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Mid-term results of a diabetic foot unit: a multidisciplinary approach

Sanchez Rios JP, Alfayate Garcia JM, De Benito Fernández L, Cancer Perez S, Criado Galan F, Puras Mallagray E. Diabetic Foot Unit. Vascular Surgery Unit. Hospital Universitario Fundación Alcorcón, Madrid. Spain

Introduction: In recent years, there has been a growing interest in multidisciplinary units dedicated to diabetic foot treatment. Our group has created one such units based on the “toe and flow” model to manage these patients. **Aim:** To present our mid term results since Diabetic Foot Unit creation in November 2009. **Material and methods:** All diabetic foot patients with or without active ulcer from November 2009 to July 2012 were included. Every patient had a neurologic screening with plantar surface sensitivity by 10-g Semmes-Weinstein Monofilament and vibratory threshold by biothesiometer. Neuropathic symptoms and presence Charcot neuroarthropathy were included. Vascular screening was also performed with physical examination, ABI, TcPO₂ and Duplex scan. Biomechanical study were done in all patients. On follow-up we evaluated wound closure, the rates of reulceration, and minor and mayor amputation, and the need and type of revascularization and survival. Statistical analysis included *Student t* study for mean comparison, chi squared test for proportion comparison and Kaplan-Meier plot for survival analysis. SPSS 15.0 for Windows was used. **Results:** 277 diabetic patients were included. Mean age was 67.97+/-12.39, 74% were male, 61.4% were insulin-dependent and 40.6% had a bad metabolic control. Mean diabetes duration was 18.2+/-11.97 years, 51.6% have had an ulcer and 26.1% have had an amputation. On initial visit, 81.94% had an active ulcer, 75% had neurologic impairment and 56.6% had absent pedal pulses. 388 ulcers were present in 227 patients located in toes 59.27%, forefoot 20.1%, midfoot 5.41% and rearfoot 15.2%. According to Texas classification we had complicated grade B 10.58%, grade C 49.5% and grade D 22.68%. According to depth, ulcers were grade I 49.5%, grade II 24.2% and grade III 26.1%. A total of 519 ulcers were treated in which wound closure was obtained in 74.18% at a median of 10.35 weeks. Minor amputation was needed in 22.73% of the cases, mayor amputation in 7.92% and 5.05% of patients died. Reulceration rate was 33.04% during the study period. Comparing the results of the first year of life of our Diabetic Foot Unit with the previous year, we could reduce the mayor amputation rate by 28.12%. Besides, economic costs were reduced by the equivalent to 45,395 €. **Conclusions:** From the implementation of a Diabetic Foot Unit in our Vascular Surgery Service we have been able to improve wound closure and reduce the number of mayor amputations. An economic benefit was also obtained. These results justify the creation of these multidisciplinary units based in the “toe and flow” model.