UK Prospective Diabetes Study 6. Complications in newly diagnosed type 2 diabetic patients and their association with different clinical and biochemical risk factors.

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The prevalence of various diabetic complications, their association with each other and with many risk factors, has been assessed in 2,337 newly diagnosed Type 2 diabetic patients. The patients entered into the UK Prospective Diabetes Study were aged between 25 and 65 (mean age 52 yr) and 33% had either an abnormal ECG or retinopathy. Different macrovascular complications such as strokes, heart attacks or abnormal ECG, and peripheral vascular disease showed little association one with another, and each was associated predominantly with different risk factors, e.g., strokes with hypertension, heart attacks with hypertriglyceridaemia and peripheral vascular disease with smoking and a low HDL cholesterol. Retinopathy was associated with reduced vibration perception but not with other complications. Reduced vibration perception and absent reflexes were associated with absent foot pulses and ischaemic skin changes, raising the possibility of a macrovascular, as well as microvascular, contribution to peripheral neuropathy. Microalbuminuria was associated with hypertension, which might be a factor predisposing to renal microvascular disease or be a consequence of it. Microalbuminuria was also associated with an abnormal ECG. Retinopathy, with exudates and or haemorrhages rather than just microaneurysms, was associated with hyperglycaemia. The occurrence of a particular complication in a diabetic patient is probably dependent on a combination of specific risk factors, many of which are related to, and probably affected by, potentially avoidable factors such as hyperglycaemia, obesity, smoking and hypertension.