Incidence and clinical characteristics of the metabolic syndrome in patients with coronary artery disease.

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Several studies suggested that the insulin resistance-associated metabolic syndrome (MS) is a major risk factor for coronary artery disease (CAD), but the criteria to identify MS were only recently standardized by the National Cholesterol Education Program (NCEP) Adult Treatment Panel (ATP) III.

We evaluated the incidence of the newly defined MS in patients with documented CAD and compared the characteristics of patients with and without this syndrome.

In a Canadian population with CAD (793 men and 315 women, age 58.1+/−9.8 years) 51% had MS. As compared to patients without the MS syndrome, these patients had significantly higher waist circumference, blood pressure levels and fasting glucose and triglyceride, but lower high-density lipoprotein (HDL)-cholesterol levels. Their homeostatic model assessment (HOMA) insulin resistance index was significantly higher, with indicators of highly atherogenic, small low-density lipoprotein (LDL) and HDL particles. Family history of diabetes and the use of hypoglycemic agents, beta-blockers and thiazides were more frequent, but physical exercise and alcohol consumption were less frequent in MS positive patients. Cumulative coronary stenosis score and the frequency of patients with >50% coronary artery narrowing were higher and there was a strong tendency for higher rates of previous myocardial infarction in MS positive patients.

In a CAD population documented in 1991-1992, 51% of participants had MS and in several respects a more advanced coronary disease than those without the syndrome. These results support the view of NCEP ATP III, that in CAD prevention, beyond lowering LDL-cholesterol levels, interventions concerning the constituents of MS should be important.