

Abstract: 5

Treatment Issues - Hepatitis _ HIV coinfection

Toll-like receptor 4 polymorphism influence on the clinical course of chronic hepatitis C in HIV-infected patients

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Background: Toll-like receptors (TLRs) play an important role in the innate immune response. We investigated the impact of TLR4 polymorphism on development of chronic hepatitis C (HCV) in HIV-infected patients.

Material & Methods: The presence of TLR4 Asp299Gly single nucleotide polymorphisms (SNPs) was determined in a cohort of 45 antiretroviral treatment-naive HIV/HCV-coinfected patients and evaluated in relation to the occurrence of clinical and laboratorial features of HCV. TLR4 genotyping was performed by real-time PCR.

Results: Thirty six patients were homozygous for the wild-type genotype (AA); 9 patients (20,0%) were heterozygous for the Asp299Gly SNP (AG).

Among HIV/HCV-coinfected persons with TLR4 polymorphism more frequent observed the HCV clinical features, such as abdominal pain (56% vs. 22%), asthenovegetative syndrome (78% vs. 39%) and cytolytic syndrome (ALT, AST > 40 IU (89% vs. 52%), compared with homozygous patients. It has been shown that symptomless period of HCV becomes shorter and liver cirrhosis more rapidly when having AG genotype. A high degree of correlation was observed between AG genotype TLR4 and liver cirrhosis development in group of patients with HIV/HCV ($r^2=0.58$, $P<0,001$), compared with wild-type genotype AA.

Conclusion: TLR4 polymorphism was associated with a greater risk of more severe clinical course of chronic hepatitis C in HIV/HCV-coinfected persons.

No conflict of interest