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RELATIONSHIP OF ARACHIDONATE 5-LIPOOXYGENASE ACTIVATING PROTEIN GENE SG13S114T/A POLYMORPHISM WITH ACUTE MYOCARDIAL INFARCTION

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Objectives To investigate the association between 5-lipoxygenase activating protein (ALOX5AP) gene SG13S114T/A polymorphism and acute myocardial infarction (AMI) in the Chinese Han population of Sunan region.

Methods All of 300 patients with AMI and 415 control subjects free from coronary artery disease were recruited into the study. The ALOX5AP SG13S114T/A polymorphism gene was determined by PCR and restriction fragment length polymorphism analysis.

Results (1) Compared with the control group, there was statistical difference of the frequencies of TT and AT genotype in the AMI group (p value was 0.027 and 0.032 respectively); the frequencies of T allele was not significantly different (59.50% vs 64.82%, $p=0.324$). (2) subgroup revealed: The frequencies of AA, AT, TT genotype and the T allele of the SG13S114T/A had no association with AMI in male group, but the frequency of TT genotype had significant correlation with AMI in female. Multivariate logistic regression analysis indicated that there was significantly correlation between ALOX5AP gene SG13S114T/A AT and TT with AMI (p value was 0.000 and 0.001 respectively). T allele had significantly association with AMI ($p=0.038$). There was statistical difference of the frequencies of AT and TT genotype with AMI in both male and female (p value was 0.010 and 0.040 respectively in male group; p value was 0.010 and 0.004 respectively in female group), T allele was a significant risk factor for AMI in the female carrier ($p=0.026$), but had no association with AMI in male ($p=0.285$).

Conclusions Conclusion: The ALOX5AP gene SG13S114T/A polymorphism may be associated with the susceptibility to AMI in the Chinese Han population of Sunan region. The T allele was a significant genetical risk factor for AMI and was the susceptibility to AMI in the female.