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Infected diabetic ulcers, when to amputate

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Abstract

Introduction: In 2030 diabetes will cause one amputation every 20 seconds. Currently 10 to 20% of all diabetic patients develop infected foot ulcers that recur 40% of the time within one year, even when adequately treated by antibiotics, angioplasty or bypass. Therefore, factors other than infection and peripheral artery disease must be incriminated in wound healing in diabetic patients. The identification of those factors is the subject of our study.

Methodology: A retrospective study done at CHU-NDS (Centre Hospitalier Notre Dame De Secours) included all patients with infected diabetic ulcers between 2012 and 2017. Age was recorded as well as: gender, HbA1c (Hemoglobin A1c), coronary heart disease, antihypertension treatment, creatinine, CRP (C reactive protein), ejection fraction, total cholesterol level and previous amputations. All our patients were followed by an infectious disease specialist, an orthopedist and a vascular surgeon.

Results: 139 diabetic ulcers in total were recorded; 83 were infected and 36 underwent amputation (25.9%). Amongst the amputated patients, 25 were males, 22 were > 65YO, 14 had HbA1c > 8, 31 had CAD, 23 had previous amputations, 25 had CRP > 80, 14 had an EF < 50% and 17 were treated by dihydropyridine.

Conclusions: We concluded that HbA1c > 8%, coronary heart disease, ejection fraction < 50%, CRP above 80 mg/L, as well as history of previous amputations were risk factors for amputation. Moreover, patients treated with dihydropyridine calcium channel blockers showed less ulcer prevalence and less amputation procedures.

Key words: infected ulcers; diabetes; amputation.

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