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CLINICAL PROFILE OF PATIENTS ADMITTED WITH HEPATITIS E UNDER GASTROENTEROLOGY DEPARTMENT OVER 3YRS IN A TERTIARY CARE CENTRE VIJAYANAND KUMAR VEGIRAJU
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Abstract : Hepatitis E is an important cause of Acute viral hepatitis in India. Usually self limiting, it however can turn fatal in pregnant women and in those with preexisting Chronic Liver Disease. Objectives - to study the clinical profiles of patients diagnosed with Hepatitis E over a period of 3 years. Methods - IgM elisa for hepatitis E was done for positive confirmation of hepatitis E infection. 63 patients - 50 males and 13 females were studied. Jaundice was the commonest symptom followed by anorexia, vomiting and abdominal pain. Complications were minimal with complete recovery in the general population. No mortality occurred in the general population. Out of the 3 pregnant women studied, one progressed to Hyper-acute liver failure which improved with treatment while the remaining two had an uncomplicated course. Among 22 patients with preexisting Chronic Liver Disease, 13 patients progressed to ACLF out of which 5 succumbed to the complications and the remaining 8 recovered.

Keyword : Hepatitis E, Pregnancy, ACLF, Jaundice, Complications

INTRODUCTION Hepatitis E is an important cause of acute viral hepatitis in India. It is the most common cause of acute viral hepatitis among adults in India.1 The disease is usually self limited and has a case fatality rate of <0.1 % in general population. However it is more severe, amongst pregnant women and often lead to fulminant hepatic failure and death in a significant proportion of patients.2 HEV is a positive sense single stranded RNA icosahedral virus with a 7.5 kilobase genome classified under the genus Hepevirus.3 It is an enterically transmitted disease that usually spreads through fecal contamination of drinking water. It is usually seen in endemic areas during monsoon when contamination of water supplies occurs, though sporadic or isolated cases are also known to occur. Secondary person to person spread from infected persons to their close contacts is rare unlike other enteric agents. 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.1,4 HEV causes high mortality in pregnant women, 20-30% as compared to 0.2-1% in general population.5,6 Identification of etiology based on clinical presentation is difficult, confirmation is done serologically. The study was done to assess the clinical profile, laboratory profile and outcome of acute viral hepatitis E cases admitted over a period of 3 years under dept of Gastroenterology, PSGIMSR.

MATERIALS AND METHODS This study was conducted over a period of 3 years from Jan 2010 till Dec 2013 at the department of Gastroenterology, PSGIMSR. This was an observational study where data was collected from the hospital records with consent of the Institutional Human Ethical Committee – PSGIMSR. Since it being a retrospective observational study, permission for consent waiver was obtained. Details comprising of history, physical examination and laboratory findings of each patient were recorded in the proforma. Serum bilirubin, alanine aminotranserase (ALT), prothrombin time / international normalized ratio (PT/INR) and serum creatinine were the key laboratory parameters recorded. All the patients tested positive for anti HEV IgM antibodies were included in the study including pregnant women, children and patients with preexisting Chronic Liver Disease. Details of clinical history at presentation to the hospital, history of pre existing Chronic Liver Disease, clinical examination, Investigation reports, Progression of the disease, response to treatment, complications encountered and outcome of the disease were noted. Details of the disease condition and clinical progress were recorded at OPD follow up.

RESULTS Demographic profiles of patients as shown in the table below reveals that males were more affected than females in all the age groups. The highest incidence was found in the age group of >51 yrs. Three out of the thirteen females were pregnant on admission. Twenty two (34.9%) patients amongst the sixty three had preexistent chronic liver disease. TABLE 1 – Demographic profile

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20 yrs</td>
<td>2(3.17%)</td>
<td>1(1.58%)</td>
<td>3(4.78%)</td>
</tr>
<tr>
<td>21 – 30 yrs</td>
<td>3(4.76%)</td>
<td>3(4.76%)</td>
<td>6(9.52%)</td>
</tr>
<tr>
<td>31 – 40 yrs</td>
<td>13(20.63%)</td>
<td>2(3.17%)</td>
<td>15(23.60%)</td>
</tr>
<tr>
<td>41 – 50 yrs</td>
<td>11(17.48%)</td>
<td>1(1.58%)</td>
<td>12(19.04%)</td>
</tr>
<tr>
<td>&gt;50 yrs</td>
<td>21(33.33%)</td>
<td>6(9.52%)</td>
<td>27(42.63%)</td>
</tr>
</tbody>
</table>

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A majority of the patients presented with jaundice (93%). Other associated symptoms in the decreasing order of frequency were – anorexia (77%), nausea/vomiting (69.84%), abdominal pain (63.49%), sleep disturbances (53.96%) and hepatomegaly (50.79%). Pruritis, bleeding manifestations and altered consciousness were present in 23.8%, 22.22% and 19.04% of patients, respectively. Table 2 – Clinical profile

- Serum Bilirubin values were elevated in all the patients with the lowest value noted at 1.5mg/dl and the highest value noted was 41.2mg/dl. ALT raise was seen in 84.12% patients. The highest value noted was 7355 U/L. Hepatic coagulopathy was the commonest complication; documented in 39.68% patients. Renal failure was noted in 19.04% patients, hepatic encephalopathy in 15.87% and fulminant hepatic failure in 7.93% respectively. There were no deaths among the general population. Overall mortality was 5 patients (7.93%) and all of them had background history of Chronic Liver Disease. There were no deaths among pregnant women in the study nor were any cases of Intra Uterine Deaths. Among 22 patients with Chronic Liver Disease, 20 patients (90.90%) had Acute on Chronic Liver Failure and a mortality of 5 amongst these patients with ACLF. Table 3

SPECIAL POPULATION – I - PREGNANT WOMEN

- 3 pregnant women were tested positive for HEV at admission. The first patient was admitted at 23 weeks gestation with features of pregnancy induced hypertension. HEV testing was done as she had mild hyperbilirubinemia. She improved with conservative measures, had no complications relating to HEV and was discharged in a stable condition. The second patient was admitted at 27 weeks + 6 days gestation with PV leak. Preterm assisted breech delivery was performed. HEV was identified at investigations. However she did not have any manifestations of hepatitis and improved with ursodeoxycholic acid treatment. Third patient was admitted at 34 weeks gestation with hyperbilirubinemia. HEV testing was positive for which she was treated with UDCA. She had normal vaginal delivery at term. Post delivery her condition started deteriorating with uncontrolled post partum hemorrhage. Investigations showed features of hyper acute liver failure with coagulopathy. She gradually improved with conservative measures and recovered completely.

II – CHRONIC LIVER DISEASE

- 22 patients of preexisting chronic liver disease were admitted with superimposed HEV infection. Out of 22 patients, 13 patients (59%) had ethanol related chronic liver disease, 3 patients (13.63%) had NAFLD related cirrhosis, 3 patients (13.63%) had cryptogenic cirrhosis, 1 patient (4.54%) had autoimmune hepatitis, 1 patient (4.54%) had HBV related cirrhosis and 1 patient (4.54%) had HCV related cirrhosis. 20 patients (90.90%) in this group progressed to Acute on chronic liver failure. 5 deaths occurred among these patients while the rest of 15 patients recovered from ACLF. Table 4 – HEV course in Chronic Liver Disease

Discussion Hepatitis E virus infection is a significant cause of acute hepatitis, both in sporadic and epidemic forms in developing countries. Our data corresponded to the existing epidemiological studies of HEV. The youngest patient was 16yrs old and the eldest was 82yrs. This was comparable to the previous studies which say all age groups are equally susceptible. Male preponderance was noted. Analysis of clinical profile showed that complications of HEV were noted predominantly in the special populations (Pregnant women and pre existing chronic liver disease) while the general population had a fairly uncomplicated course with complete resolution. In pregnant women, one patient had hyper acute liver failure which however recovered with treatment. A majority of patients with preexisting chronic liver disease progressed to ACLF with HEV super infection. Mortality was noted in a minority of these patients while a majority recovered with treatment.

Conclusion We concluded that Acute viral hepatitis E is generally a self limiting disease among the general population, but can cause significant morbidity and mortality among special groups ( pregnant women and people with preexisting Chronic Liver Disease )
if not tackled appropriately with timely aggressive management. Progression of HEV related illness depends on multiple factors like age, comorbid illnesses, nutritional status, initial severity at presentation, early diagnosis, timely intervention and effective treatment.

References: