



Association between *ERCC5* gene polymorphisms and gastric cancer risk

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ABSTRACT. We investigate the role of *ERCC5* gene polymorphisms (rs17655 and rs751402) in the development of gastric cancer in a Chinese population. A total of 142 gastric cancer patients whose diagnoses were confirmed by pathology, and 274 control subjects were recruited from Tangshan Gongren Hospital between March 2013 and March 2015. Genotyping of *ERCC5* rs17655 and rs751402 polymorphisms was performed by polymerase chain reaction-restriction fragment length polymorphism. Compared with the control subjects, we found that gastric cancer patients were more likely to be older, smoke tobacco, drink alcohol, and suffer from *Helicobacter pylori* infection. Using a chi-square test, a significant difference was observed in the distribution of *ERCC5* rs751402 genotypes between patient and control groups (chi-square = 7.79, $P = 0.02$). In addition, unconditional multiple logistic regression analysis revealed that the AA genotype of rs751402 significantly increased gastric cancer risk compared to the GG genotype [odds ratio (OR) = 2.61, 95%CI = 1.23-5.49; $P = 0.005$]. Moreover, we found that the AA genotype correlated with elevated risk of gastric cancer when compared to the GG+AG genotype under a recessive

model (OR = 2.21, 95%CI = 1.11-4.39; P = 0.01). In conclusion, we suggest that the *ERCC5* rs751402 polymorphism is associated with development of gastric cancer.

Key words: *ERCC5*; Polymorphism; Gastric cancer