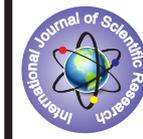


A STUDY OF CLINICAL PROFILE AND OUTCOME IN ACUTE VIRAL HEPATITIS E IN RAIPUR CG



Paediatrics

KEYWORDS: Fulminant hepatic failure, hepatic coagulopathy, mortality.

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ABSTRACT

Acute viral hepatitis E (HEV) is generally mild and self-limiting and resolves within six weeks, with no chronic sequelae. Pregnant women are at increased risk with the risk increasing as the pregnancy progresses near term. We performed a prospective study of 100 patients who presented to Dept. of Pediatrics, RIMS, Raipur, CG, India-492001, with jaundice (IgM anti-HEV positive) during 2015-2016 and data were analyzed for the clinical profile and outcome of HEV. The most common age group affected was 05-10 years with overall M:F ratio of 3.4:1. Most common presenting symptom was jaundice (100%) followed by nausea/vomiting (87%). On presentation, serum bilirubin level was elevated in 89% patients with SGPT raised in 86%. PT was prolonged in 39% patients. Anemia (Hb < 7) was seen in 17% while 9% of patients had renal involvement. Hepatic encephalopathy was seen in 15%. Overall mortality was 7%. We found that majority of cases were cured with supportive treatment.

INTRODUCTION

Hepatitis E is an important cause of acute clinical hepatitis in children throughout Asia. Hepatitis E virus (HEV) is the most common cause of acute viral hepatitis in the adult population in India. In children, the disease is usually self-limited and has a case-fatality rate of <0.1%. However, in pregnant women, particularly from certain geographical areas in India, HEV infection is more severe, often leading to fulminant hepatic failure and death in a significant proportion of patients. The disease was first recognized as a distinct clinical entity in the 1980s when sera from persons affected during a large water-borne epidemic of viral hepatitis during 1955-56 in Delhi and another epidemic in Kashmir were found to lack serological markers of acute hepatitis A and B.

It is an enterically transmitted disease that spreads through fecal contamination of drinking water. HEV infection, a common cause of water-borne epidemics, is endemic and frequently responsible for acute viral hepatitis in developing countries. According to the South-East Asia Regional Office of the World Health Organization (WHO), hepatitis E is widespread in developing countries, accounting for upto 60-70% of all sporadic cases of acute viral hepatitis. HEV causes high mortality in pregnant women, 20-30% as compared to 0.2-1% in general population. It has been implicated as an important etiological agent for sporadic fulminant hepatic failure (FHF) in developing countries. Etiology of acute viral hepatitis cannot be differentiated on the basis of mode of presentation; confirmation is done serologically. The present study was conducted to assess the clinical profile, laboratory profile and outcome of acute viral hepatitis E cases at our hospital. This study was conducted over a period of one year from 1st May, 2015 to 30th April, 2016, in patients who were positive for serological viral marker (IgM HEV, ELISA, Smart Test Diagnostics, Israel). Informed written consent was taken from each patient. Details comprising of history, physical examination and laboratory findings of each patient were recorded in the proforma. Serum bilirubin, alanine aminotransferase (ALT), prothrombin time international normalized ratio (PT INR) and serum creatinine were the key parameters in our study. Patients with pre-existing liver disease were excluded. Complete liver function tests (LFT), renal function tests (RFT), prothrombin time and ultrasound abdomen of each patient was done on admission and investigations were repeated at regular intervals thereafter for two months. Upper normal limit of ALT, alkaline phosphatase, bilirubin, creatinine and PT INR was 40 IU/l, 170 IU/l, 2.0 mg/dl, 1.2 mg/dl and 1.3, respectively. All patients were given supportive treatment, symptomatic treatment for nausea, vomiting and specific treatment for hepatic encephalopathy, coagulopathy and renal failure when required. Patients were followed up at regular intervals for eight

weeks for assessment of clinical and biochemical parameters.

RESULTS

Demographic profile of patients revealed that males (Children) were affected more than females in all age groups with a male-female ratio of 3.4:1. The highest incidence was found in the age group of 05-10 years. All patients presented with jaundice and other associated symptoms, which were nausea/vomiting (88%), anorexia (85%) and abdominal pain (49%). Hepatomegaly was found in 30% of cases. Bleeding diathesis, sleep disturbances and altered level of consciousness were present in 16%, 17% and 14% of patients, respectively. On presentation serum bilirubin level was elevated in 100% patients with ALT raised in 86%. We found that 34% of patients presented with bilirubin in range of 2.1-10 mg/dl and 43% with ALT in range of 500-1,000. Values started decreasing by 2nd week and laboratory profile of all survivors (93) became normal by 8th week. Hepatic coagulopathy was the commonest complication; documented in 39% of patients. Only one out of the eight patients who had fulminant hepatic failure survived. Overall mortality was 7%, which correlated with the occurrence of complications and was strongly associated with FHF. Symptoms and signs = Total-Jaundice-100, Nausea/Vomiting-88, Anorexia-85, Abdominal pain-49, Hepatomegaly-30, Sleep disturbances-17, Bleeding-16, Altered level of consciousness-14, Complications=Total(n), Hepatic coagulopathy-39, Hepatic encephalopathy-17, Fulminant hepatic failure-08, Renal failure-09, Intrauterine death-08, Maternal mortality rate-04, Overall mortality-07.

Discussion

Our data correspond with the existing epidemiological features of HEV. Hepatitis E virus infection is responsible for 30-70% cases of acute sporadic hepatitis. The classic epidemiological studies by Viswanathan and recent serological studies by Wong et al, Khuroo et al, have convincingly demonstrated that HEV is an important cause of non-A non-B viral hepatitis. Male preponderance was noted. In our study, the youngest patient was a child of 03 years age and the oldest patient was a 12-year-old male child. Thus, we found that all age groups were susceptible to hepatitis E infection, which was comparable to Khuroo et al. Analysis of clinical profile showed that uncomplicated acute hepatitis accounted for majority (61%) of cases. Resolution occurred in all survivors (93) by eight weeks.

CONCLUSION

Acute viral hepatitis E is a self-limiting illness with the time to resolution directly correlating with initial severity at presentation and occurrence of complications. We concluded that acute viral hepatitis E has a higher morbidity and mortality.

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