

P20

Surgical treatment of diabetic forefoot osteomyelitis

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Background: Osteomyelitis is one of the most frequent infections of the diabetic foot. The treatment of osteomyelitis of the foot in diabetic patients continues to be debated, most experts considered that the standard should be the surgical removal of infected bone. Aim of this study is to determine efficacy and relapse rate of surgical treatment of osteomyelitis. Materials and Methods: we performed a surgical removal of infected bone in 206 consecutives diabetic patients. Forefoot osteomyelitis were confirmed by probe to bone test and radiological signs of osteomyelitis. Results: osteomyelitis were localized in 140 patients at phalangeal level (68%), in remaining 66 patients at metatarsal head level: 19 first head (9%), 9 second head (4%), 5 third head (3%), 4 forth head (2%), 29 fifth head (14%). Bone culture was performed in 122 patients, in 118 patients was positive and Staphylococcus aureus was the organism isolated in majority of cultures (42%). Kind of surgical treatment: 152 conservative surgical procedures were performed (74%), in the remaining cases: 23 distal finger amputations, 20 finger amputations, 11 ray amputations. 154 patients (75%) healed, mean healing time was 62 ± 42 days. Causes of healing failure were: 19 patients for ischemic relapse, 21 patients for residual osteomyelitis, 12 patients for other causes. 37 patients (18%) healed with a second surgical procedure. Once healed wound relapse was observed in only 5 patients (3%) in a mean follow up of 12 ± 4 months. Conclusions: surgical removal of infected bone in forefoot osteomyelitis seem a safe procedure with an elevated healing rate and large possibility of conservative management. Relapse rate is low when healing is reached.