

Prevalence of Undiagnosed Dysglycaemia in Adults at High Risk of Cardiovascular Disease

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Diabetes (2009); **58**: Suppl 1: A639

Aim

Population-based screening for cardiovascular disease (CVD) risk including measurements of glucose, is proposed in several countries. We aimed to determine the prevalence of undiagnosed dysglycemia in adults at high CVD risk.

Methods

Adults aged 40-70 years at high CVD risk (Framingham derived 10-year CVD risk $\geq 20\%$) but without a previous CVD event, from four general practices in Oxfordshire, UK (n=1333) were invited to take part. 187 adults agreed. Each participant underwent a 75g anhydrous Oral Glucose Tolerance Test (0 and 120 minute glucose sampling) and routine clinical information was also collected.

Results

For those invited to participate the median (IQR) age was 60.4 (53.4, 65.0) years and 61% were male.

Participants were median (IQR) age 62.4(56.3, 66.1) years 67% men, 98% white Caucasian. 18% had type 2 diabetes, 2% type 1 diabetes, 8% dysglycaemia (an elevated blood glucose level on at least one previous occasion) and 72% no known diabetes or dysglycaemia. There were 19% current smokers. Mean (SD) blood pressure was 141.4 (18.2)/82.2 (10.7) mmHg, total:HDL cholesterol ratio 3.9 (1.1). Their median (IQR) BMI was 27.4 (25.2, 30.8) kg/m², HbA1c 5.5 (5.3, 5.8) %. Mean (SD) estimated 10-year CVD risk was 42.9 (16.3) % using the Framingham risk equations for individuals without diabetes and the UKPDS Risk Engine version 3 for individuals with diabetes.

Of the 135 individuals without any previously known dysglycaemia 12 (9%) were diagnosed with type 2 diabetes, 19 (14%) with IGT (120 minute glucose ≥ 140 but ≤ 200 mg/dl), 22 (16%) with IFG (fasting glucose ≥ 110 but ≤ 126 mg/dl) and 11 (8%) with both IFG and IGT.

Conclusions

Our results confirm that adults at high risk of CVD are also at high risk of undiagnosed dysglycaemia. Half of participants without previously known diabetes or dysglycaemia were identified as a result of the study. The United Kingdom government vascular screening programme for all adults aged 40-74 years is likely to find large numbers of individuals with diabetes and dysglycaemia and needs to address their subsequent management. In addition, the issue of ensuring younger people are screened requires attention.