



Medicine

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Risk factors associated with diabetic foot complications in Kuwait

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Introduction:

Foot ulcers and amputations are a major cause of morbidity, disability, as well as emotional and economic costs. Early recognition and management of independent risk factors for ulcers and amputations can prevent or delay the onset of adverse outcomes. This study is conducted to identify the risk factors associated with diabetic foot complications (DFC).

Methods:

Demographic and clinical data were collected for a sample of 55 diabetic patients who presented to Surgical Department with DFC from February to October 2011. Controls were selected from a pool of diabetic patients followed up in the diabetic outpatient clinic, and they were matched by gender, nationality, and type of diabetes.

Results:

The mean age was 59.8 ± 11.7 and 57.8 ± 10.4 years for cases and controls respectively. Cases had a notable longer duration of diabetes compared to controls (17.7 ± 9.6 vs. 14.2 ± 9.7 years, $p=0.063$). Among the studied cases, foot ulceration was the main presentation in 37 patients (67.3%), and ten patients (18.2%) had gangrene. The majority of the cases (98.2%) had type 2 diabetes, 56.4% were male, 65.5% were Kuwaitis, and 9.1% were current smokers. Amputation was done for 14 cases. Longer duration of diabetes ($+20$ years), current smoking, and presence of diabetic neuropathy (DN), peripheral vascular disease (PVD), retinopathy, and treatment with insulin were the significant factors associated with DFC in both the univariate and multivariate regression analyses. DN and PVD were the strongest significant factors ($p<0.001$).

Conclusions:

DN and PVD were the strongest risk factors for DFC. Other factors included longer duration of diabetes, current smoking, treatment with insulin, and presence of retinopathy. Identifying patients at highest risk for developing DFC can improve the quality of diabetes services by targeting these patients for early prevention and treatment, thereby reducing the disability and costs associated with diabetic foot disease.

Key Words: Diabetes; Foot Complication; Risk Factors

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