

The Impact of High Sensitivity C-reactive Protein Level on Coronary Artery Spasm as Assessed by Intracoronary Acetylcholine Provocation Test

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The aim of this study is to evaluate whether the elevated hs CRP level negatively impact on the coronary artery spasm (CAS) by intracoronary acetylcholine (ACh) provocation test. A total of 1,729 consecutive pts without significant CAD who underwent coronary angiography with intracoronary ACh provocation test between November 2004 and August 2010 were analyzed. The pts were divided into five groups according to quintiles of hs CRP levels. During ACh test, the incidences of significant CAS, ischemic ECG change, multivessel and diffuse CAS were highest in C5. Multivariate analysis showed that age (OR=1.01, CI; 1.0-1.02, p=0.0226), myocardial bridge (OR=3.34, CI; 2.16-5.17, p<0.001), and C5 (OR=1.54, CI; 1.12-2.18, p=0.0079) were independent predictors of ACh induced CAS. Clinical outcomes including mortality, myocardial infarction, revascularization, and chest pain were similar between five groups up to 12 months. Patients with elevated hs CRP were associated with higher incidence of CAS, ischemic ECG change, and vulnerability to lower dose of ACh, suggesting more intensive medical treatment would be required.