



Relationship between serum neopterin levels and coronary heart disease

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ABSTRACT. The relationship between serum neopterin levels and coronary heart disease (CHD) was investigated. Eighty-six CHD patients were divided into an acute myocardial infarction (AMI) group (N = 21), an unstable angina pectoris (UAP) group (N = 35), and a stable angina pectoris (SAP) group (N = 30), based on coronary angiography (CAG), 30 subjects without CHD served as the control group. Serum neopterin levels were determined by enzyme linked immunosorbent assay (ELISA), and relationships between neopterin and the severity of stenosis, stenosis number, and the stability of coronary artery were analyzed. Serum neopterin levels were higher in the AMI and UAP groups than in the SAP and control groups ($P < 0.01$), but no significant differences were observed between the AMI and UAP groups or between the SAP and control groups ($P > 0.05$). Mean serum neopterin levels were higher in the single, double, and three vessel lesion groups than in the control group ($P < 0.05$), whereas there were no significant differences among the lesion groups ($P > 0.05$). Serum levels of neopterin were significantly higher in the type II than in the type I or type III, plaque groups ($P < 0.01$), the incidence of type II plaque was significantly higher in the AMI and UAP groups compared to the SAP group ($P < 0.01$). Neopterin likely plays a role in the occurrence and development of athermanous plaque and can serve

as a useful biomarker of vulnerable plaques. Immunoreaction may be involved in the pathophysiological process of CHD.

Key words: Neopterin; Coronary artery; Coronary heart disease