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Correlation of IFNL4 ss469415590 and IL28B rs12979860 with the Hepatitis C Virus Treatment Response among Tunisian Patients

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Abstract : IL28B rs12979860 genotype is confirmed as an important predictor of response to peginterferon/ribavirin therapy in patients with chronic hepatitis C (CHC). IFNL4 ss469415590 is a newly discovered polymorphism that could also affect the sustained virological response (SVR). The aim of this study was to evaluate the association of IL28B and IFNL4 genotypes with peginterferon/ribavirin treatment response in Tunisians patients with CHC and to determine which of these SNPs, was the stronger marker. A total of 120 patients were genotyped for both rs12979860 and ss469415590 polymorphisms. The association of each genetic marker with SVR was analyzed and comparison between the two SNPs was calculated by logistic regression models. For rs12979860, 69.6% of patients with CC, 41.8% with CT and 42.8% with TT achieved SVR (p = 0.003). Regarding ss469415590, 70.4% of patients with TT/TT genotype achieved SVR compared to 42.8% with TT/ΔG and 37.5% with ΔG /ΔG (p = 0.002). The presence of CC and TT/TT genotypes was independently associated with treatment response with an OR of 3.86 for each. In conclusion, both IL28B rs12979860 and IFNL4 ss469415590 variants were associated with response to pegIFN/RBV in Tunisian patients, without any additional benefit in performance for IFNL4. Our results are different from those detected in Sub-Saharan Africa countries.

Keywords : Hepatitis C virus, IFNL4, IL28B, Peginterferon/ribavirin, polymorphism
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