



Investigation on the association between *IL-10* C819T gene polymorphisms and susceptibility to gastric cancer

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ABSTRACT. We conducted a case-control study to investigate the association between the interleukin-10 (*IL-10*) C819T polymorphism and susceptibility to gastric cancer in a Chinese population. A total of 157 patients with gastric cancer and 249 controls were consecutively enrolled from the Guizhou Provincial People's Hospital between October 2012 and February 2015. The polymerase chain reaction-restriction fragment length polymorphism technique was used to genotype for *IL-10* C819T. As determined by χ^2 -test, there was a significant difference in genotype distributions of *IL-10* C819T between gastric cancer patients and controls ($\chi^2 = 7.09$; $P = 0.03$). Based on unconditional logistic regression analysis, the TT genotype of *IL-10* C819T was significantly associated with increased risk of gastric cancer when compared with that of the CC genotype [odds ratio (OR) = 2.24;

95% confidence interval (CI) = 1.17-4.26; P = 0.008]. In a dominant model, we found that the CT + TT genotype of *IL-10* C819T was associated with susceptibility to gastric cancer compared to that of the CC genotype (OR = 1.63; 95%CI = 1.02-2.64). In a recessive model, the TT genotype of *IL-10* C819T was correlated with a higher risk of gastric cancer when compared with that of the CC + CT genotype (OR = 1.75; 95%CI = 1.01-3.02). In conclusion, our study suggests that the *IL-10* C819T polymorphism is associated with an increased risk of gastric cancer in co-dominant, dominant, and recessive models.

Key words: *IL-10* C819T; Polymorphism; Gastric cancer