Association of the interleukin-10 gene -1082A/G genetic polymorphism with risk of ischemic stroke in a Chinese population

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ABSTRACT. We investigated the possible association between two single nucleotide polymorphisms of IL10 -1082A/G and -592C/A and susceptibility to ischemic stroke. In total, 335 patients with proven ischemic stroke and 335 control subjects were recruited from Xinxiang Central Hospital between March 2013 and May 2015. The IL10 -1082A/G and -529C/A polymorphisms were investigated by polymerase chain reaction-restriction fragment length polymorphism. When compared with the control subjects, patients with ischemic stroke were more likely to be male, have a habit of tobacco smoking, have higher BMI, have hypertension or diabetes mellitus, and have higher levels of TC, LDL-C, HDL-C, and TG. The multivariate logistic regression analyses revealed that the AA genotype of IL10 -1082A/G was significantly associated with development of ischemic stroke in a Chinese population compared with the GG genotype (OR = 1.93, 95%CI = 1.15-3.25). In the dominant model, the association between GA+AA genotype of IL10 -1082A/G and risk of ischemic stroke was also significant compared with the GG genotype, and the adjusted OR (95%CI) for the GA+AA genotype was 1.41 (1.02-1.94). Thus, our study suggests that IL10 gene polymorphisms contribute to the development of ischemic stroke.

Key words: IL10 -1082A/G; IL10 -592C/A; Polymorphism; Ischemic stroke