Statistical analysis of the relationship between IL-10 gene promoter polymorphisms and the development of coronary artery disease

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ABSTRACT. Here, we conducted a case-control study to investigate the association between IL-10 gene polymorphisms and development of CAD in a Chinese population. A total of 220 patients with CAD and 236 control subjects who visited the Zhengzhou People’s Hospital between May 2012 and June 2014 were selected for this study. The IL-10-1082A/G and -592A/C polymorphisms were genotyped by polymerase chain reaction coupled with restriction fragment length polymorphism. The chi-squared test revealed a significant difference in the distributions of the IL-10-1082A/G genotypes ($\chi^2 = 6.32, P = 0.04$). This data was then statistically analyzed by logistic regression analysis; we observed that the CC genotype of IL-10-1082A/G had a higher risk of CAD in comparison to the AA genotype (OR = 2.09, 95%CI = 1.11-3.97). Moreover, the C allele of IL-10-1082A/G had a 1.39 fold risk of CAD when compared with (OR = 1.39, 95%CI = 1.06-1.82). We did not observe any significant correlations between the IL-
10-592A/C genetic variation and susceptibility to CAD. In conclusion, our study suggests that the IL-10-1082A/G genetic variation could influence the development of CAD in a Chinese population.

**Key words:** IL-10; -1082A/G; -592A/C; Polymorphism; CAD