

Main predictors for recurrence of diabetic foot ulcers: infection-related factors and diabetes control

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Background and Aims: Factors affecting risk and healing of diabetic foot ulcers (DFU) could be different from factors affecting the recurrence of DFU. The aim of the study was to assess risk factors for ulcer recurrence in patients with healed foot during the 3-year follow-up. **Methods:** Inclusion criteria for our follow-up study were patients with healed observational foot after completing Eurodiale study. From 93 healed patients during our 3 year follow-up 14 patients died and from 79 living patients 73 were included into this study (drop-out was 6 persons = 7.6 %). Among them 6/73 (8.2 %) were healed after minor amputation. Ulcer recurrence was defined as a new full thickness lesion appeared on the observational foot during the follow-up period. Potential risk factors for ulcer recurrence were selected from risk factors for unsuccessful ulcer healing such as: patient-related factors - age, sex, duration and treatment of diabetes, HbA1c > 7.5 % (with normal values < 6 %), obesity, end-stage renal disease; ulcer-related factors - peripheral arterial disease (PAD), osteomyelitis (assessed by X-ray), clinical signs of infection and CRP (abnormal values ≥ 5 mg/l); foot status (ulcer depth, amputation, local signs of infection) and miscellaneous factors (distance from hospital, smoking, chronic alcohol use). All risk factors were assessed by the first presentation of foot ulcers during the entry visit of Eurodiale study. For statistical analysis were used chi-square test and stepwise logistic regression. **Results:** The ulcer recurrence was observed in 42/73 (57.5 %) of patients during 3 years follow-up. Stepwise logistic regression of all potential risk factors showed that presence of osteomyelitis (OR 6.02, 95 % CI 1.55 - 23.4), value of HbA1c > 7.5 % (OR 5.21, 95 % CI 1.25 - 21.8) and blood level of CRP ≥ 5 mg/l (OR 3.79, 95 % CI 0.99 - 14.5) were independent predictors for recurrence of DFU. Other assessed risk factors weren't significant in stepwise logistic regression. **Conclusion:** Results of our study reflect importance of accurate diagnosis of osteomyelitis and monitoring blood level of CRP in determination of risk of ulcer recurrence. HbA1c may reflect not only worse diabetes control but also patient's compliance with ulcer treatment.

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