

**Predictors of Outcomes in Diabetic Foot Osteomyelitis Treated Initially With Conservative (Nonsurgical) Medical Management: A Retrospective Study,** Zeun P, Gooday C, Nunney I, Dhatariya K. *Int J Low Extrem Wounds*. 2016;15(1):19-25.

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**Level of Evidence:** 3

**Reviewer:**

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Diabetic foot ulceration is one of the most common complications resulting in hospital admission. Diabetic foot osteomyelitis (DFO) complicates diabetic foot infections. The optimal management for DFO is controversial with limited evidence for initial treatment. Some authors promote a primarily surgical approach, while there are several retrospective case series promoting treatment of DFO with antibiotics alone. This study evaluated the influence of patient variables on the outcomes of DFO using the nonsurgical approach.

A retrospective study was conducted from July 2008 to December 2011. A diagnosis of DFO clinical suspicion and supportive radiographic features. All patients had plain radiographs, and a magnetic resonance imaging (MRI) was taken when osteomyelitis was indeterminate. Patients underwent standard management with ulcer debridement and pressure off-loading. In mild infections, co-amoxiclav was first choice. For moderate infection ciprofloxacin and metronidazole were added. With severe infections, patients would be admitted for intravenous piperacillin and tazobactam with or without vancomycin. Remission was defined as wound healing with no clinical or radiological signs of osteomyelitis 12 months after clinical and or radiological resolution without further surgical intervention or requirement for further antibiotic therapy.

85 patients met the fully criteria for analysis. After a 12-month follow-up, 54 (63.5%) had achieved remission with nonsurgical management alone with a median duration of 10.8 (10.1) weeks. In these patients, 14 (26%) were admitted for intravenous antibiotics. The absence of pedal pulse in the foot (n=34) was associated with longer duration of antibiotic therapy to achieve remission, 8.7 (7.1) vs 15.9 (13.3) weeks. Osteomyelitis of the metatarsal was more likely to be amputated than other sites of the foot.

This study showed that remission was achieved in 65.9% of DFO treated with nonsurgical management. The main limitation is study is being a retrospective cohort study, the study being a single-center study with relatively small sample size and limited by difficulties defining osteomyelitis.

In conclusion, this study showed that the absence of foot pulses on the affected side in the DFO is associated with longer duration of antibiotics until remission and that metatarsal DFO is more likely to undergo amputation than any other site of the foot.



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