

A study of viral hepatitis during pregnancy in Nepal Medical College Teaching Hospital

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ABSTRACT

The present study aimed to find out prevalence and severity of viral hepatitis during pregnancy in the department of Obstetrics and Gynaecology, Nepal Medical College Teaching Hospital. Out of 5602 pregnant women admitted in the ward from 2001 – 2007; viral hepatitis was seen in 29 cases. HBV was detected in 18/29 (62.0%), HEV in 6/29 (20.6%) and viral hepatitis of undetected serology was seen in 5/29 (17.2%). Serology was undetected in these cases because of financial constraints. The mortality rate was 8/29 (27.5%). Three out of eight cases who expired were HEV positive and five were of undetected serology. Seven out of 8 maternal deaths were in preterm gestation and undelivered. Fulminant hepatitis with hepatic encephalopathy was the commonest cause of death. Hepatitis E was the commonest etiological agent in those who had fulminant disease during pregnancy and was associated with high mortality rate.

Keywords: Hepatitis, pregnancy, mortality.

INTRODUCTION

Viral hepatitis is the most common serious liver disease encountered in pregnancy. Abnormal liver tests occur in 3.0-5.0% of pregnancies, with many potential causes, including coincidental liver disease (most commonly viral hepatitis) and underlying chronic liver disease. There are at least six distinct types of viruses A, B, C, D, E and G that cause viral hepatitis.¹ Specific diagnosis relies on detection of specific serological markers. Most fatalities in viral hepatitis are due to fulminant hepatic failure when the patients develop hepatic encephalopathy after having acute hepatitis. It is characterized by mental changes progressing from confusion to stupor and coma as a result of severe impairment of hepatic function without any history of pre-existing liver disease.² Viral

hepatitis in pregnancy has been a subject of continuing interest and controversy as both the incidence and severity in pregnancy vary widely around the world. In Western Europe and North America the incidence is as low as one in 20,000 whereas in the Middle East, Africa and India, the reported incidence is around 3.0%.^{3,4} Fulminant hepatic failure is also more common in pregnancy than in non pregnant women with hepatitis.⁵

METHODS AND MATERIALS

A retrospective study was conducted in the Department of Obstetrics and Gynaecology from January 2001 to December 2007. Over the period of seven years all the pregnant women admitted in the obstetric ward with acute viral hepatitis were retrospectively studied for aetiology,

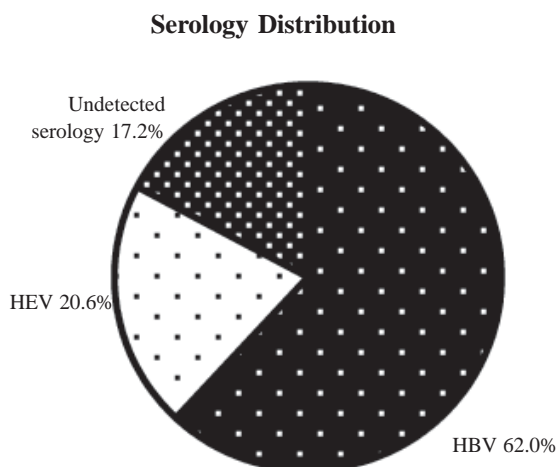


Fig. 1. Serology Distribution of viral hepatitis during pregnancy

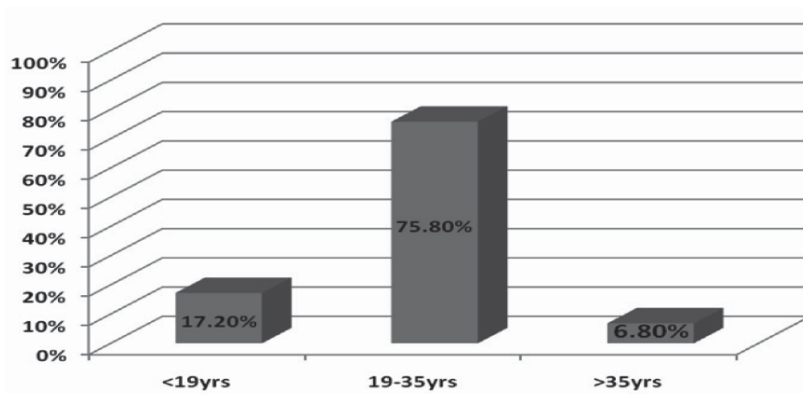


Fig. 2. Age Group Distribution among viral hepatitis patients Most of the pregnant women with viral hepatitis were in the age group between 20 to 35 years (75.8%)

clinical course and outcome of the disease. Data was taken from the files of 5602 admitted pregnant women in the time period from January 2001 to December 2007 and results carefully analyzed. The study aimed to find out the prevalence and severity of viral hepatitis during pregnancy among the admitted pregnant women.

HBV was seen as the commonest agent in viral hepatitis 18 (62.0%). HEV in 6 (20.6%) and viral hepatitis of undetected serology was seen in 5 (17.2%) cases. Serology among 5 out of 29 cases could not be detected due to financial constraints and immediate death upon arrival to the hospital. These five cases all presented in

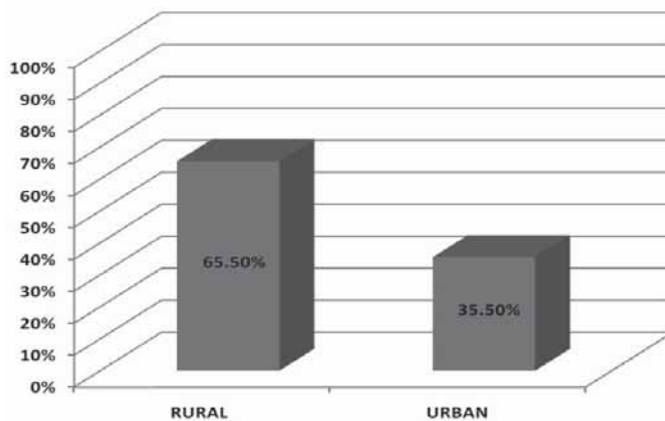


Fig. 3. Area of residence Majority 65.5% (patients came from rural areas of the country)

RESULTS

Of the 5602 pregnant women admitted in the obstetric ward from January 2001 to December 2007, viral hepatitis was diagnosed in 29 cases. The prevalence of viral hepatitis during seven years period was 0.5% (29/5602).

the third trimester with features of fulminant hepatitis and hepatic encephalopathy.

Out of 29 pregnant women with viral hepatitis 15(51.7%) were primigravida, 12 (41.3%) multigravida and 2 (6.8%) were grandmultigravida.

Parity Distribution

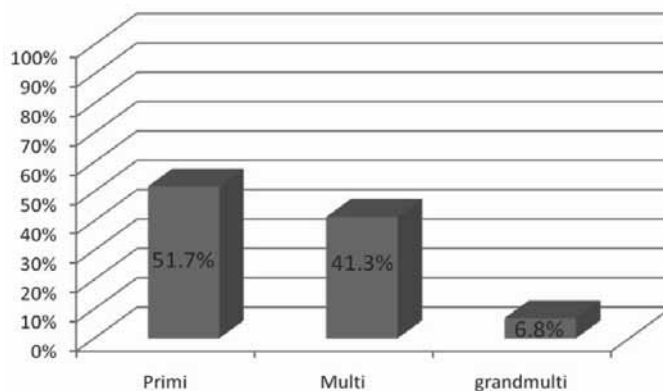


Fig. 4. Parity distribution

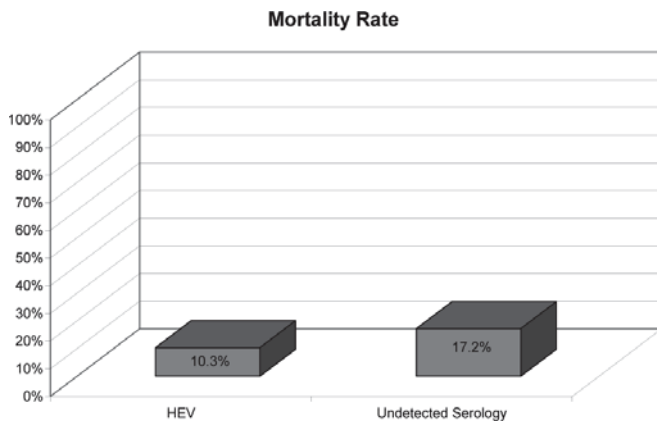


Fig. 5. Mortality rate

The mortality occurred in 8 out of total 29 viral hepatitis cases (27.5%). Three of the cases who expired were HEV positive while five were of undetected serology. Seven out of eight maternal deaths were in preterm gestation and undelivered. Fulminant hepatitis with hepatic encephalopathy was the cause in seven out of 8 maternal deaths while one patient died due to severe postpartum haemorrhage with disseminated intravascular coagulopathy.

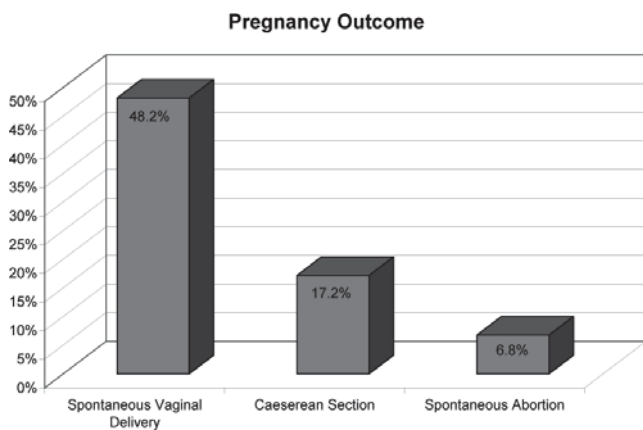


Fig. 6. Pregnancy outcome

Spontaneous vaginal delivery occurred in fourteen out of 29 (48.2%) pregnant women with hepatitis, out of which thirteen were HBV infected and one HEV infected. Caesarean section was done in five out of 29 (17.2%) cases. All of them were HBV infected. Spontaneous abortion occurred in two out of 29 (6.8%) cases. Both the cases were HEV infected.

DISCUSSION

In this study, HBV infection was seen in majority of the cases (62.0%) as compared to HEV infection which was seen in 20.6% of cases of viral hepatitis in pregnant women. The prevalence of HEV infection in India is reportedly between 40.0-57.0%.³ The low prevalence of HEV in pregnancy in this study could be attributed to the fact that 5 out of 29 cases could not have their serology determined because of financial constraints and late arrival to the hospital. Lack of financial resources is one of the major factors for inability to determine the serology in this study. Most of the pregnant women with viral hepatitis had spontaneous vaginal deliveries. Thus obstetric intervention and mode of delivery was not significantly influenced by the presence of viral hepatitis. Majority of the maternal deaths were due to fulminant hepatic failure with hepatic encephalopathy which is similar to studies by Patra *et al.*⁶ Among the HEV positive pregnant women the mortality rate was 50.0% which is nearly similar to study of Beniwal *et al*⁷ where the mortality rate is in the range of 30.0-45.0% and may be as high as 70.0%. HEV is seen as the proven common hepatotropic virus associated with fulminant hepatic failure and high mortality rate among pregnant women. Malnutrition, poor socioeconomic and suboptimal obstetric care may combine significantly to the unusually severe outcome of viral hepatitis.

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