



Original article

Catalase C-262T Gene Variant in Patients with Bronchial Asthma

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SUMMARY

Bronchial asthma (BA) is a chronic inflammatory disease of the airways in the pathogenesis of which oxidative stress has a very important role. Single nucleotide polymorphisms (SNPs) in catalase gene may result in decreased antioxidative defense capacity, and thus a higher risk for BA development. Since oxidative stress has an important role in the pathogenesis of BA and catalase has a key role in antioxidant defense, the aim of this study was to examine the association of CAT C-262T polymorphism with BA in Serbian patients with BA.

A total of 170 subjects (79 patients with BA and 91 controls) were screened for CAT C-262T SNP using PCR-RFLP method.

The analysis of genotype distribution did not show statistically significant differences between BA patients and controls ($p > 0.05$). Moreover, no differences were detected when comparison was performed based on dominant or recessive model. The distribution of CAT-262C and CAT-262T alleles did not show differences between patients and healthy controls ($p = 0.715$; OR = 1.091; 95% CI = 0.684–1.741). Further analysis of genotype and allele distributions, based on stratification by sex, did not show significant differences between BA patients and controls ($p > 0.05$).

This is the first study that examined CAT C-262T (rs1001179) SNP in Serbian patients with BA. The results obtained in this study showed that biallelic SNP at the position -262 in the catalase gene is not associated with BA in the Serbian population.

Key words: bronchial asthma, SNP, catalase, oxidative stress

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