

Surgical outpatient management of neuropathic ulcers complicated with osteomyelitis in forefoot. M. Lladó Diabetic Foot Area, Endocrinology Service, Son Espases University Hospital, Palma de Mallorca, Balearic Islands, SPAIN

Background: Osteomyelitis is the most frequent and feared complication of the neuropathic ulcer, and it precedes the amputation in 80% of cases. The classic treatment is the amputation of the anatomical infected area, or a prolonged antibiotic treatment, with questionable effectiveness when the infection affects the bone and the articular joint. However, any small amputation, has unfavorable biomechanical consequences, and it is therefore essential preserve the integrity of the foot to maintain its function and to prevent new pressure points that can lead to new ulcers, and therefore new potential amputations. **Objective:** Show a simple therapeutic method in cases of neuropathic ulcer complicated by osteomyelitis in the forefoot (interphalangeal and metatarsophalangeal joints), to resolve this complication without the need to amputate the affected anatomical area. **Methods:** We have taken a sample of 25 patients, aged between 37 and 75 years with a mean time of diagnosis of diabetes of 9 years. The screening done each one matched the total lack of pressure, vibration and pain sensitivity, and distal pulses present or with ABI above 0.7. All of them had neuropathic ulcers located in the forefoot: 13 patients with interphalangeal joint ulcer and 12 in metatarsophalangeal joint, and 9 of them had previous amputations. The average duration of the ulcer was 1.2 years, complicated with osteomyelitis in admission time. The diagnosis of osteomyelitis was made with RX, probe-to-bone test, and verification of elevated ESR and CRP. In those cases that was possible (4 of 25) we took a bone sample for histological analysis and diagnosis of osteomyelitis. For empirical antibiotic treatment we used amoxicillin/clavulanic acid in acute ulcers, and clindamycin and ciprofloxacin in chronic ulcers. After the diagnosis of osteomyelitis and the stabilization of glycemic control, pain and infection in the patient cases that had required urgent admission (7 patients of 25), we proceeded to prepare a surgical field and through the ulcer we removed the infected bone tissue as less traumatic as possible, taking a bone sample for microbiological study. After, we scraped and cleaned the cavity well and placed a Penrose type drain that was retired at 48 hours in all cases. Antibiotic treatment was maintained for 4 to 6 weeks, which was adjusted in necessary cases when was obtained the results of microbiological culture. **Results:** After practicing this technique on an outpatient basis, all cases were healed at an average of 43 days, with an effective offload, and an appropriate topical care to keep the ulcer clean and with an optional moisture. In cases where hospitalization was required average time of stay was 8 days. **Conclusion:** While still in many places the conventional treatment of osteomyelitis is the amputation of the affected anatomical area, is essential to raise other less invasive and conservative methods. Specially in patients who have good distal arterial perfusion that in many cases are young, and once that amputees have many more possibilities of new ulcers by decreasing the surface area of support, neuropathy and biomechanical imbalance. The presented method is rapid, inexpensive, does not need OR, and we can avoid many amputations and therefore substantially reduce the social costs generated by this complication. In addition, the psychological impact for the patient is much less than an amputation, and helps to enhance a diabetological education to adopt good prevention guidelines.