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THE CORRELATION OF THE SERUM C-REACTIVE PROTEIN LEVEL WITH THE C-REACTIVE PROTEIN GENE T-757C POLYMORPHISM AND RISK OF ACUTE MYOCARDIAL INFARCTION

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Objectives To explore the association of the serum C-reactive protein (CRP) level with the CRP gene T-757C polymorphism and risk of acute myocardial infarction (AMI) in Chinese Han population of Sunan region.

Methods The CRP gene T-757C polymorphism was genotyped by polymerase reaction restriction-fragment length polymorphism analysis, and the serum CRP level was measured by ELISA in 213 AMI patients (AMI group) and 173 subjects without coronary heart disease (CHD) (control group).

Results In Chinese Han population of Sunan region, there were CRP gene T-757C polymorphisms in patients with AMI and in subjects without CHD. The serum CRP level in AMI patients (5.985/6.527 $\mu\text{g/ml}$) was significantly higher than those in subjects without CHD (3.262/1.356 $\mu\text{g/ml}$) ($p<0.01$) and multivariate logistic regression analysis showed that the serum CRP level was an independent risk factor of AMI [OR (95% CI)=2.048 (1.234–3.401), $p<0.01$]; In AMI patients, no significant differences were found in the serum CRP level among any genotype (CC, TC or TT) of the CRP gene T-757C (4.069/2.493 $\mu\text{g/ml}$ vs 5.745/6.321 $\mu\text{g/ml}$ vs 6.127/6.629 $\mu\text{g/ml}$), and there also were no significant differences in the serum CRP level among any genotypes in this locus within the same gender and age ($p>0.05$).

Conclusions The elevated serum CRP level is an independent risk factor of AMI, but not influenced by CRP gene T-757C polymorphism in Chinese Han population of Sunan region.