UKPDS 59: hyperglycemia and other potentially modifiable risk factors for peripheral vascular disease in type 2 diabetes.

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OBJECTIVE: To determine the role of hyperglycemia in prospective analyses of peripheral vascular disease (PVD) in type 2 diabetes, taking into account other potential risk factors. RESEARCH DESIGN AND METHODS: Potential risk factors for the development of PVD were examined in 3,834 of 5,102 individuals enrolled in the U.K. Prospective Diabetes Study (UKPDS) without PVD at diagnosis of diabetes, followed for 6 years, and for whom relevant data were available. PVD was defined as two of the following: ankle-arm blood pressure index < 0.8, absence of both dorsalis pedis and posterior tibial pulses to palpation in one or both legs, and intermittent claudication. Logistic regression was used to estimate the association between potential risk factors measured 3-4 months after diagnosis of diabetes and incident PVD. The prevalence of PVD at 3-year intervals to 18 years was determined. RESULTS: Hyperglycemia, assessed as HbA(1c), was associated with an increased risk for incident PVD, independent of other risk factors including age, increased systolic blood pressure, reduced HDL cholesterol, smoking, prior cardiovascular disease, peripheral sensory neuropathy, and retinopathy. Each 1% increase in HbA(1c) was associated with a 28% increased risk of PVD (95% CI 12-46), and each 10-mmHg increase in systolic blood pressure with a 25% increase in risk (95% CI 10-43). CONCLUSIONS: Hyperglycemia, as well as smoking, dyslipidemia, and blood pressure are potentially modifiable risk factors for the development of PVD.