

Editorial

Hepatitis E – A Serious But Potentially Preventable Disease.

Hepatitis E (HEV) is a RNA virus of Hepaviridae family have four main genotypes 1 to 4. Of them HEV 1 and 2 are found in human. HEV 3 and 4 are found in animals including pigs, wild boars and deer and occasionally infect human (1). Globally HEV is the most common cause of acute hepatitis (2). WHO estimates that about 20 million HEV infection occurs per year globally and 3.4 million of them become symptomatic. In 2015, about 44000 patients died from HEV infection (3.4% of mortality from viral hepatitis) HEV infection is common in East and South Asia(3). Inactivation of HEV can be done by heating at $\geq 70^{\circ}\text{C}$ or by chlorination(4,5).

Common route of transmission of HEV is man to man through fecal oral route. The virus is shed in stool of infected persons few days before and up to three weeks after onset of clinical disease (6). Commonly drinking water becomes contaminated through sewage, flood, heavy monsoon rain or overcrowding (3, 7). Transfusion related transmission are reported mostly among immunosuppressed recipients of organ transplantation with chance of chronicity (2, 8,9). Vertical transmission via intrauterine or transplacental route to fetus or infant results in high risk of maternal and neonatal mortality (10). Usually HEV acute hepatitis is self limiting within two to six weeks. But it may sometimes cause fulminant hepatic failure with higher chance of mortality specially in pregnant women (3).

This HEV, previously known as non-A, non-B hepatitis, was identified in 1981(11). Retrospective reports showed that our subcontinent including our country experienced large outbreaks of HEV in 1070s and 1980s (7, 12). In our country documented outbreaks were in Dhaka in 2008, in Rajshahi in 2010, in Chattogram in 2012 and 2018 and in Noakhali 2013 (13). In our country seroprevalence study found evidence of prior HEV infection in about 20% people with male predominance and higher age group(13).

It is the leading cause of acute hepatitis with jaundice in our country with high risk of mortality in pregnant women (14, 15). In our country usually occurs during rainy season or during or after flood when scarcity of safe water is common. Poor food hygiene specially street foods in our country also play role in transmission HEV (16). Incubation period of HEV is on average 5-6 weeks and patients excrete virus in stool for few day before onset of clinical disease to 3-4 weeks of clinical disease(3). Spectrum of HEV disease may be asymptomatic, nonspecific like other viral disease, elevation of liver enzymes, jaundice or acute liver failure (17) and extra hepatic manifestation like renal, hematological and neurological diseases (18). And asymptomatic cases are more common (17). In endemic areas symptomatic disease mostly occurs in young people of 15 to 40 years. Typically prodromal period ie, fever, anorexia, nausea, vomiting, malaise followed by jaundice, abdominal pain, itching joint pain, dark urine and pale stool. Most of them recovers uneventfully (17). Rarely (<1%) HEV becomes severe leading to fulminant hepatic failure. Fulminant hepatic failure with HEV in pregnancy specially in second and third trimester may be disastrous with mortality up to 20- 25% (19) and proposed pathogenesis may be multifactorial – viral, hormonal, nutritional and immunological (20). Super infection with HEV in patients with pre-existing liver disease with poor hepatic functional reserve may lead to decompensation (21, 22). Diagnosis depends on detection of anti-HEV immunoglobulin M in patients' blood. Treatment of HEV disease is supportive and symptomatic and avoidance of hepatotoxic drugs. Patients should be monitored to detect complication early and measures should be taken accordingly. Ribavirin may be used in immunocompromised patients with chronic HEV infection (3).

An effective and safe recombinant vaccine for prevention of HEV is approved only in China and Pakistan (23). Near future effective vaccine

will be introduced globally for prevention of HEV. But practice of preventive measures like maintenance of personal hygiene, avoidance of unhygienic water and food consumption should be encouraged universally. And safe water supply and proper disposal of human faeces should be ensured (3).

Author:

Prof. Dr. Madhusudan Saha
Head of the department, Gastroenterology.
SWMC

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