Interleukin 18 promoter variants (-137G>C and -607C>A) in patients with chronic hepatitis C: association with treatment response.

BACKGROUND: Recently, two functional IL18 promoter variants, -607C>A (rs1946518) and -137G>C (rs187238), were associated with viral clearance in patients with hepatitis C. The present study focused on their relevance for treatment response.

METHODS: Seven hundred fifty-seven chronically infected European patients and 791 controls were enrolled in the study. IL18 genotyping was performed by allele-specific PCR. Liver histology was available in 67.9%. RESULTS: Genotype and allele frequencies were equally distributed in patients and controls. No significant association with various disease characteristics was observed. However, when comparing patients with sustained virological response (SR) and non-SR, statistically significant associations were found for both variants (p = 0.0416 and p = 0.0274, respectively). In viral genotype 1, the -607A allele was positively associated with treatment response (p = 0.0190; OR 1.537; 95% CI, 1.072-2.205) and the -137G allele with a higher rate of nonresponse (p = 0.0302; OR 1.524; 95% CI, 1.040-2.233).

CONCLUSIONS: The association of IL18 variants with treatment response in genotype 1 hepatitis C patients implies a predictive and modifying role of these genetic variants.