Hepatitis C Virus Antibody in Acute and Chronic Liver Diseases in India

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Abstract

Non-A, non-B hepatitis (NANBH) is the major cause of acute and chronic active hepatitis in India (1). This infection leads to severe liver damage when associated with hepatitis B virus (HBV) infection (2). The etiological agents responsible for NANBH are 2 recently characterised major groups of viruses, i.e. hepatitis-E virus, HEV (3) and hepatitis-C virus, HCV (4). HEV is associated with waterborne hepatitis, HCV is the causative agent of bloodborne hepatitis. It is already established that HEV is the foremost cause of waterborne epidemics of viral hepatitis in different parts of the world. However, the relative roles of HEV and HCV in the causation of acute sporadic hepatitis is not known. The present study was designed to evaluate the prevalence of anti-HCV in sporadic acute and chronic viral hepatitis patients in India. Using Ortho-ELISA kits for anti-HCV, the antibody was tested by the courtesy of Dr T. Uchida (Nihon University, School of Medicine, Tokyo, Japan) in serum samples collected from patients of fulminant hepatitis (n=28), subacute hepatic failure (a= 12) and chronic active hepatitis (n=7). All these patients were positive for HBsAg but negative for IgM anti-HBc and IgM anti-HAV, thus forming a group of HBV carriers without active HBV or hepatitis A virus (HAV) infections. The results of this study demonstrated that antiHCV was present in 45% of fulminant hepatitis, 58% of subacute hepatitis and 43% of chronic active hepatitis patients. These data indicate that HCV infection is quite frequent in India. However, at present, it appears difficult to explain such a high prevalence of anti-HCV in fulminant and subacute hepatitis patients, which is in contrast to the earlier reports that anti-HCV is present only in 15-25 Yo (5) of cases with acute infection. Presumably presence of HBsAg helps in aggravating the situation by enhancing host immune response vs. HCV leading to high anti-HCV positivity in acute infections. These antibodies may be involved in the pathogenesis of liver causing a massive liver damage. This is also supported by our earlier findings of high morbidity and mortality in the patients with superimposed NANB infection in HBV carriers

Reference

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