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ZBTB17 Gene rs10927875 Polymorphism in Slovak Patients with Dilated Cardiomyopathy

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Abstract : Dilated cardiomyopathy (DCM) is a severe cardiovascular disorder characterized by progressive systolic dysfunction due to cardiac chamber dilatation and inefficient myocardial contractility often leading to chronic heart failure. Recently, a genome-wide association studies (GWASs) on DCM indicate that the ZBTB17 gene rs10927875 single nucleotide polymorphism is associated with DCM. The aim of the study was to identify the distribution of ZBTB17 gene rs10927875 polymorphism in 50 Slovak patients with DCM and 80 healthy control subjects using the Custom Taqman®SNP Genotyping assays. Risk factors detected at baseline in each group included age, sex, body mass index, smoking status, diabetes and blood pressure. The mean age of patients with DCM was 52.9±6.3 years; the mean age of individuals in control group was 50.3±8.9 years. The distribution of investigated genotypes of rs10927875 polymorphism within ZBTB17 gene in the cohort of Slovak patients with DCM was as follows: CC (38.8%), CT (55.1%), TT (6.1%), in controls: CC (43.8%), CT (51.2%), TT (5.0%). The risk allele T was more common among the patients with dilated cardiomyopathy than in normal controls (33.7% versus 30.6%). The differences in genotype or allele frequencies of ZBTB17 gene rs10927875 polymorphism were not statistically significant (p=0.6908; p=0.6098). The results of this study suggest that ZBTB17 gene rs10927875 polymorphism may be a risk factor for susceptibility to DCM in Slovak patients with DCM. Studies of numerous files and additional functional investigations are needed to fully understand the roles of genetic associations.

Keywords : ZBTB17 gene, rs10927875 polymorphism, dilated cardiomyopathy, cardiovascular disorder
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