

PRIZE 01

Differences in minor amputation rates in European diabetic foot centres are largely explained by differences in disease severity at presentation

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Background and aims: Minor amputation is a frequent consequence of diabetic foot ulcers. So far, determinants of minor amputation have not been studied systematically and the current literature suggests that the incidence of minor amputation may vary significantly between centres and countries. We have therefore investigated: 1) the determinants of minor amputation; 2) the differences in amputation rates between 14 centres from 11 European countries; and 3) the extent to which centre differences in amputation rates could be explained by differences in disease severity at presentation. **Materials and Methods:** We examined 1088 patients from the Eurodiale study, a prospective cohort study of patients with new diabetic foot ulcers who were followed, on a monthly basis, until healing, death, major amputation or up to a maximum of 1 year. Ulcers were treated according to international guidelines. Patient, foot and ulcer characteristics were obtained at baseline and data on any minor amputation were collected on a monthly basis. Multiple logistic analyses were used to ascertain the baseline characteristics independently associated with minor amputation. A severity score was then calculated, for each patient, on the basis of these characteristics. Finally, we examined the correlation between the amputation rates and the mean patient's severity scores of each centre. **Results:** 194 (18%) patients underwent a minor amputation. Baseline factors independently associated with minor amputation were, depth of the ulcer (OR=6.08, CI: 4.10-9.03), peripheral arterial disease (OR=1.84, 1.30-2.60), infection (OR=1.56, 1.05-2.30) and male sex (OR=1.42, 0.99-2.04). Minor amputation rate across centres varied between 2.4% and 34% and these rates were strongly associated with the patient's severity score ($r=0.75$). **Conclusions:** Minor amputation is performed frequently in diabetic foot centres throughout Europe and primarily determined by depth of the ulcer, PAD, infection and male sex. Differences between the different European centres can be explained, to a great extent, by differences in patient's level of disease severity at presentation. Our findings suggest that amputation rates should not be used as an indicator of quality of care, given the large variance in patient's initial disease severity across centres, which may also be related to regional or national differences in health care organisation.