

ABSTRACT

Lipid Profile in Non-Insulin Dependent Diabetes Mellitus in the Jamaican Population

Lorenzo Augustus Gordon

A transverse study was done at The University of the West Indies with the purpose to compare the lipid profile between non-insulin dependent diabetes mellitus and nondiabetic subjects of the Jamaican Population. Blood sugar measurements were done using haemo-glucotest 20-800R glucosticks from Boehringer Mannheim with the Accu-Chek II glucometer. The lipid fractions were analysed using the Abbott Super VP System with Sigma diagnostics: Total cholesterol by enzymatic method; triglycerides by hydrolysis by lipase followed by coupled enzyme reactions; HDL-Cholesterol by the precipitation method using phosphotungstic manganese; LDL-Cholesterol by calculation. We studied 2108 subjects (402 non-insulin dependent diabetes mellitus and 1706 nondiabetics). Statistical analysis was performed using an available statistics package (Epi-Info Version 6.0) installed in the Department of Biochemistry.

The principal differences found between both groups were as follows (Units MMoles/ml): For the obese diabetic men, the mean triglyceride (1.65) was higher than the obese nondiabetic men (1.45), showing a significant difference ($P=0.038560$). For the obese diabetic women, the mean triglyceride (1.67) was higher than the obese nondiabetic women (1.51) ($P=0.018588$). The hypertensive obese diabetic men mean triglyceride (1.96) was higher than the hypertensive obese nondiabetic men (1.53) ($P=0.007491$). The mean LDL cholesterol was higher in the hypertensive obese diabetic men (3.29) than obese nondiabetic men (2.99) ($P=0.043630$); mean total cholesterol was higher in the hypertensive obese diabetic men (5.37) than the hypertensive obese nondiabetic men (4.67) ($P=0.031276$). The hypertensive obese diabetic women mean triglyceride (2.0) was higher than the hypertensive obese nondiabetic women (1.76), ($P=0.045888$). Mean LDL cholesterol was higher in the hypertensive obese diabetic women (3.42) than obese nondiabetic women mean (2.87), ($P=0.041410$); Mean total cholesterol in hyperten-

sive obese diabetic women (5.41) was higher than the hypertensive obese nondiabetic women (4.91) ($P=0.042238$).

Our results indicate that non-insulin dependent diabetes mellitus associated with obesity and hypertension altogether increases significantly the lipid profile in non-insulin dependent diabetes mellitus in comparison with nondiabetic subjects in the Jamaican Population.