

# Key Role of Low HDL Cholesterol for the Association of the Metabolic Syndrome With Inflammation in Coronary Patients

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Thematic topic: Medicine

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## INTRODUCTION/BACKGROUND (MAIN TITLE)

The association of the metabolic syndrome (MetS) and of the individual MetS stigmata with inflammation in patients with established coronary artery disease (CAD) has not been investigated yet.

## MATERIAL & METHODS

We enrolled 728 consecutive patients with angiographically proven stable CAD. According to National Cholesterol Education Programme Adult Treatment Panel III criteria, the MetS was defined in the presence of at least 3 out of the 5 quantitatively defined criteria large waist circumference, low HDL cholesterol, high triglycerides, high blood pressure, and elevated fasting glucose.

## RESULTS

In univariate analyses, hsCRP was higher in patients with the MetS (n = 284) than in those who did not have the MetS (0.49 vs. 0.41 mg/dl; p <0.001), and also was higher in patients who fulfilled the large waist (0.48 vs. 0.40 mg/dl; p <0.001), the low HDL (0.48 vs. 0.40 mg/dl; p <0.001) and the elevated fasting glucose (0.48 vs. 0.45 mg/dl; p = 0.003) criteria than in those who did not. Importantly however, after adjustment for age, gender, smoking and LDL cholesterol by means of analysis of covariance only the low HDL cholesterol criterion (F = 21.22; p <0.001) remained significantly associated with hsCRP. The significant and independent association of low HDL with hsCRP was confirmed after additional adjustment for all other MetS traits (F = 22.26; p <0.001).

## CONCLUSIONS & OUTLOOK

We conclude that among patients with angiographically proven stable CAD, low HDL cholesterol drives the association between the MetS and subclinical inflammation. This observation is well in line with the paramount role of low HDL cholesterol as a marker of cardiovascular risk in this important patient population.