Role of IL-10 gene polymorphisms in the development of acute pancreatitis

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ABSTRACT. Recent studies have suggested that chemokines contribute to the initiation and development of acute pancreatitis. We evaluated the relationship between IL-10 gene polymorphisms (-1082A/G and -819T/C) and development of acute pancreatitis in the Chinese population, in order to provide data for screening high-risk Chinese individuals. In total, 182 patients with confirmed cases of acute pancreatitis and 262 control subjects were recruited from the Shaanxi Provincial People’s Hospital between April 2012 and December 2014. IL-10 gene polymorphisms at positions -1082A/G and -819T/C were examined using the polymerase chain reaction-restriction fragment length polymorphism method. Through multiple-logistic regression analysis, the GG genotype in IL-10 -1082A/G could influence the susceptibility to acute pancreatitis compared to the AA genotype, and the adjusted OR (95%CI) was 2.68 (1.34-5.39) (P = 0.002). Individuals who carried the AG+GG genotype of IL-10 -1082A/G were associated with greater risk for acute pancreatitis compared to the wide-type genotype, and the adjusted OR (95%CI) was 1.64 (1.09-2.46). However, no significant difference in susceptibility to acute pancreatitis was found between the IL-10 gene polymorphism at -819T/C. In conclusion, this study
demonstrates that the *IL-10* -1082A/G gene polymorphism contributes to the development of acute pancreatitis.

**Key words:** Interleukin-10; -1082A/G; -819T/; Polymorphism; Acute pancreatitis