

Low Amputation & High Recurrence Rates of Osteomyelitis in the Foot Clinic

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Background: Osteomyelitis is thought to complicate approximately 20% of diabetic foot ulcers and controversy surrounds its management. Recent evidence suggests that good outcomes can be obtained with antibiotic therapy and conservative use of surgery. However, the literature suggests that while low amputation rates of ~25% can be achieved with such an approach, recurrence rates tend to be high at ~30%. We were therefore interested to bench-mark our own outcomes in a busy, regional tertiary referral diabetes foot clinic. **Subjects and Methods:** Between Nov' 2007 and Nov' 2008, 46 consecutive patients attending our diabetic foot clinic with foot ulcers and clinical signs of osteomyelitis were enrolled. The diagnosis of osteomyelitis was determined by MRI or X-ray. 20 patients with 23 cases of radiographically confirmed osteomyelitis were then followed for a mean of 14.6 months (range 4 - 22) to assess clinical outcomes. **Results:** **Baseline characteristics:** 6 patients (30%) had a previous healed ulcer at the same site, 11 patients (55%) had previous osteomyelitis (in 10 patients, at other sites) and 4 patients (20%) had had a previous amputation. In 19 of 23 cases (83%) the ulcer had been present for > 1 month, 74% (17 cases) affected a toe, 30% (7 cases) affected an MTP joint. **Antibiotic therapy:** 52% (12 cases) received more than 3 months of therapy, 39% (9 cases) required at least 1 course of intravenous therapy and the median number of different agents used was 4 (range 1-8). A diabetic foot antibiotic protocol has since been introduced. **Outcomes:** At the end of follow up, 19 patients (95%) went on to achieve complete wound healing, with 16 patients (80%) achieving remission of osteomyelitis without surgery. Three toe amputations and 1 metatarsal head resection were performed, no major amputations were undertaken. Re-ulceration rates and recurrence of osteomyelitis were 60% (12 patients) and 35% (7 patients) respectively. Of the 7 patients who developed further osteomyelitis during the study period only 1 of these was at the original site. At the end of the study, 5 patients (25%) had died, 10 patients (50%) were still under active follow up in the clinic and 5 patients (25%) were healed and well. **Discussion:** These data demonstrate the high remission and low amputation rates that can be achieved with prolonged antibiotic therapy and a multidisciplinary team approach. These findings also suggest that patients with a history of osteomyelitis require long term monitoring as they are at high risk of developing further ulceration and osteomyelitis.