Role of interleukin-10 gene polymorphisms in the development of coronary artery disease in Chinese population

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ABSTRACT. The aim of this study was to investigate the association between three common SNPs (-1082A/G, -819T/C, and -592A/C) in the interleukin 10 (IL-10) gene, and the development of coronary artery disease. Between January 2013 and December 2014, 272 patients with coronary artery disease and control subjects (each) were recruited for this study from the Huaihe Hospital of Henan University. The IL-10-1082A/G, -819T/C and -592A/C gene polymorphisms were analyzed using a polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) assay. Logistic regression analyses revealed an association between the AA and GA+AA genotypes of IL-10-1082G/A and an elevated risk of coronary artery disease, compared to the GG genotype [adjusted odds ratio (OR) = 2.31 and 1.49; 95% confidence interval (CI) = 1.29-4.19 and 1.04-2.12, respectively]. The AG+GG genotype was associated with a moderately increased risk of coronary artery disease in smokers (adjusted OR = 2.74; 95% CI = 1.01-3.01). In conclusion, the AA and GA+AA genotypes of IL-10-1082G/A were associated with an elevated risk of coronary artery disease; the IL-10-1082G/A gene polymorphism
also interacted with the tobacco smoking habits, contributing to the development of coronary artery disease.

**Key words:** Interleukin-10; Coronary artery disease; Polymorphism