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ASSOCIATION OF THE MCP-1 GENE A-2518G POLYMORPHISM WITH ACUTE CORONARY SYNDROME GUOPING

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Objective To investigate the impossible association of the monocyte chemoattractant protein-1 (MCP-1) gene A-2518G single nucleotide polymorphism (SNPs) in the promoter region with acute coronary syndrome (ACS) in Chinese Han population of Sunan region.

Methods This study was conducted with a case-control design in 484 ACS patients including 290 cases of acute myocardial infarction (AMI) and 194 cases of unstable angina pectoris (UAP) (ACS group) and 346 control subjects who were free of coronary artery disease demonstrated by coronary angiography (control group). Polymerase chain reaction-restriction

fragment length polymorphism was used for detecting the A-2518G polymorphism in MCP-1 gene.

Results There were AA, AG and GG genotypes of MCP-1 gene A-2518G polymorphism in the ACS group and control group. The two groups could be considered as a genetic equilibrium representative by Hardy-Weinberg equilibrium test ($p>0.05$). Compared with those in control group, the frequencies of AA (15.32% vs 16.12%), AG (53.47% vs 51.86%), GG (31.21% vs 32.02%) genotypes, and G (57.95% vs 57.95%) allele were not significantly different in ACS group (P was 0.083, 0.673, 0.821 and 1.00, respectively). Multivariate including gender, age, history of smoking, hypertension and diabetes mellitus, and plasma lipids level logistic regression analysis showed that there was no significant correlation between MCP-1 gene A-2518G polymorphism and ACS (p values all>0.05). Subgroups analysis showed: (1)compared with those in control group, the frequencies of AA, AG, GG genotypes, and G allele were not significantly different in male and female group (p values all>0.05); (2) compared with those in the control group matched with age, frequencies of AA, AG and GG genotype, and G allele were not significantly different in prematrue ACS (male<65 and female<55 years old) either (p values all>0.05); (3)compared with those in normal coronary group respectively, the frequencies of AA, AG, GG genotypes, and G allele were not significantly different in AMI and UAP group (p values all>0.05).

Conclusion Our data shows that MCP-1 gene A-2518G polymorphism is not associated with the risk of ACS in the Chinese Han population of Sunan region.