Relationship between ethnicity and glycaemic control, lipid profiles, and blood pressure during the first 9 years of type 2 diabetes: U.K. Prospective Diabetes Study (UKPDS 55).

Davis,TM; Cull,CA; Holman,RR
U.K. Prospective Diabetes Study UKPDS Group

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OBJECTIVE: To assess the relationship among self-reported ethnicity, metabolic control, and blood pressure during treatment of type 2 diabetes. RESEARCH DESIGN AND METHODS: We studied 2,999 newly diagnosed type 2 diabetic patients recruited to the U.K. Prospective Diabetes Study who were randomized to conventional or intensive glucose control policies if their fasting plasma glucose levels remained >6 mmol/l after a dietary run-in. A total of 2,484 patients (83%) were white Caucasian (WC), 265 patients (9%) were Afro-Caribbean (AC), and 250 patients (8%) were Asian of Indian origin (IA). Variables were assessed at 3, 6, and 9 years. RESULTS: During the 9-year study period, body weight increased more in WC patients (mean 5.0 kg) than in AC (3.0 kg) and IA (2.5 kg) patients ($P < 0.001$). After adjusting for age, sex, baseline value, treatment allocation, and change in weight, there were no consistent ethnic differences in mean change in fasting plasma glucose or HbA(1c). After adjustment for antihypertensive therapy, increase in systolic blood pressure at 9 years was greatest in AC patients (7 mmHg; $P < 0.01$ vs. WC patients). Mean diastolic blood pressure, total cholesterol, and LDL cholesterol decreased progressively during the 9 years in each group. In AC patients, the mean increase in HDL cholesterol (0.16 mmol/l) at 3 years, maintained to 9 years, and the mean decrease in plasma triglyceride level (0.4 mmol/l) at 9 years were greater than in WC and IA patients ($P < 0.001$). CONCLUSIONS: This study shows important ethnic differences in body weight, lipid profiles, and blood pressure, but not glycemic control, during 9 years after diagnosis of type 2 diabetes. AC patients maintained the most favorable lipid profiles, but hypertension developed in more AC patients than WC or IA patients. Ethnicity-specific glycemic control of type 2 diabetes seems unnecessary, but other risk factors need to be addressed independently.