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Risk Factors for “At-Risk Foot” in Diabetes

Diabetic foot is an ominous complication of diabetes. Diabetic neuropathy and peripheral arterial disease predispose to diabetic foot disease leading to amputation of the foot in due course of time, a process, which may be hastened by infection. Early identification of the “at-risk foot” in these patients may prevent development of a diabetic foot ulcer.

A study involving 3030 Chinese adults with type 2 diabetes attempted to examine the prevalence and factors affecting the at-risk foot in patients with diabetes.

These patients had been a part of an at-risk foot screening program in Shanghai from March 2021 through to April 2021. Data for the study was collected via questionnaires, physical examination and laboratory investigations.

Analysis of data revealed the presence of at-risk foot in almost 28% of the patients with diabetes included in the study. The chances of having at-risk foot increased with advancing age, higher urine albumin creatinine ratio (UACR) and reduced eGFR with odds ratios of 1.04, 1.00 and 0.99 respectively.

Eleven percent of patients with diabetes had peripheral artery disease. While age, pulse rate and low-density lipoprotein cholesterol (LDL-C) were independently associated with elevated risk for peripheral artery disease, factors such as eGFR, lymphocyte-to-monocyte ratio and high-density lipoprotein cholesterol (HDL-C) were found to be protective. There was no association between levels of glycosylated hemoglobin (HbA1c) and the risk of severe peripheral artery disease.

This study highlights the high prevalence of at-risk foot in diabetes patients. It has also delineated risk factors that are associated with increased risk of having at-risk foot, of which, the most significant risk factors were older age and renal impairment. Presence of these risk factors should alert the clinician about an impending diabetic foot and take proactive measures to prevent its occurrence.

Reference

1. Ren B, Li B, Pan T, Zhao E, Ju S, Li X, et al. Risk factors for at-risk foot and peripheral artery disease among the population with diabetes: A multicomunity-based cross-sectional study. *Diabetes Res Clin Pract.* 2023;203:110869.

