



Investigation on ERCC5 genetic polymorphisms and the development of gastric cancer in a Chinese population

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ABSTRACT. Our study aimed to investigate the role of 2 ERCC5 promoter SNPs (rs2094258 and rs751402) in the development of gastric cancer in the Chinese population. The present hospital-based case-control study consisted of 155 patients with gastric cancer and 246 healthy controls recruited between March 2012 and December 2014. Genotyping for the rs2094258 and rs751402 polymorphic sites was carried out using polymerase chain reaction-restriction fragment length polymorphism. Statistical analyses were conducted using the SPSS version 16.0 software (SPSS, Inc., Chicago, IL, USA). As determined by the chi-square test, there was a significant difference in the genotype distributions of rs751402 between patients and controls ($\chi^2 = 6.74$, P

= 0.03). By unconditional logistic regression analysis, we observed that the TT genotype in rs751402 was significantly associated with increased risk to gastric cancer as compared with the CC genotype, and the adjusted OR (95%CI) was 2.17 (1.15-4.09). Moreover, subjects carrying the T allele in rs751402 had elevated risk of developing gastric cancer when compared with those carrying the C allele, with an adjusted OR value (95%CI) of 1.47 (1.09-1.99). In conclusion, we suggest that the ERCC5 rs751402 gene polymorphism may influence the susceptibility to gastric cancer in the Chinese population.

Key words: ERCC5; Polymorphism; Gastric cancer; Chinese population