Association between *IL-1β*, *IL-8*, and *IL-10* polymorphisms and risk of acute pancreatitis

D. Li¹, J. Li¹, L. Wang¹ and Q. Zhang²

¹Department of Emergency, Beijing Tongren Hospital, Capital Medical University, Beijing, China
²Department of Hepatobiliary Surgery, Beijing Tongren Hospital, Capital Medical University, Beijing, China

Corresponding author: Q. Zhang
E-mail: lidapeng667@126.com

Received May 30, 2014
Accepted October 28, 2014
Published June 18, 2015
DOI http://dx.doi.org/10.4238/2015.June.18.6

**ABSTRACT.** We assessed the possible correlation between genetic polymorphisms in interleukin (IL)-1β, IL-8, and IL-10 and risk of acute pancreatitis. Polymorphisms of *IL-1β* +3954C/T (rs1143634), *IL-1β* -511C/T (rs16944), *IL-8* -251T/A (rs4073), *IL-10* -1082A/G (rs1800896), and *IL-10* -819C/T (rs1800871) were assessed by polymerase chain reaction-restriction fragment length polymorphism. Patients with acute pancreatitis were more likely to have a family history of acute pancreatitis and a habit of tobacco smoking and alcohol drinking. Conditional logistic regression analyses showed that subjects carrying *IL-10* -1082A/G and *IL-8* -251 AA genotype with the A allele were significantly associated with an increased risk of acute pancreatitis, with adjusted odds ratio (95% confidence interval) of 1.82 (1.01-3.31) and 1.39 (1.02-1.90), respectively. However, we did not observe that *IL-1β* +3954C/T, *IL-1β* -511C/T, *IL-10* -1082A/G, and *IL-10* -819C/T polymorphisms were associated with the risk of acute pancreatitis. We found that the *IL-8* -251T/A polymorphism is associated with an increased risk of acute pancreatitis, and no significant
association between *IL-1β* and *IL-10* gene polymorphisms and risk of acute pancreatitis was detected.

**Key words:** Acute pancreatitis; Inflammatory cytokines; Polymorphism