

Impact of Amputation Site on the Risk of Reulceration. A Retrospective Analysis of Ulceration-Free Survival Time

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Background and Aims: Patients with partial foot amputation have a high risk for reulceration (RU) and for re-amputation. The impact of amputation site (forefoot, ray amputation) on the future risk for RU is little known. In this study we analysed the prognosis of patients with different amputation sites (forefoot (FFA), one ray amputation (ORA) or two or more ray amputation (TRA)) with regard to RU. Primary outcome was the RU free survival time. **Material and Methods:** In this study Patients with a foot amputation between Sep 2009 and Dec 2011 were included. Incidence of new foot ulceration was assessed in March 2013. The mean follow-up period was 2.5 ± 0.87 years. Patients were divided into 3 subgroups according to their amputation site (FFA, ORA and TRA). Kaplan-Meier analysis was performed to determine ulceration free survival time. Log rank tests were performed to test significance of observed different survival time. **Results:** In this study 118 patients (92 male (78%)), mean age 68 ± 12 years were included, 55% had a revascularization before first amputation. In these patients 77 (55%) underwent a FFA, 37 (26%) an ORA and 26 (19%) a TRA. 8 (6%) of these procedures were followed by major amputation due to poor wound healing. 4 patients were lost for follow-up. 61 (48%) patients reulcerated, 27 (21%) died, 19 of them without a RU. 30 (22%) need a further reamputation. (FFA 13 (11%), ORA 10 (8%), TRA 7 (6%) $p=0.47$). The risk of Ulceration free time differed significantly with regard to amputation site (Tarone-ware log rank test, $p=0.002$). The longest RU free survival was observed in patients with FFA (mean of 626 ulcer free days), whereas patients with an ORA had a mean of 466 ulcer free days. The shortest time until RU was assessed in the patients with TRA (mean of 373 days). **Conclusion:** The amputation site seems to have a significant impact on the further prognosis of patients with diabetic foot syndrome with regard to RU. ORA and TRA seems to have a poorer prognosis than FFA. Offering a FFA to patients who need a further ray amputation may be discussed.