Prevalence of occult HBV in chronic hepatitis C and cryptogenic hepatitis patients

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Occult Hepatitis B Virus (HBV) infection (OBI) is considered as the possible phase of the HBV natural history but the molecular mechanisms and clinical impact and epidemiological aspect of OBI remains unclear. We investigated the prevalence of OBI and its clinical impact among patients with Hepatitis C virus (HCV) infection and with cryptogenic hepatitis. This study protocol was approved by the ethics committee of Istanbul University Istanbul School of Medicine (No: 2015/1519). This prospective cohort study included a total of 60 HBsAg-negative patients (27 patients with chronic HCV and 33 patients with cryptogenic hepatitis) were enrolled in the Department of Gastroenterology, Istanbul Faculty of Medicine. Liver tissue samples had been obtained by percutaneous needle liver biopsy and immediately frozen and stored at -80°C. Total nucleic acids were extracted from frozen liver biopsies using QIAamp DNA Mini Kit (Qiagen) according to the manufacturer’s instructions. OBI was defined as HBV DNA positivity in 2 or more different viral genomic regions by nested polymerase chain reaction PCR using 4 sets of primers in preS-S (S), precore-core (C), Pol, and X viral regions of the HBV genome. Plasmid HBV DNA 4.1 kb and liver biopsy samples obtained from patients with chronic HBV infection (positive control) were used. Statistical analyses were evaluated using Mann-Whitney U test, Chi-square test and Kruskal Wallis tests. The baseline characteristics of patients are presented in figure 1. The prevalence of OBI was 25.9% (7/26) with 27.3% (9/33), 26.7% (16/60) in patients anti-HCV (+), cryptogenic hepatitis, and totally respectively. There wasn’t any significant differences for prevalence of OBI between patients with chronic HCV infection and cryptogenic hepatitis (P=0.907). Patients with anti-HCV (+), OBI (+) were older compared with patients anti-HCV (+), OBI (-), (P: 0.033). As it is expected that cryptogenic hepatitis patients had higher serum alkaline phosphatase and gamma-glutamyltransferase level (P<0.05). Clinical significance and role of OBI in patients with chronic HCV infection is controversial. Accordingly, first results of the study with respect to prevalence of OBI is correlated with endemicity of Hepatitis B infection; moreover OBI can be associated with liver injury rather than chronic HCV infection. Therefore, it appears that host factors rather than viral factors are more responsible for OBI.