



An Atypical Presentation of Hepatitis E in Pregnancy

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Abstract

Hepatitis E is water born disease and transmitted by feco-oral route and it is an emerging infectious agent causing acute viral hepatitis all over the world. During pregnancy, especially in the third trimester, hepatitis E infection is characterized by a more severe infection with many fold increase in hepatic enzyme levels that sometimes results in fulminant hepatitis leading to increasing maternal and fetal morbidity and mortality. We are presenting an atypical case of hepatitis E in pregnancy which showed mild increase in enzyme levels with very high bilirubin levels.

Keywords: Hepatitis E, liver enzymes, bilirubin, preterm labour, pregnancy

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Introduction

Pregnancy itself causes several physiological changes to liver that can be appreciable by liver-related clinical and biochemical manifestation. There are several liver diseases and its complication which are unique to pregnancy, encountered in day to day clinical practice. But there are certain liver disease especially viral hepatitis found coincidental to pregnancy. Its consequence is generally grave if not taken into consideration early. Most common cause of severe hepatitis during pregnancy is Hepatitis E. Its consequences are seriously dangerous for both maternal and fetal life with a mortality rate of 58%, even up to 100% if a postpartum massive hemorrhage occurs [1].

Hepatitis E is a single-stranded, non-enveloped RNA virus of the genus Hepevirus and the family Hepeviridae. It is transmitted enterically with worldwide distribution and is responsible for both sporadic cases and large hepatitis epidemics in developing countries [2]. Here we are presenting a case of hepatitis E with pregnancy which presented in atypical manner in our tertiary care hospital.

The Case

19 year G2A1 lady at 31 wk POG with red cell non alloimmunized pregnancy admitted with h/o pruritus and mild yellowish discoloration of skin and mucous membrane for last 10 days. She complained of malaise and fever on and off during last 10 days. She denies any history of travel and any family member suffered recently or suffering any form of liver disease or jaundice. There was no history of passing whitish foul smelling stool. Her admission test showed a reassuring FHR on NST. Biochemical test showed Hb: 11.4%, TLC: 21300 /mm³, Plt: 2.40 Lakh/mm³, INR: 1.13 with raised total bilirubin: 10.2 mg% , direct bilirubin: 4.8 mg%, Alkaline Phosphatase: 46, ALT: 54 IU/L, AST: 37 IU/L. Her kidney function tests showed urea of 26 mg% and creatinine was 0.6 mg%. Her serum markers for hepatitis A, B and C were negative. Her serum HEV IgM antibody was positive. There after she developed preterm labour and leaking per vaginum at 32 weeks period of gestation. She underwent preterm assisted breech delivery and delivered a 1.14 kg female baby at 15.10 hr on 21 Apr 2015 with apgar of 3/10 and 9/10. The liquor was meconium stained and placenta and cord were also stained. Her labour and delivery went uneventful without any postpartum haemorrhage. Baby was observed in NICU in view of very low birth weight. On postnatal

period mother received anti D immunoglobulin as the baby was Rh positive blood group and DCT was negative. Following delivery her liver function improved. The total and direct bilirubin on post natal day 2 was 9.1 mg% and 5.1 mg% respectively. On postnatal day 5 they were 5.1 mg% and 2.7 mg% respectively.

Discussion

Viral hepatitis is a major health problem in India. Pregnancy itself is a potential risk factor for viral replication and leads extreme low immune status of Indian pregnant women. It has been reported that upto 70% cases of pregnant women with acute hepatitis E progress to acute liver failure with a short pre-encephalopathy period, rapid development of cerebral edema and high occurrence of disseminated intravascular coagulation [3]. Acute viral hepatitis is defined as those cases which have acute self limited disease and a serum aspartate aminotransferase elevation of at least five fold or clinical jaundice or both [4]. In our case the serum AST was less than two fold increased. It makes us the suspicion of viral hepatitis was difficult.

Our patient was more fitting into the criteria of cholestasis of pregnancy as in cholestasis, serum aminotransferase level remains normal to moderately elevated but seldom exceeds 250 U/L. But total bilirubin concentrations which rarely exceed 4 to 5 mg/dL in this condition and our patient had bilirubin level more than 10 mg%. This finding was confusing with acute fatty liver pregnancy which is mainly characterised by bilirubin levels usually are <10 mg/dL, and serum aminotransferase of usually <1000 U/L and after delivery AFLP shows improved trends in liver function as in our case.

Although the mechanism of liver injury is not yet clear, it is possible that interplay of hormonal and immunologic changes during pregnancy, along with a high viral load of HEV, renders the woman more vulnerable. Hepatitis E in pregnancy is also associated with high rates of spontaneous abortion, intrauterine death, and preterm labour [3]. In our case, she had mild elevation of AST, ALT and high levels of serum bilirubin with HEV positive status and underwent spontaneous preterm delivery at 32 weeks period of gestation. This presentation was atypical in case of hepatitis E infection as liver enzymes were mildly elevated with high levels of serum bilirubin.

References

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