MRP8/14 is associated with systemic inflammation in stable coronary atherosclerosis in men.

Abstract:
MRP8/14, a secreted heterodimeric protein complex secreted upon phagocyte activation, plays an important role in atherogenesis and vascular injury. Phagocyte activation is crucially involved in the development of atherosclerotic processes, and MRP8/14 levels have also been linked to acute cardiovascular events. We investigated whether circulating MRP8/14 correlates to chronic coronary artery disease (CAD) stages in this observational, cross-sectional study. A total of 240 male subjects undergoing elective coronary angiography were included in the study. CAD was present in 166 individuals, whereas 74 subjects were classified without prevalent CAD (control subjects). The atherosclerotic burden was obtained by three independent angiographic scores: the Severity, Gensini and Extent Score. Serum MRP8/14 levels were measured by ELISA. They were associated with hs-CRP, IL-6 and fibrinogen levels ($r = 0.43$, $r = 0.40$ and $r = 0.44$, respectively; all $P < 0.001$). However, MRP8/14 was neither associated with any other cardiovascular disease risk factor nor did serum levels differ between patients with stable CAD ($0.82 - 0.55 - 1.14$ mg/mL) and control subjects ($0.91 - 0.63 - 1.30$ mg/mL; $P = 0.69$). Moreover, atherosclerotic wall irregularities did not demonstrate any association with circulating MRP8/14. The phagocyte activation
marker MRP8/14 is significantly associated with markers of systemic inflammation in male patients with CAD. However, we were unable to find a correlation between circulating MRP8/14 complex and stable CAD.