

Time to healing and length of antibiotic therapy after conservative surgery of diabetic foot osteomyelitis. Preliminary report of a new cohort of patients.

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Aim: To analyze the time to healing and the length of postoperative antibiotic therapy after surgical treatment of diabetic foot osteomyelitis (DFO).

Methods: Preliminary report (1st November 2007 to 31 December 2009) on a new cohort of patients which will be finished on 30 April 2010 (30 months). The diagnosis of bone infection was made using a combination of probe-to-bone-test (PTBT) and simple x-ray of the foot. Samples were extracted for analysis by microbiological and pathological laboratories.

Results: During the period studied, we surgically treated 55 patients with 60 episodes of DFO. One patient was treated as an outpatient and 59 required admission to our unit.

9 patients presented non-necrotizing soft tissue infections associated with bone infection and 11 patients presented necrotizing soft tissue infections associated with bone infection. PTBT was positive in 56 cases and negative in 4 cases (Prevalence=65.8%, Sensitivity: 94.4%, Specificity: 82.1%, positive predictive value: 91% and negative predictive value: 88.4%).

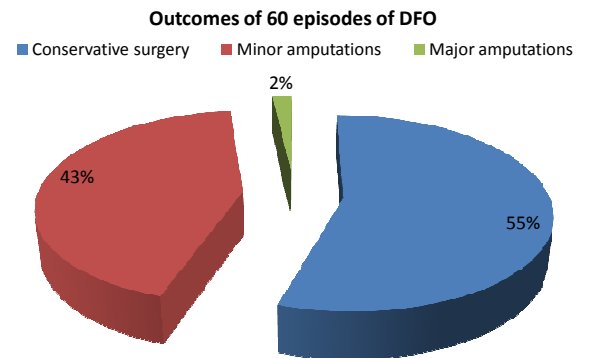
33 episodes were treated by means of conservative surgery (55%), 26 by minor amputation (43.3%) and 1 by major amputation (1.7%). 3 patients (5%) died during the postoperative period (30 days).

Before admission to our hospital, 41 patients (74.5%) were given antibiotic treatment prescribed by other teams for a median of 30 days (Interquartil range, IQR=33).

Bone biopsy cultures showed the following results: 3 bacteria were isolated in one case, two bacteria were isolated in 15, one bacterium in 30 and no bacteria were cultured in 9 cases. Staphylococcus aureus was the most frequent bacterium isolated (n=23, 41.8% cultures). **Negative bone cultures were not statistically associated with previous antibiotic therapy (Fisher's exact test, p=0.37).**

The median period for endovenous antibiotic therapy was 7 days (IQR=9) and for oral antibiotic therapy the median was 26.5 days (IQR=17). **The median total length of antibiotic therapy in this series was 35 days (IQR=14).**

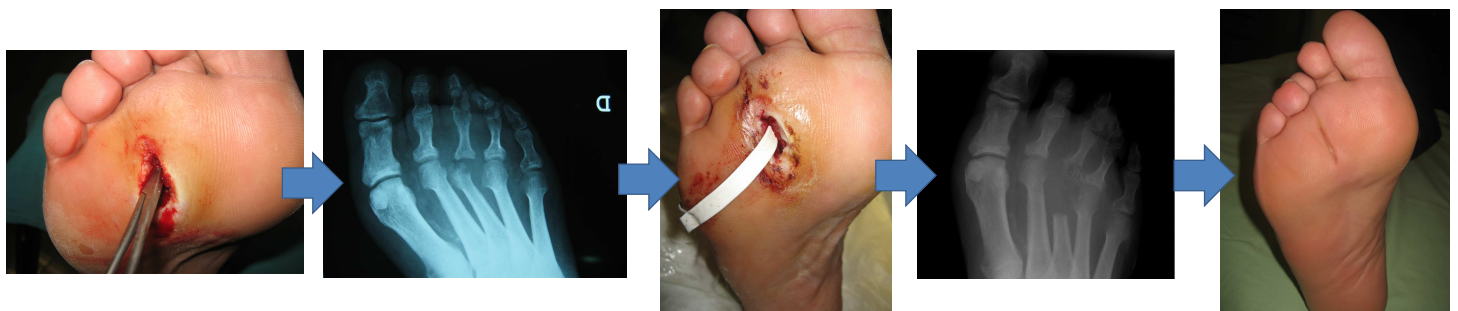
After excluding 3 patients who died in the postoperative period, 2 patients who died with the wound unhealed after discharge from hospital, 1 patient who was lost for follow-up and 3 patients who are undergoing healing, the median time to achieve healing was **64 days (IQR=81.5).**



Conservative surgery for osteomyelitis in the third toe Total healing: 33 days



Conservative surgery for osteomyelitis in the third metatarsal head Total healing: 34 days



Conclusions: Diabetic foot osteomyelitis has a variety of clinical manifestations but it can be successfully treated achieving healing by conservative surgery followed by a moderate period of antibiotic treatment.