Chromosome 2 marker as a risk factor for atherosclerosis

Adámková V.1, Hubáček JA.1, Staněk V.1, Mesanyová J.1, Vráblík M.2, Češka R.2, Piťha J.1, 2
1Institute for Clinical and Experimental Medicine ,Prague Czech Republic
2 III. Department of Internal Medicine 1. Medical Faculty, Charles University, Prague

Introduction: Cardiovascular disease (CVD) caused more than 50 % of deaths in Czech Republic. Attention is therefore recently focused on genetic variants that are associated with these conventional risk factors. One is the rs2943634 marker on chromosome 2 geneless area, which was recognized as a risk factor for CVD in Western populations. We analyzed the relationship of rs2943634 variants and risk of acute coronary syndrome (ACS) in the Czech population.

Methods: Rs2943634 (C → A) variant was successfully analyzed (CR = 97.5%) by PCR-RFLP at the 1162 controls (male, age to 65 years, the study postMONICA) and 637 consecutive patients with ACS (male, age to 65 years). ANOVA and chi-square were used for statistical analysis.

Results: Rs2943634 polymorphism was not in controls or patients associated with traditional risk factors (plasma lipids, hypertension, obesity, smoking, diabetes). We confirmed that AA homozygotes occur less frequently in patients with acute coronary syndrome than in the control group (8.8% vs. 15.9%, p = 0.0001, OR for AA homozygotes vs. C allele carriers of 0, 51, 95% CI 0.37 to 0.70).

Conclusion: Rs2943634 variant on chromosome 2 is an important risk factor for ACS in the Czech Slav population. The causal relationship between genetic marker and disease remains unclear.

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