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Risk factors of recurrent diabetic foot ulcers: results of 6-year follow-up study.

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Background and Aims: Foot ulcers in diabetic patients are characterized with high recurrence rate. The causes of ulcer relapses and their risk factors depend on studied population, availability of orthopedic care and other circumstances. We aimed to investigate the ulcer relapses and their risk factors in patients with diabetic foot in Russian population. **Patients and Methods:** 421 patients with 723 foot ulcers were recruited in out-patient foot-clinic and followed $6,2 \pm 2,9$ yrs. Mean age of the group was $58,7 \pm 12,3$ yrs, duration of diabetes $18,1 \pm 7,7$ yrs, type 1/2 DM: 185/236. Relapse was estimated as the foot ulcer located at the same foot region as primary ulcer and developed at least 2 months later after complete healing of primary ulcer. Data about quantity of recurrence, number and severity of foot deformities were collected. Physical activity was measured by counting of number steps per day. Questionnaire, foot and shoes inspection were used to evaluate the patient's compliance. Relative risks as odds ratio (OR) were calculated. **Results:** 176 patients (42%) presented 499 recurrent ulcers (69%) with mean number of relapses 2,8 per patient. Patients with relapses (PR) had more severe neuropathy (OR=1,7) and foot deformities (OR=4,98), history of foot ulcer and/or minor amputation (RR=1,8) and male sex (OR=1,2) compared with patients with 1 ulcer (P1u) (for all OR $p < 0,05$). Compliance score was lower in PR vs P1u ($2,8 \pm 2,2$ vs $4,5 \pm 2,6$; $p < 0,05$). Problems with daily foot care and use of orthopedic footwear were strongly associated with relapse (OR=2,4; $p < 0,05$). Daily physical activity in PR group was slightly higher (6670 ± 2734 vs 5208 ± 1429 in P1u steps per day, ns). **Conclusion:** Studied group is characterized with high ulcer recurrence rate. Main risk factors of relapse were foot deformities, non-compliance with footwear and self-care. These data suggest implementation of re-education and individual manufacturing of footwear for patients with very high risk of foot ulcer.