Differences in the Prevalence of the Metabolic Syndrome between Ethnic Groups in Recently Diagnosed Type 2 Diabetes in the North American Cohort of the ADOPT Study

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Background and Aims: Previous studies have reported ethnic differences in the prevalence of the Metabolic Syndrome (NHANES III), but few data exist in diabetes. This analysis set out to assess ethnic differences in the prevalence of the Metabolic Syndrome in a cohort of patients from the ADOPT study (a global, randomised, controlled clinical trial). **Materials and Methods:** Subjects had recently diagnosed (≤ 3 years) type 2 diabetes and fasting glucose < 10 mmol/l at study entry. The prevalence of the Metabolic Syndrome using NCEP ATP III (National Cholesterol Education Program Adult Treatment Panel III) criteria was assessed in different ethnic groups from the North American cohort of the study [Caucasians (n = 1756), African Americans (n = 164), Asian Americans (n = 74) and Others (principally Hispanic; n = 215)]. **Results:** The highest rate of the Metabolic Syndrome was in Caucasians. The pattern of abnormalities differed, with prevalence of all 5 criteria 3-fold higher in Caucasians than in Asian Americans. C-reactive protein (CRP) levels were lowest in Asian Americans, possibly reflecting differences in adiposity, or insulin resistance.

	Caucasians	African Americans	Asian Americans	Others	***P***
BMI (kg/m^2)	33.0 ± 6.0	34.5 ± 6.5	28.2 ± 4.7	33.1 ± 6.3	< 0.0001*
HOMA IR (μU/ml.mmol/l)†	7.2 (7.0, 7.5)	7.1 (6.4, 7.8)	5.5 (4.8, 6.4)	7.4 (6.7, 8.0)	< 0.0001*
CRP (mg/dl)†	0.38 (0.35, 0.41)	0.49 (0.39, 0.61)	0.16 (0.11, 0.20)	0.40 (0.33,0.48)	0.0003*
Metabolic Syndrome +ve (%)	83.4	75.0	60.8	76.7	< 0.001**
Diabetes (%)	100	100	100	100	
HTN (%)	73.1	78.0	58.1	63.3	< 0.001**
Low HDL (%)	52.7	39.6	41.9	48.8	< 0.01**
High TG (%)	63.4	32.9	48.6	54.0	< 0.001**
Waist Circ (%)	72.9	75.0	43.2	65.6	< 0.001**
All 5 criteria (%)	25.3	12.8	8.1	14.0	< 0.001**
* Ethnic difference by ANOVA adjusted for age and gender; **Chi-square test of association between criterion satisfaction and ethnicity. †Geometric mean (95% CI)					

Conclusions: There are marked differences in the prevalence of the Metabolic Syndrome, in addition to insulin resistance and subclinical inflammation among the different ethnic groups studied. This may translate into differences in the prevalence of cardiovascular disease.