

Surgical treatment of diabetic foot syndrome

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Today improvements in surgical treatment of diabetic foot syndrome in patients with diabetes mellitus are associated with the most possible preservation of the lower extremity's bearing function.

Aim: to study advantages of the 1st toe phalanx amputation with preservation of the metatarsal head over traditional resection of the 1st metatarsal bone.

Materials and methods: we examined 159 patients (59 men, 57.8%, and 67 women, 42.2%, aged from 38 to 75, mean age 56.5) with the 1st toe gangrene referred to the "Diabetic Foot" department within the period from 2001 to 2007. There were 91% and 9% patients with type I and type II diabetes mellitus among the examinees, respectively, with the disease duration from 8 to 26 years. The patients were divided into two groups by metatarsal head amputation (1st group) or preservation (2nd group). The surgery included the 1st toe exarticulation, the altered tendon excision and the tendon-antagonist intersection through lateral incision at the distance of 7 cm away from the medial foot edge with subsequent wound closure. The metatarsal head resection was performed as indicated with the digital tendon excision. With the foot anatomy taken into account the limb immobilization is mandatory, the latter performed by removable plaster splint. The 2nd toe deformation accompanied with trophic ulcers took place in 39% of the patients, the event unobserved in patients with the preserved metatarsal heads. **Conclusions:** removal of tendons-antagonists is preferable upon the 1st toe exarticulation. The metatarsal head preservation results in decrease of the post-operational 2nd toe deformation and ulcer formation. Physiological foot fixation by means of removable plaster splint helps improve wound healing and prevent proximal pyo-necrosis spread.