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Surgical treatment of fifth metatarso-phalangeal joint osteomyelitis

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Background: Foot ulcers are a frequent complication of patients suffering with diabetes mellitus accounting for up to 20% of diabetes related hospital admission. Secondary infection of these ulcers with bone involvement is by far the leading cause of amputation of feet. Wound and osteomyelitis of fifth metatarso-phalangeal joint (MPJ) are very frequent in diabetic foot. Treatment of osteomyelitis can be done removing infected bone or fifth MPJ with or without removing fifth finger. **Methods:** We analysed 32 surgical treatment of fifth MPJ osteomyelitis performed in 29 diabetic patients during the last two years. Before surgical treatment color-duplex imaging, transcutaneous oximetry and detection of neuropathy were performed. Patients with critical limb ischaemia were revascularized with angioplasty. Osteomyelitis was confirmed by X-ray and/or with bone culture performed before surgical treatment. **Results:** Patients presented a mean age of 68±8 years (mean ± SD), HbA1c was 8,5±2,5, history of diabetes 16±8 years. Peripheral neuropathy was detected in 26 limbs, peripheral arterial disease in 18 limbs, in 12 limbs the two complications were associated. Mean transcutaneous oximetry was 42±12mmHg. X-ray identified presence of osteomyelitis in 23 foot. Bone culture was positive in 90% of cases, gram positive organisms were predominant, St. Aureus was the most prevalent microorganism. We performed surgical treatment with fifth finger amputation 11 cases and fifth finger conservation in 18. Patients with and without finger removal presented similar characteristics for age, diabetes history, transcutaneous oximetry, presence of neuropathy and vascular disease. Healing results were similar, we obtain healing in 94% of treatment, in 17(53%) cases for first intention. Three cases not healed (two in the group with finger conservation) for ischemic relapse. In one case we observed a charcot foot two months after surgical treatment. In the mean follow up of 10±5 months we observe three wound relapse (two in patients with fifth finger removal). Patient satisfaction was better in group with finger conservation and intervention was good accepted. **Conclusions:** surgical treatment of fifth mpj present a good options to heal a lesion with presence of osteomyelitis. Surgical treatment with finger conservation is safe, presents a low rate of relapse and it is good accepted to the patients.