Chronic CAD/Stable Ischemic Heart Disease

PERSISTENT ELEVATED LEVELS OF MRP 8/14 AND CARDIOVASCULAR EVENTS AFTER DES IMPLANTATION IN PATIENTS WITH STABLE ANGINA PECTORIS

ACC Moderated Poster Contributions
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Background: Myeloid-related protein (MRP) 8/14, a heterodimer of S100A8 (10.8 kD) and S100A9 (13.2 kD), is expressed in activated human neutrophils and macrophages. The present study was designed to investigate the time-course of changes in serum MRP-8/14 levels in patients with stable angina pectoris (SAP) undergoing drug-eluting stent (DES) implantation. Furthermore, we investigated whether serum MRP-8/14 levels predict future cardiovascular events.

Methods: Serum MRP-8/14 levels and high sensitivity C-reactive protein (hs-CRP) were measured in 162 SAP patients. Measurements were taken at baseline (before DES implantation) and during the chronic phase (2 weeks after DES implantation), and the findings were related to cardiovascular events during follow-up. Cardiovascular events were defined as cardiac death, acute coronary syndrome, target vessel revascularization (TVR) or non-TVR.

Results: Serum MRP-8/14 levels during the chronic phase were significantly increased compared with baseline (baseline, 0.69±0.52; chronic phase, 0.91±0.59 μg/dl, P<0.0001). In contrast, serum hs-CRP levels during the chronic phase were not significantly increased. Over a mean follow-up period of 26±17 months, 49 patients (30%) had cardiac events. Patients were classified into 2 groups based on the median MRP-8/14 value during the chronic phase (low-MRP-8/14 group ≤ 0.74, high-MRP-8/14 group > 0.74 μg/ml). Kaplan-Meier survival curves showed that the high group had significantly worse outcomes than the low group (P=0.0187 by log-rank test). However, when patients were classified into two groups based on the median hs-CRP levels (0.01mg/dl) during the chronic phase, no significant differences between the 2 groups. Multivariate logistic regression analysis showed that elevated MRP-8/14 levels during the chronic phase was the only independent predictor of cardiovascular events (odds ratio, 2.74; 95% confidence interval, 1.24 to 6.04; P=0.013).

Conclusion: These findings suggest that the persistence of increased levels of serum MRP-8/14 is closely associated with restenosis and plaque instability in patients with SAP after DES implantation.