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A Comparative Study of Outcomes of Patients With Diabetic Foot Lesions Managed with an Off-Loading Device, Dar es Salaam, Tanzania.

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Background: Foot ulcers in persons with diabetes are the leading cause of non-traumatic lower limb amputation in Tanzania; recent data indicate such ulcers are more likely due to infection rather than neuropathy or vascular disease. Unlike developed nations, where off-loading devices have proven effective in ulcer healing, there are no published data that demonstrate the effectiveness of such devices among diabetes populations in Africa. **Objectives:** To determine the utility of a locally made shoe as an off-loading device in the management of foot ulcers among persons with diabetes who attend Muhimbili National Hospital (MNH) diabetes clinic. **Methods:** During Sept 1995 through Dec 2005 (study period), consecutive adult diabetes patients with foot ulcers were evaluated and enrolled after informed consent. Detailed clinical and epidemiologic data were recorded and patients were randomly given custom-made off-loading shoes according to the site of the foot ulcer. We followed up patients in the MNH clinic to document progress and outcomes. **Results:** Of 885 patients enrolled during the study period, 589 (66%) were male, 660 (75%) were African (vs. 16% Asian), 861 (97%) had type 2 diabetes, 762 (86%) had peripheral vascular disease, 763 (86%) had peripheral neuropathy, and 129 (15%) were fitted with custom-made shoes. All patients received at least one course of antibiotics. The median age and body mass index was 54 (range: 14-98) years and 24.8 (range: 14-45) kg/m^2, respectively. Forty-four (5%) patients died from causes attributed to complication from their foot ulcer. The median time to healing was 49 days. On multivariate analysis using logistic regression, independent correlates for total healing of ulcers were female sex ($p < 0.01$), age <50 ($p < 0.001$), sloughectomy ($p < 0.01$), or tissue loss grade ($p < 0.01$). **Conclusion:** In conclusion, we did not document any significant advantage in using a locally made shoe to achieve total healing of foot ulcers in our study population, even among patients with severe ulcers. Adjunct surgery, antibiotics, and education focused on targeted groups of patients appear to be playing a major role in achieving total healing of ulcers.