



TGF- β 1 polymorphism 509 C>T is associated with an increased risk for hepatocellular carcinoma in HCV-infected patients

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ABSTRACT. Transforming growth factor-beta 1 (TGF- β 1), a member of the transforming growth factor beta family, functions as a multi-functional cytokine and plays a key role in cellular growth, proliferation, and differentiation. The 509 C/T polymorphism in the *TGF- β 1* gene has been implicated in the outcome of hepatitis C virus (HCV) infection; however, little is known regarding the relationship between *TGF- β 1* gene mutations and the development of hepatocellular carcinoma (HCC) in HCV-infected patients. The aim of the study was to evaluate the effect of the *TGF- β 1* polymorphisms 509 C>T on the occurrence of HCC in patients chronically infected with HCV in a Chinese Han population. The results showed that HCC patients had a higher frequency of the *TGF- β 1* -509 TT genotype distribution of

the *TGF-β1* -509 polymorphism and a lower frequency of the CC genotype. Serum TGF-β1 levels were significantly higher in patients with the TT genotype than in those with the CC genotype. In this study, we confirmed that the *TGF-β1* polymorphism 509 C>T is associated with the risk of HCC in HCV-infected patients.

Key words: Gene mutations; Single-nucleotide polymorphisms; TGF-β1 -509 CC genotype; Hepatocellular carcinoma; Hepatitis C virus; TGF-β1 -509 TT genotype