

Risk Factors for Foot Problems among Patients with Type 2 Diabetes and Chronic Kidney Disease

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Objective –Determine the prevalence of foot problems among patients with Type 2 Diabetes Mellitus and Chronic Kidney Disease and identify the risk factors that predispose these patients to foot problems.

Design and Methods – We implemented an analytical cross-sectional study of patients with type 2 Diabetes and Chronic Kidney Disease (stage I-V) consulting at the National Kidney and Transplant Institute. Foot problems were assessed by inspection, palpation, the Michigan Neuropathy Screening Instrument, and measuring the ankle brachial index. Risk factors for foot problems were analyzed by univariate and multivariate logistic regression.

Results – We analyzed 104 patients with type 2 diabetes and chronic kidney disease (mean age 47 years; 48%male; 88% CKD stage V; 73% on dialysis). We found a prevalence of 49% of foot problems (73% neuropathy; 69% neuro-ischemia; 45% peripheral arterial disease, 8% amputation, 6% active foot ulcerations and 4% foot deformities). In univariate statistical analysis, independent risk factors for foot problems were: history of coronary artery disease (odds ratio 4.1[95%CI 1.2-13.9]), history of stroke (9.6[1.2-80.4]), dialytic therapy (3.3[1.3-8.3]), HbA1c (p=0.008), cholesterol (p=0.048), triglycerides (p=0.018), and stage of CKD (p=0.041). In multivariate logistic analysis risk factors for foot problems were history of coronary artery disease (OR 16.3), dialytic therapy (OR 7.6), cholesterol (OR 1.08) and triglycerides (OR 1.04).

Conclusions – The high prevalence of foot problems strongly favors the establishment of preventive foot strategies within the context of a multidisciplinary team. Patients on dialytic therapy with coronary artery disease and hyperlipidemia should be prioritized for these preventive programs.