United Kingdom Prospective Diabetes Study, 30: diabetic retinopathy at diagnosis of non-insulin-dependent diabetes mellitus and associated risk factors.

Kohner,EM; Aldington,SJ; Stratton,IM; Manley,SE; Holman,RR; Matthews,DR; Turner,RC

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OBJECTIVES: To report on the prevalence of retinopathy in patients with newly diagnosed non-insulin-dependent diabetes mellitus (NIDDM) and to evaluate the relationship of retinopathy to clinical and biochemical variables. DESIGN: A multicenter, randomized, controlled clinical study of therapy in patients with NIDDM. SETTING AND PATIENTS: Patients were part of the United Kingdom Prospective Diabetes Study, a 23-center study of 2964 white patients who had both eyes photographed and assessed. OUTCOME MEASURES: The presence and severity of diabetic retinopathy were evaluated by sex, and the relationship of retinopathy to medical and biochemical parameters was assessed. RESULTS: Retinopathy, defined as microaneurysms or worse lesions in at least 1 eye, was present in 39% of men and 35% of women. Marked retinopathy with cotton wool spots or intraretinal microvascular abnormalities was present in 8% of men and 4% of women. The severity of retinopathy was related in both sexes to higher fasting plasma glucose levels, higher systolic and diastolic blood pressure, lower serum insulin levels, and reduced beta-cell function. In addition, in men, increased alcohol consumption was related to increased severity of retinopathy, while leaner women had more severe eye lesions. Visual acuity was normal in most patients, but in men there was a trend for those with more severe retinal lesions to have worse visual acuity. CONCLUSIONS: Diabetic retinopathy is common in patients with newly diagnosed NIDDM. Careful ophthalmic assessment at diagnosis is important.