Gene polymorphisms associated with susceptibility to coronary artery disease in Han Chinese people

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ABSTRACT. This study investigated 5 single nucleotide polymorphism (SNP) haplotypes in susceptibility genes for coronary artery disease (CAD) and the putative involvement of these SNPs in CAD in the Chinese Han population. From March 2008 to June 2009, we selected 119 CAD patients and 115 subjects not related to the CAD of Chinese Han origin as controls. The SNP genotypes were performed by multiplex SNAPSHOT technology. The HNRPU1 gene rs11881940T and GATA2 gene rs3803T loci were highly correlated with CAD (P < 0.05). rs10757278G increased the risk of CAD in patients indicated by an odds ratio (OR) = 1.242 [95% confidence interval (CI) = 1.04-1.49]; rs11881940T and rs3803T were protective factors for CAD with ORs = 0.767 (95%CI = 0.61-0.97) and 0.53 (95%CI = 0.40-0.72), respectively. Analysis of the rs10757278, rs11881940 and rs3803 loci showed that haplotypes ATC
(OR = 4.26; 95%CI = 2.85-6.40, P < 0.01), GAC (OR = 1.50; 95%CI = 1.25-1.81, P < 0.01) and GAT (OR = 1.53; 95%CI = 1.12-2.09, P < 0.01) were CAD risk factors, whereas GTC was protective (OR = 0.48; 95%CI = 0.32-0.72, P < 0.01). ATC and glucose were positively correlated (OR = 1.91; 95%CI = 1.01-3.61, P < 0.05). GAT was a risk factor for hypertension (OR = 2.86; 95%CI = 1.40-5.83, P < 0.01). In conclusion, polymorphisms and haplotype analysis of susceptibility genes for CAD can improve predicting this disease and will enable early diagnosis of CAD.

**Key words:** Coronary artery disease; Predisposing genes; Polymorphism; Single nucleotide; Genotyping