THE PREVALENCE OF METABOLIC SYNDROME IN YOUNG ACUTE CORONARY SYNDROME PATIENTS

INTRODUCTION: The metabolic syndrome (syndrome X, insulin resistance syndrome) consists of a constellation of metabolic abnormalities that confer increased risk of cardiovascular disease (CVD) and diabetes mellitus. The prevalence of the metabolic syndrome varies around the world, depending on the age and ethnicity of the populations studied and the diagnostic criteria applied.

AIM: To ascertain the prevalence of metabolic syndrome in young acute coronary syndrome (ACS) patients.

MATERIALS AND METHODS: Patients aged < 45 years hospitalized with the first episode of ACS were categorized based on the NCEP-ATP III CRITERIA for metabolic syndrome. Laboratory assessments included obtaining venous blood samples in a fasted state for the determination of lipid components (total cholesterol (TC), HDL-C, LDL-C and TG, and total lipid) and blood glucose. Serum glucose and lipids were measured by International Federation of Clinical Chemistry approved enzymatic methods using commercially available kits. Blood pressure was measured using a sphygmomanometer and elevated blood pressure according to NCEP:ATPIII was diagnosed if the systolic blood pressure was higher than 130mmHg or the diastolic blood pressure was above 85 mmHg. Waist circumference was evaluated at midway between the iliac crest and the last rib.

RESULTS: In our study, the metabolic syndrome, as defined by the NCEP ATP III criteria, was found in 23 patients (46%) of the study population. The fasting blood glucose was the most common NCEP ATP III determinant elevated in patients with or without the metabolic syndrome, about 72%. The prevalence of other components were raised triglyceride levels (50%), low HDL cholesterol levels (40%), increased waist hip ratio (16%) and elevated systolic blood pressure (48%). The mean age of the sample population was 38.48. The mean fasting blood sugar level was found to be 147.87mg/dl in patients with metabolic syndrome and 116.44 mg/dl in patients without metabolic syndrome.

CONCLUSION: The prevalence of metabolic syndrome in young patients presented with acute coronary syndrome was found to be around 46%. The fasting blood glucose was the most common NCEP ATP III determinant elevated in patients with or without the metabolic syndrome, about 72%. This high prevalence of metabolic syndrome in young population reinforces the need for a comprehensive non communicable disease prevention and control program. Increasing awareness and early identification of the clusters of risk factors should be emphasized in designing population wide prevention strategies. When the full spectrum of various aetiological factors and risk markers of CVD risk in metabolic syndrome is uncovered, we can more effectively implement concrete preventive strategies in the community on a wide scale.

Keywords: metabolic syndrome, NCEP ATP III criteria, young CAD.