CARDY-25

RELATIONSHIP BETWEEN SERUM LEVELS OF INFLAMMATORY MARKERS AND CORONARY VASOSPASM WITHOUT HEMODYNAMICALLY SIGNIFICANT CORONARY ARTERY DISEASE

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BACKGROUND: Inflammation plays a key role in all phases of atherosclerosis. However, no previous study has demonstrated an association between the serum markers of the inflammatory pathway and coronary vasospasm.

METHODS: Serum levels of inflammatory markers [interleukin-6 (IL-6), monocyte chemoattractant protein-1, soluble intercellular adhesion molecule-1 (sICAM-1) and soluble vascular adhesion molecule-1, and C-reactive protein] were measured at baseline in serum samples from 189 patients admitted for coronary angiography because of suspected ischemic heart disease. The median duration of follow-up was 28 months.

RESULTS: Patients in our sample were enrolled in four diagnostic groups: without hemodynamically significant coronary artery disease (CAD) and no coronary vasospasm (control; n=32); hemodynamically significant CAD and stable angina pectoris (SAP; n=34); coronary vasospastic angina pectoris without hemodynamically significant CAD (vasospasm; n=31) and ACS; and hemodynamically significant CAD (ACS; n=92). Overall, the level of serum inflammatory markers was highest in the ACS group and lowest in the controls, with intermediate values observed in the SAP and vasospasm groups, with the exception of sICAM-1, the level of which was highest in the vasospasm group. Multivariate analysis showed that Log (IL-6) was independently associated with a diagnosis of coronary vasospastic angina pectoris in patients without hemodynamically significant CAD (odds ratio=8.48; p=0.027). The ACS group had a significantly lower survival rate than the other three groups but no independent predictor could be identified in this patient cohort. Recurrent angina pectoris occurred with similar rates in the SAP, vasospasm, and ACS groups. The independent predictor for recurrent angina pectoris was treatment that did not include clopidogrel (odds ratio=3.88; p=0.007).

CONCLUSION: Inflammation can exist in coronary vasospasm without hemodynamically significant CAD.

Keyword: coronary spasm, inflammation