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No evidence of association between rs7865618 in locus 9p21 and coronary artery disease in Bulgarian population

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Coronary artery disease (CAD) has become a major health problem in development countries. Recent genome-wide association studies have identified the association between polymorphisms in 9p21 locus and susceptibility to CAD in different populations.

The aim of this study was to investigate a possible association of rs7865618 in 9p21 locus with CAD in Bulgarian population.

A total of 496 consecutive patients were studied including 168 cases with coronary stenosis $\geq 50\%$ or previous myocardial infarction and 328 controls without documented coronary artery disease. Genomic DNA was extracted from leucocytes following standard procedures. Participants were genotyped for rs7865618 in 9p21 locus, previously associated with CAD in white populations. Genotypes were determined by use of High Resolution Melting genotyping assay. Reactions were performed with the Corbett 6000, Qiagen. Genotype frequencies were tested for Hardy-Weinberg equilibrium and allele and genotype frequencies between control and CAD subjects were compared by chi-square test.

The distribution frequencies of the healthy control and CAD groups conformed to the Hardy-Weinberg genetic balance rule ($p > 0.05$). In the CAD subjects, the AA, AG, and GG genotype frequencies were 39.0%, 44.0% and 17.0% respectively, compared to 39.0%, 47.0% and 15.0% respectively for the control group. There was also no significant difference between cases and controls in the allele frequency. The A and G allele frequencies were 61.0% and 39.0% in the CAD group respectively and 62.0% and 38.0% respectively in control group. There was no statistical significant different in distribution in allele and genotype frequencies between cases and controls in this study.

In our study we found no difference in the frequencies of genotypes and alleles of rs7865618 between cases and controls in Bulgarian population. Further investigations with a large number of cases and controls will need to evaluate a possible association between rs7865618 and CAD in Bulgarians.

Biography

Galya Naydenova Atanasova completed her Ph.D. 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 to many International Events and presented her research work. She did many researches on metabolic syndrome and myocardial infarction of heart.

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