

IL-1 β (+3953 C/T) and IL-8 (-251 A/T) Gene Polymorphisms in *H. pylori* Mediated Gastric Disorders

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ABSTRACT

Background: Previous studies imply that IL-1 and IL-8 gene variations may play a crucial role in the genetic predisposition to different gastric disorders upon *H. pylori* infection. **Objective:** The aim of this study was to determine the potential association between the prevalence of certain polymorphic sites and the risk of gastric disorders in Iranian population. **Methods:** One hundred and forty three unrelated individuals with different gastric disorders and 374 normal individuals with no gastric disorders and with a negative serology test for *H. pylori* (control group) were studied for the association between IL-1 β (+3953 C/T) and IL-8 (-251 A/T) gene polymorphisms and *H. pylori*-mediated gastritis and gastric ulcer. An analysis of genotype frequency for these genes was performed using RFLP-PCR. **Results:** Based on the data obtained from culture and pathologic findings, the patients were classified into three subpopulations: *H. pylori*⁺ non-ulcerative gastritis⁺, *H. pylori*⁺ ulcerative gastritis⁺ and *H. pylori*⁻ non-ulcerative gastritis⁺. A significantly higher frequency of TT genotype (p=0.02) in IL-1 β +3953 in *H. pylori*⁺ ulcerative gastritis⁺ was revealed compared to the control group. There were no significant differences among other subpopulations. No significant differences in allele and genotype frequencies of IL-8 (-251A/T) were found among the patients. **Conclusion:** The data suggest that TT genotype in IL-1 β +3953 may be a major contributing genetic risk factor for *H. pylori* induced gastric ulcer. Moreover, the role of other bacterial and host response factors, such as bacterial adherence peptides, host chemokines, and genes involved in gastric acid secretion, must be further investigated in different ethnic populations.

Keywords: Gastric Diseases, *Helicobacter pylori*, IL-1 β , IL-8, Polymorphism

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