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The incidence of sporadic viral hepatitis in North India: a preliminary study..

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Abstract

Background: Viral hepatitis is one of the major causes of mortality and morbidity in developing countries. Hepatitis E virus (HEV) among the major etiological agents is responsible for both sporadic and epidemic outbreaks. The epidemic outbreak is water-borne whereas the sporadic outbreak is possibly through contact. Various diagnostic tools at times fail to pinpoint the cause of viral hepatitis. This study was carried out to evaluate the utility of ELISA and nested reverse transcriptase polymerase chain reaction (nRT-PCR) for the diagnosis of sporadic and acute viral hepatitis (AVH) caused by HEV in an endemic situation in North India.

Methods: Serum samples were collected from all the affected and suspected persons and subjected to serological detection of HAV IgM, HBsAg, HCV antibody and HEV IgM. The samples that were positive for HEV IgM were further processed for the detection of HEV RNA by nRT-PCR.

Results: A total of 843 samples were collected from 685 patients with AVH, 70 patients with fulminant hepatic failure (FHF), 53 patients with chronic liver disease (CLD), 11 patients with antituberculosis therapy (ATT)-induced jaundice, and 24 pregnant women. The percentage of positivity for anti-HEV IgM was 58.3% in the pregnant women, 41.4% in the patients with FHF, 38.6% in the patients with AVH, 9.4% in the patients with CLD and 18.2% in the patients with ATT induced jaundice. 9.4% of HBsAg carriers were positive for anti-HEV IgM. Males outnumbered females (62.8% vs. 37.1%). Furthermore, the rates of fulminant and acute outbreaks of hepatitis with HEV RNA positivity were 41.4% and 9.4%, respectively.

Conclusion: Serological and molecular analysis should be combined for the diagnosis of viral infections, especially in endemic areas.

Reference:

Tandon BN, Gandhi BM, Joshi YK. Etiological spectrum of viral hepatitis and prevalence of markers of hepatitis A and B virus infection in North-India. Bull WHO 1984; 62: 67-73.