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RELATIONSHIP BETWEEN 5-LIPOXYGENASE ACTIVATING PROTEIN GENE SG13S89G/A POLYMORPHISM AND ACUTE CORONARY SYNDROME

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Objective To investigate the distribution of ALOX5AP gene SG13S89G/A polymorphism and the relationship between the ALOX5AP gene SG13S89G/A polymorphism and acute coronary syndrome (ACS) in the Chinese Han population of Sunan region.

Methods Four hundred and ninety four patients with ACS (ACS group) and 479 control subjects who were free from coronary artery disease (control group) were recruited into the study. The SG13S89G/A polymorphism in ALOX5AP gene was determined by polymerase chain reaction and restriction fragment length polymorphism analysis.

Results The AA, GA and GG genotype of ALOX5AP gene SG13S89G/A exist both in ACS group and control group. The genotype distribution of the ACS group and control group conformed to the Hardy-Weinberg balance via χ^2 test ($p>0.05$), which suggested that the selected sample is representative. As compared with those in the control group, there was no statistical difference of the frequencies of AA (0.21% vs 0.20%), GA (5.01% vs 5.06%) and GG (94.78% vs 94.74%) genotype, and G allele (97.29% vs 97.27%) in ACS group (all $p>0.05$). Multivariate logistic regression analysis showed that there was no statistically significant correlation of ALOX5AP gene SG13S89G/A AA, GA and GG genotype, and G allele with ACS (all $p>0.05$). Subgroup analysis showed that as compared with those in the control group, respectively, there was no significant difference of the frequencies distribution of AA, GA and GG genotype, and G allele in the AMI group, the UAP group, male ACS group, female ACS group and the elderly ACS group (all $p>0.05$). Multivariate logistic regression analysis for above-mentioned five subgroup showed that there were no association of any genotype and G allele of the ALOX5AP

gene SG13S89G/A with AMI, UAP, male ACS, female ACS and the elderly ACS (all p>0.05).

Conclusion In the Chinese Han population of Sunan region, three genotypes including AA, GA and GG of ALOX5AP gene SG13S89G/A exist both in ACS group and control group; and there are no association of the ALOX5AP gene SG13S89G/A polymorphism with ACS, AMI, UAP, male ACS, female ACS and the elderly ACS.