

Distribution of IL-28B genotypes in patients with hepatitis C and healthy individuals in Jahrom city.

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Abstract

AIM:

The purpose of this study was to compare the distribution of interleukin (IL)-28B genotypes between Iranian healthy individuals and patients with chronic hepatitis C based on the genotype.

BACKGROUND:

Polymorphisms in the region of IL-28B gene have been identified as the strongest genetic pretreatment predictor of sustained virological response (SVR) in hepatitis C infection.

PATIENTS AND METHODS:

In this study, 147 patients with chronic hepatitis C and 80 healthy individuals were included. The IL-28B rs12979860 and rs8099917 polymorphisms were genotyped by PCR-RFLP method and the frequency of IL-28B polymorphisms with respect to HCV genotypes was also determined.

RESULTS:

The frequencies of rs12979860 TT, CC and CT genotypes in the chronic hepatitis C patients and healthy individuals were as follows: 10.8% vs. 11.3%, 38.7% vs. 46.2% and 50.3% vs. 42.5%. Also, the frequencies of rs8099917 TT, GG and GT genotypes in the chronic hepatitis C patients was 61.9%, 6.1% and 32% and in controls was 47.5%, 11.2% and 41.3%. The differences in the distribution of rs12979860 genotypes and alleles between HCV genotype 1 and HCV genotype 3a infected patients were statistically significant.

CONCLUSION:

The rs12979860 C allele is the favorable allele for the spontaneous clearance of HCV. It seems that the impact of IL-28B polymorphism on the spontaneous clearance of HCV genotype 3 is more prominent than HCV genotype 1, which results in the observation of higher rs12979860 C allele frequency in chronic hepatitis C patients with HCV genotype 3 than HCV genotype 1.

KEYWORDS:

Hepatitis C; IL-28B Genotype; Jahrom; Polymorphism