



ROLE OF IL-1B GENE POLYMORPHISM in DISEASE SUSCEPTIBILITY in HELICOBACTER PYLORI ASSOCIATED GASTRITIS and GASTRIC CANCER

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Abstract

Background: Interleukin-1 β gene Polymorphisms might be associated with individual variations in the levels of cytokine messenger RNA resulting in different risk of inflammation of the gastric mucosa in response to *H. pylori* infection.

Objective: The aim of present study a role for IL-1B31, IL-1B-511 gene polymorphism (SNP) in Helicobacter pylori associated gastritis and gastric cancer that could have an effect on disease susceptibility. Patients and methods: A case control study have been conducted and based on three groups, 20 patients with Helicobacter pylori infection associated gastric cancer, Second group was including 20 patients with Helicobacter pylori infection associated Gastritis and Third group was including 40 healthy volunteers. Two milliliter of blood Directly collected in a sterile tube with EDTA for DNA extraction ,then uses (RFLP PCR) technique application to IL-1B31, IL-1B-511 gene polymorphisms, Such these samples will be stored at -20C right away.

Results: present study show that IL-1 β -511 TT genotype significantly higher in gastric cancer patients than control group (P=0.005). Concerning IL-1B-31 genotype, current result found that, the Frequency distribution of IL-1B-31 CT and CC genotypes show, no significant difference in gastric cancer patients than control (P=0.173) and (P=0.076) respectively. Moreover, IL-1B-31 (C/T), show no significant difference in the frequency of CT and CC genotype between patients with gastritis than control group (P=0.522) and (P=0.291) respectively. IL-1B-31 (C/T), show no significant difference in the frequency of heterozygous (CT), and homozygous (CC) genotype between gastric cancer patients in comparison with gastritis (P = 0.516), and (P = 0.510) respectively.

Conclusion: current study has shown that IL-1B 31 C > T (rs1143627) genotype have no impact on individual susceptibility to *H. pylori* associated gastric cancer and gastritis. Additionally, IL-1B 511 T > C (rs16944) gene polymorphisms act as a risk factor to *H. pylori*-related diseases including gastric cancer.

Author Keywords

IL-1 β , Helicobacter pylori associated gastritis and gastric cancer

ISSN Print:

Source Type: Journals

Publication Language: English

Abbreviated Journal Title: EJMCM

Publisher Name: EJMCM

Major Subject: Life Sciences

Subject area: Cancer Research

ISSN Online: 2515-8260

Document Type: Journal Article

DOI:

Access Type: Open Access

Resource Licence: CC BY-NC

Subject Area classification: Biochemistry, Genetics and Molecular Biology

Source: SCOPEDATABASE