative fixation for symptomatic nonunions. There was no difference in time to radiographic healing between patients treated nonsurgically and those treated operatively (4.4 +/- 2.8 months vs. 5.4 +/- 4.7 months, $p = 0.413$). Similarly, there was no difference in time to clinical healing between both groups (2.3 +/- 1.9 months vs. 2.6 +/- 3.8 months, $p = 0.723$).

DISCUSSION AND CONCLUSION: Zone 2 5th metatarsal base fractures, which are often incorrectly referred to as Jones fractures despite being proximal to the fractures originally characterized by Jones, can be successfully treated with nonsurgical management. There is no evidence that operative treatment leads to significantly faster clinical or radiographic healing for patients.