Recurrent Hepatitis E in Pregnancy

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ABSTRACT

Hepatitis E virus (HEV) is a single stranded RNA virus that causes large scale epidemics of acute viral hepatitis, particularly in developing countries. In men and non pregnant women, the disease is usually self limited and has a case fatality rate of less than < 0.1%. However in pregnant women HEV infection is more severe often leading to fulminant hepatic failure and death in a significant proportion of patients. The high mortality rate in pregnancy has been thought to be secondary to the associated hormonal changes during pregnancy and consequent immunological changes.

Recurrent hepatitis E in pregnancy is a severe and rare condition. We report an interesting case of recurrent hepatitis E in pregnancy.

Key Words: *Recurrent Hepatitis E Virus Infection, Pregnancy.*

INTRODUCTION

Enterically transmitted hepatitis E virus infection is the most frequent cause of acute viral hepatitis in developing countries.[1] The case fatality rate from the general population is from 0.5% to 4%.[2] HEV has an interesting course in pregnant women in certain geographical regions of the world. Studies from various developing countries have shown that the incidence of HEV infection in pregnancy is high and a significant proportion of pregnant women can progress to fulminant hepatitis with a mortality rate varying from 30-100%.[3] The mechanism of severe liver injury in pregnant women with hepatitis E remains a mystery. The WHO recognizes hepatitis E as a significant health problem in many developing nations. Pakistan is endemic for all types of hepatitis and hepatitis E occurs here both in sporadic and endemic forms.[4] In a study in Pakistan, two-thirds of pregnant women with fulminant hepatic failure had HEV infection.[5] Recurrent hepatitis E infection in pregnancy is a severe and rare condition. We report a case of recurrent hepatitis E in pregnancy.

CASE

A 28 year old second gravida was referred to Ziauddin Hospital from a small maternity home in view of jaundice during pregnancy. She was admitted to the hospital on 16th march 2013 at 11:48 am, at 25 weeks of pregnancy with jaundice since one month and decreased fetal movements for one day. Patient gave history of hepatitis E virus infection in her previous pregnancy and had delivered a stillborn baby at 25 weeks of gestation, eight months back (16th July 2012).

On examination patient was conscious and well oriented, icteric, not pale, pulse rate 80 bpm, B.P. 100/70 mmHg. Examination of respiratory and cardiovascular systems was unremarkable. Abdominal examination revealed symphysiofundal height corresponding to 24wks and breech presentation. Fetal heart rate was 140b/min. Initial investigations two weeks back showed Haemoglobin 10.3 gm/dl, platelets 232000/mm3, Liver function test (LFT's) showed total bilirubin 2.6mg/dl, SGPT 537IU/L. On admission LFT's showed serum bilirubin 3.5mg/dl, SGPT 603IU/L. Her Prothrombin time was normal. Viral serology showed HEV IgM positive and IgG negative. ANA profile was negative. Ultrasound pelvis showed, single alive fetus corresponding to 25 weeks, liquor adequate, breech presentation and placenta anterior not low lying. Ultrasound upper abdomen showed mild hepatomegaly. She was managed in collaboration with consultant gastroenterologist who suggested termination of pregnancy as her SGPT showed a continuously rising pattern. The couple was counseled and the condition and its complications were discussed. Options were given for either the continuation of pregnancy with all risks or the termination of pregnancy. The couple took one day to think over it and opted for termination. After written and informed consent from the couple, pregnancy was terminated. She delivered a stillborn female baby weighing 1kg on 17th March 2013 at 6pm. without any complications.

She came for post natal follow up on 30th March 2013, with LFT report which showed serum bilirubin 1.3mg/dl, SGPT 338IU/L (declining pattern). Clinically she was much improved.

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DISCUSSION

Hepatitis E virus (HEV) infection is a significant public health problem in many parts of the world, causing large outbreaks of acute hepatitis. In men and non pregnant women, the disease is usually self-limited and has a case-fatality rate of less than <0.1%. However in pregnant women particularly from certain geographic areas in India, HEV infection is more severe, often leading to fulminant hepatic failure and death in a significant proportion of patients. In contrast, reports from Egypt, Europe and the USA have shown that the course and severity of viral hepatitis during pregnancy is not different from that in non-pregnant women. The reasons for this geographical difference are not clear. The high mortality rate in pregnancy has been thought to be secondary to the associated hormonal (estrogen and progesterone) changes during pregnancy and consequent immunological changes.[6] The decrease in T-cell activity has been suggested to increase susceptibility to viral infections such as hepatitis, rubella, herpes and human papilloma virus and also infections like malaria during pregnancy.[7]

In this case patient had an increased risk of developing fulminant hepatic failure because she had recurrent hepatitis E infection in her second pregnancy. Her IgM antibodies were positive. As she had conceived within two months of her first delivery there is possibility of reactivation of previous viral infection. IgM anti HEV appears during early clinical illness and diminishes over 4-5 months. IgG anti-HEV appears a few days after appearance of IgM anti HEV and its titers remain high from 1 to 4.5 years after acute phase of the disease.[8] The exact duration of persistence of anti HEV is not known. One study showed 47% of people to have anti HEV 14 years after acute HEV infection.[9] Thus, IgM anti HEV is a marker of acute or recent HEV infection while IgG anti HEV indicates infection, not necessarily recent.

Hepatitis E causes a mild self-limiting illness with no long-term sequelae. However, it is especially severe in pregnant females in the second and third trimester where it results in a high mortality rate and an increased incidence of stillbirths. Protection from this disease in endemic areas lies mainly in prevention. As the vaccine for hepatitis E is still in the experimental stage. Provision of clean drinking water, hand washing before eating and proper disposal of sewage has been shown to decrease the incidence of this disease.

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