

Outcome after surgical treatment of diabetic foot ulcers with the aim to achieve primary woundhealing in a multidisciplinary setting.

K. Zink¹, K. Stumptner², M. Zoller², A. Saueressig², C. Imhof¹, J. Stumpf³, H. Burgwal³, H. Schweiger⁴, G. Müller², T. Haak¹ Diabetes-Klinik Bad Mergentheim, Bad Mergentheim, Germany² Caritas Krankenhaus Bad Mergentheim, Germany³ IETEC GmbH, Fulda, Germany⁴ Herz-und Gefäßklinik Bad Neustadt/Saale

In a cohort of 440 Patients with diabetic foot ulcers receiving treatment in the year 2009, 80 of these needed minor amputations. Among these 14 received a second amputation, 8 patients had MRSA, 5 ESRD. Some of these patients were admitted to our hospital with previous open amputations which again had caused foot infections like phlegmons or osteomyelitis. Our aim was to achieve primary woundhealing. The approaches and the outcome are described below. Patients: 57 men, 23 women, 70±11years old, HbA1c 7,5% ± 1,5, Krea 1,88 ± 2,06 g/dl, GFR 53 ± 26 ml/min. Indication for amputation: Gangrene 30, Osteomyelitis 52, wounds after previous amputations 6, severe woundinfections 2, charcot foot 1, Haemangioma 1. 39 Patients had previous amputations on the affected foot 13,9 ± 32,5 weeks before. 7 open amputations and 13 which had not achieved woundhealing. 42 patients needed revascularisation (RV): PTA 35 (3 femoral, 14 lower leg, 18 combined), Bypasses 12 (fem-pop 3, fem-crural 2, pop-pedal 7, 2 failed), combined 5, incl. 3 TEAs. (10 patients had 2 RV.). Amputations: 12 x Dig1, 12 x Dig 2-5, 9 x first ray, 8 x Ray 2-4, 15 x Ray 5, 27 transmetatarsal forefoot amp., 3 Chopart-Amp., 5 surgical of soft tissue, 2 stump revisions, 1 bone resection in charcot foot. 54 treatments were done with NPWT (neg. pressure wound treatment), 3 times with VAC[®], 51 with normal Redon-drains and PU-foams. 6 patients required 2 NPWT cycles, 2 patients 3 cycles. Times in hospital for patients with RV: In our unit before RV 9 ± 4 days, for RV 8,6 ± 4,8 days, again in our unit 28 ± 9,6 days; and without: 30,5 ± 10,3 days only in our unit. Outcome: In 58 procedures in 48 Patients (73% procedures, 61% patients) we achieved primary woundhealing, 10 of them also after the second intervention, 19 (20%) had a superficial secondary woundhealing, which healed completely in a mean period of 9 ± 4,9 weeks. 2 healed after revision surgery, 5 patients suffered a lower limb amputation (2 failed distal bypasses, 3 without further possibility of RV), 7 did not achieve complete woundhealing up to now (5 without further possibility of RV). 1 died due to cardiac failure. Summary: In the multidisciplinary approach using aggressive RV and treatment with NPWT in infected diabetic foot ulcers, it is possible to achieve complete woundhealing in 84% of the patients in an acceptable time, 61% of them healed primarily