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Analysis of metatarsophalangeal joint resection in patients with diabetic foot in regards to transmetatarsal amputation.

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Background: Diabetic ulcers are the result of abnormally high foot pressure. The conventional transmetatarsal amputation (TMT) often involves the sacrifice of healthy tissue. On the other hand, resection of metatarsophalangeal joint (MTP) saves the toe(s). The aim of our retrospective study was to compare the one-year healing tendency and risk of reamputation of these two surgical techniques. **Methods:** All diabetic patiens after MTP joint resection (40 amputations in 37 patients) and single TMT amputation (121 amputations in 103 patients) performed at our hospital between 2002-2006 were involved in the study. The follow-up period was 1 year. The number of healed amputations and the amount of re-amputations as the result of poor healing were compared between groups. The demographic data of the patients were (TMT vs MTP group): age (65±12 vs 59±14 years), sex (male 85% vs 84,2%) and frequency of vascular interventions (50 vs 58%).
Results: One year after MTP joint resection, 37 of 40 (92,5%) wounds were healed. After TMT amputation, 94 of 121 (77,7%) stumps were healed. Wound healing was significantly better in patients after MTP joint resection ($p<0.05$). The number of re-amputations after MTP joint resection was 1/40 (2,5%) and after TMT amputation 20/121 (16,5%), respectively. Re-amputation was significantly more frequent after TMT amputation ($p<0.05$). **Conclusion:** The results of our retrospective study show that the resection of metatarsophalangeal joint is safe method with a statistically better healing tendency and a lower need for reamputations compared to transmetatarsal amputation. The crucial for healing is good compliance of the patient, offloading and the treatment of infection.