OSTEOPONTIN AND OSTEOPROTGERIN SERUM LEVELS ARE ASSOCIATED WITH ARTERIAL STIFFNESS IN CORONARY ARTERY DISEASE

ACC Poster Contributions
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Background: Osteopontin (OPN) and osteoprotgerin (OPG) have recently emerged as key factors in both vascular remodeling and development of atherosclerosis. Arterial stiffness is a significant factor of clinical evaluation in patients with coronary artery disease (CAD). The study was designed to evaluate the relation between serum concentration of OPN and OPG and arterial function in CAD.

Methods: We enrolled 126 patients with CAD (mean aged 61±11 years), and 103 control subjects (mean aged 61±12 years). Serum OPN and OPG levels were measured, using ELISA. Carotid-femoral pulse wave velocity (PWV) was measured as an index of aortic stiffness and augmentation index (AIx) as a measure of arterial wave reflections.

Results: Compared to control, CAD patients had significantly increased PWV (8.42 ± 1.99 m/sec vs 9.00 ± 2.29 m/sec, p<0.005) and increased AIx (24.41 ± 7.05% vs 26.55 ± 6.47%, p<0.005). In CAD patients OPN levels were associated with AIx (r=0.163, p<0.005). Moreover, in CAD patients OPG levels were significantly associated with PWV (r=0.576, p<0.001) and AIx (r=0.333, p<0.005).

Conclusion: Our findings indicate that CAD patients have impaired arterial performance. The degree of arterial dysfunction is associated with serum OPN and OPG levels in CAD.