Viral hepatitis - is it still a challenge in the Indian subcontinent?

Viral hepatitis continues to be a major public health problem in India. Ever since the first epidemics of hepatitis that had occurred in 1955 at Delhi, several epidemic outbreaks of hepatitis have continued to occur. It is important to point out that HEV infection is responsible for most of these epidemics. But recently outbreaks of hepatitis A have been also reported from the country. Yet, it is interesting to point out that HEV infection is responsible for 30-70 per cent of the cases of acute sporadic hepatitis and is the major cause of acute liver failure (ALF). In paediatric population, hepatitis A is the predominant aetiological agent for the cases of viral hepatitis. However, dual infections with HAV and HEV have been reported amongst the children with ALF. Hepatitis B accounts for 15-30 per cent of the cases of acute hepatitis seen in India, while HCV is an infrequent cause of acute icteric hepatitis though it is responsible for most of the cases of post-transfusion hepatitis. Hepatitis D virus (HDV) infection is reported to be in less than 10 per cent of patients with acute on chronic HBV infection.

The clinical and biochemical features of viral hepatitis do not help in distinguishing the spectrum of the disease due to the different viruses. Despite the availability of the various serological tests (A, B, C and E) commercially, 30-40 per cent of the cases of viral hepatitis would still remain unclassified and this led to the speculation that whether other newer hepatotrophic viruses like hepatitis G virus (HGV), Sen virus and TT virus (TTV) could account for most non-B non-C cases of viral hepatitis. It has been reported from India that though these viruses, (HGV, TTV and SenV) have been isolated from the cases of viral hepatitis and acute liver failure, they were not found to influence the natural course of the illness and recovery. Though hepatitis E is considered to be a benign infection, but when it occurs during epidemics, it is associated with severe liver disease. It has been observed that during epidemics, pregnant women in their second and third trimesters get infected more frequently (12-20%) than men and non pregnant women (1-2%). Hence the mortality rate is higher among pregnant women who develop hepatitis during epidemics (10-39%), than in the general population affected with pregnant women who develop hepatitis (0.06-12%). Further, HEV infection when it occurs as superinfection in chronic liver disease patients in India, it is associated with decompensation. Though hepatitis A infection usually occurs in children and the infection in adults is extremely rare, a recent study from Delhi has reported that the frequency of HAV infection amongst children has increased from 8.4 to 12.3 per cent over a period of five years, with the frequency of HAV infection having increased in adults also from 3.4 to 12.3 per cent during the same period. Similarly, outbreaks of epidemics of hepatitis A have been reported from Kottayam, Kerala State and the infection was traced to the presence of a sewage treatment plant which was overflowing and getting mixed with a canal.
India suggest that there has been a gradual shift in the epidemiology of hepatitis A in India, like in the European countries and we need to be vigilant. Though vaccine against hepatitis A is available for the people who are negative for IgG antiHAV antibodies and who can afford it, yet improved sanitation and personal hygiene will remain as an effective intervention to control the transmission of HAV.

About 12.5-21 per cent of the cases of acute viral hepatitis are due to hepatitis B infection and 40 per cent of the cases of subacute hepatic failure as well. Asymptomatic HBV carriers can also get superinfection with hepatitis A & C leading to severe disease. In India, HCV infection is acquired mostly through transfusion of blood or blood products. It is likely that the magnitude of HCV infection amongst the patients of chronic liver disease is likely to increase in future since the blood banks in India have only recently introduced the policy of anti HCV screening, hence all those individuals who have been exposed before this, are likely to develop the disease in next 15-30 yr.

Since hepatitis E is rampant in India, for both epidemic and sporadic hepatitis cases, the preventive strategies should aim at providing clean drinking water, proper sewage disposal and health education. Recent studies have shown recombinant HEV ORF 2 proteins as candidate vaccine, and in future may be an additional armentonium. Since the epidemiological data reflect that HBV causes a considerable disease burden in India, the basic need is to target high risk population for HBV vaccination, and to insist on the inclusion of HBV vaccine in the universal immunization schedule so as to reduce the HBV carrier frequency. Quality control of donor screening in India is another area where focus of attention is deserved. Awareness campaign on risk of community acquired infection and steps to prevent household and nosocomial spread of HBV infection needs to be launched. In conclusion, the high disease burden of viral hepatitis in India, emphasizes the need of the setting up of a Hepatitis Registry and formulation of government supported prevention and control strategies.

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