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SERUM OSTEOPROTEGERIN LEVELS AND LONG-TERM PROGNOSIS IN SUBJECTS WITH STABLE CORONARY ARTERY DISEASE

ACC Poster Contributions

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Objectives This study was designed to assess the association between serum osteoprotegerin (OPG) level and long-term prognosis in patients with stable coronary artery disease.

Background OPG is a secretory glycoprotein which belongs to the tumor necrosis factor receptor family. OPG immunoreactivity was demonstrated in the normal blood vessels and in early atherosclerotic lesions. In a previous study, we showed that high serum OPG levels are associated with progression of coronary artery disease (CAD)

Methods We performed a prospective, observational cohort study in 225 subjects to examine whether serum OPG level can predict cardiovascular mortality. The median OPG levels were 1.02 ng/ml at baseline.

Results During the follow-up (61 ± 25 months), 27 deaths occurred including 14 cardiovascular deaths. When the subjects were divided into 3 groups according to serum OPG level, the group with high serum OPG showed a higher risk for cardiovascular mortality ($P = 0.017$ by Kaplan-Meier analysis and log-rank test). Multivariate Cox proportional hazards model indicated that the higher risk of cardiovascular death in the high OPG level group remained significant (hazards ratio of 2.93, 95%CI 1.02-8.44, $P = 0.046$) and was independent of presence of diabetes. In contrast, serum OPG level was not associated with non-cardiovascular mortality.

Conclusions Our data show that serum OPG level is an independent predictor of cardiovascular mortality in patients with stable coronary artery disease.

