ASSOCIATION OF PREGNANCY-ASSOCIATED PLASMA PROTEIN-A (PAPP-A) GENE IVS6+95 POLYMORPHISM WITH ACUTE MYOCARDIAL INFARCTION

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Objective To investigate the association of pregnancy-associated plasma protein-A (PAPP-A) gene IVS6+95 polymorphism with acute myocardial infarction (AMI) in the Chinese Han population of Sunan region.

Methods Two hundred and fifty three patients with AMI and 162 control subjects who were free from coronary artery stenosis confirmed by coronary angiography were recruited into the study. The PAPP-A gene IVS6+95 polymorphism was measured by polymerase chain reaction and restriction fragment length polymorphism (PCR-RFLP).

Results Compared with those in the control group, there was no statistical difference of the frequencies distribution of the GG (48.76% vs 43.25%), CG (46.80% vs 49.60%) and CC (4.32% vs 7.15%) genotype, and C allele (27.78% vs 30.73%) in AMI group (all p value>0.05). Subgroup analysis showed that the frequencies of CC genotype in female AMI were significantly higher than those in the control group (16.13% vs 2.41%, p=0.007). Furthermore, after adjustment for conventional risk factors by multiple logistic regression analysis showed that there was significant correlation between PAPP-A gene IVS6+95 CC genotype with the risk of AMI (p=0.002) and the female AMI (p=0.000).

Conclusion The PAPP-A gene IVS6+95 CC genotype is closely associated with risk of AMI and may be an independent risk factor of AMI, especially in female AMI in the Chinese Han population of Sunan region.