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The single nucleotide polymorphism in CYP2C8 is associated with myocardial infarction in Bulgarian population with cardiovascular risk profile

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Initial epidemiologic studies have demonstrated that genetic variation in the CYP epoxygenase pathway significantly modifies cardiovascular disease risk at the population level in humans. In the present study, the impact of a genetic variant in CYP2C8*3 and on myocardial infarction (MI) in Bulgarian population was analyzed. We conducted a case-control study to determine whether the common genetic variation rs890293 (CYP2J2*7) in CYP2J2 gene was associated with the risk of MI. The study included 99 patients with MI and 377 population control subjects. To determine the genotypes of the samples real time PCR with predesigned. TaqMan SNP Genotyping Assays (Applied Biosystem) was used. The deviation of allele polymorphism CYP2C8*3 on the balance of Hardy-Weinberg and the frequency of the T allele with 2 test was studied. The rare allele CYP2C8*3 was found in 16% of the affected and 10% of the non affected cases and it showed statistical significance [OR (95% CI): 1.64 (1.00-2.56), P=0.03]. The CYP2C8*1/*1 genotype occured more often in the control group compared with the patients with MI [OR (95% CI): 0.58 (0.35-0.96), P=0.039]. The heterozygous genotype of CYP2C8 was found to be significantly associated with a risk of myocardial infarction [OR (95% CI): 2.25 (1.06-4.75), P=0.036] in women. Possession of the rare genetic variant rs1050968 in CYP2C8 gene is associated with a modestly increased risk of MI in Bulgarian population.

Biography

Galya Atanasova completed her PhD training in Cardiology from Department of Cardiology, Pulmonology and Endocrinology at Pleven Medical University, Bulgaria. She is a General Practitioner and Cardiologist in Trainee at Pleven Medical University, Bulgaria. She specialized in General Medicine from Pleven Medical University, Bulgaria during 1993. She has attended many international events and presented her research work. She did many researches on metabolic syndrome and myocardial infarction of heart.

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