

ORIGINAL ARTICLE

Hepatitis Virus Infection in Pregnant Women- A Clinical Study

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ABSTRACT:-

Introduction- Hepatitis with pregnancy is now a common disease among pregnant women on the labour ward. Hepatitis B and C has more complications while Hepatitis E with pregnancy has higher mortality rate. The present study was conducted to determine the cases of hepatitis in pregnant women. **Materials & Methods-** The present study was conducted in the department of Gynaecology & Obstetrics on 68 pregnant women with history of hepatitis. In all patients, blood biochemistry and liver enzymes estimation was done.

Results- Out of 68 patients, 42 were multigravid and 26 were primigravid. The difference was significant (P- 0.01). Hepatitis A was seen in 20 patients, hepatitis B in 28, hepatitis C in 13 and hepatitis E in 7 patients. The difference was significant (P- 0.02). There were 9 preterm birth, 2 low birth weight and 12 IUD babies. The difference was significant (P< 0.05). Common maternal complications was ascites (1), abortion (5), DIC (4), cholestasis (1), GI bleed (2), hepatic encephalopathy (1) preeclampsia (4). The difference was significant (P< 0.05). **Conclusion-** Pregnant mothers should be managed as high risk group to improve their outcome. Neonatal immunization should be both active and passive even if government has to bear the cost. Blood and blood products needs to be screened to reduce hepatitis B and C.

Key words- Hepatitis, Multigravid, Preeclampsia

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INTRODUCTION

Hepatitis is the liver inflammation caused by A, B, C, D and/or E viruses. It is an acute illness with discrete onset of symptoms eg fatigue, abdominal pain, loss of appetite, intermittent nausea, vomiting and jaundice. Hepatitis is a major health issue in India and the worldwide. The prevalence is increasing among pregnant women in proportion to the increase worldwide. Hepatitis in pregnant women leads to increased maternal and neonatal morbidity and mortality. Recently there is more emphasis on prevention and treatment of hepatitis during pregnancy, as it leads to reduction in maternal and neonatal morbidity and mortality.¹

Hepatitis B virus (HBV) is a double stranded DNA virus belonging to Hepadna viridae family. HBV infection occurs through parenteral, sexual and by vertical transmission. WHO reports 2% hepatitis B prevalence among the general population in South East Asia Region. In India, the prevalence of hepatitis B surface antigen (HBsAg) is 3 - 4.2% with over 40 million HBV carriers. Chronic HBV infection in early childhood and its progression to chronic liver disease, failure, cirrhosis or carcinoma causes 15 - 25% adults death. In India, around 1.15 lakh population die due to hepatitis B related complications.²

Hepatitis with pregnancy is now a common disease among pregnant women on the labour ward. Hepatitis B and C

has more complications while Hepatitis E with pregnancy has higher mortality rate. Most acute liver failures diagnosed in India are due to HEV and HEV is the most common cause of hepatitis during pregnancy. In India, HBV is the second most common cause of acute viral hepatitis after HEV.³ The present study was conducted to determine the cases of hepatitis in pregnant women.

MATERIALS & METHODS

The present study was conducted in the department of Gynaecology & Obstetrics. It included 68 pregnant women with history of hepatitis. All were informed regarding the study and written consent was obtained. Ethical clearance was taken before starting the study.

General information such as name, age, gender etc was recorded. In all patients, blood biochemistry and liver enzymes estimation was done. HAV and HEV were diagnosed by the presence of serum IgM antibodies. HbsAg was the serum marker to confirm active Hepatitis B infection. HBeAg was taken as increased infectivity, appearance of IgM antiHBc confirmed acute infection. Appearance of anti-HBs implies either natural immunity or vaccination. Presence of anti-HCV suggested infection by HCV. Results were tabulated and subjected to statistical analysis using chi- square test. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 68		P value
Multigravid	Primigravid	
42	26	0.01

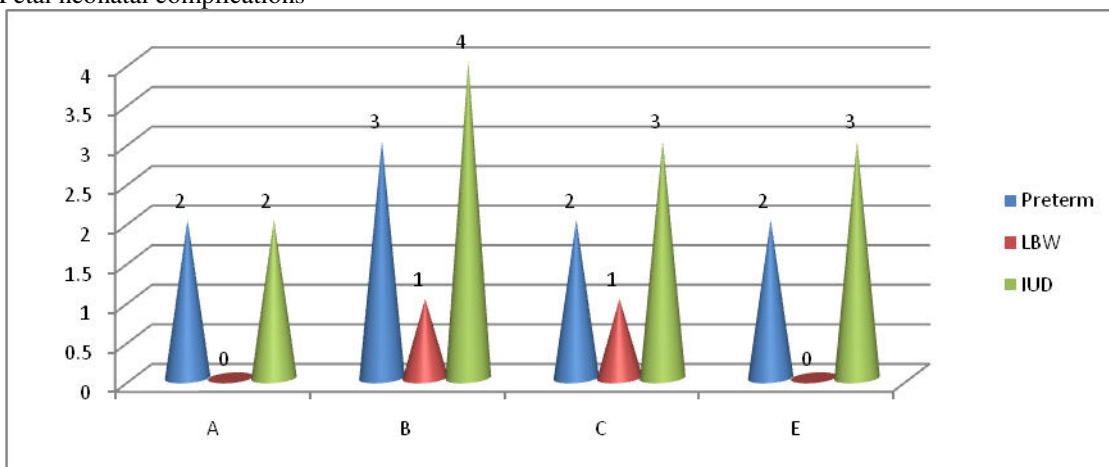
Table I shows that out of 68 patients, 42 were multigravid and 26 were primigravid. The difference was significant (P- 0.01).

Table II Type of Hepatitis

Type	Number	P value
A	20	
B	28	0.02
C	13	
E	7	

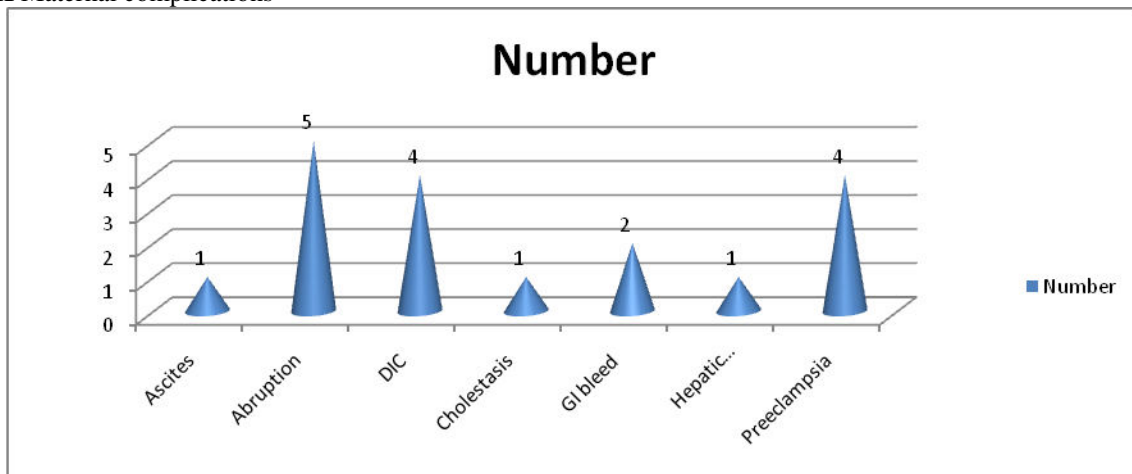
Table II shows that Hepatitis A was seen in 20 patients, hepatitis B in 28, hepatitis C in 13 and hepatitis E in I 7 patients. The difference was significant (P- 0.02).

Graph I Fetal neonatal complications



Graph I shows that there were 9 preterm birth, 2 low birth weight and 12 IUD babies. The difference was significant (P< 0.05).

Graph II Maternal complications



Graph II shows that common maternal complications was ascites (1), abruptio (5), DIC (4), cholestasis (1), GI bleed (2), hepatic encephalopathy (1) preeclampsia (4). The difference was significant (P< 0.05).

DISCUSSION

Neonates who suffer from neonatal hepatitis B have almost 90% risk of developing HBs Ag carrier and chronic liver disease. The population prevalence of HCV in India is 1%. HDV is not very common in our country and is found in 10-20% of HBV positive patients. HAV and HEV both of them are transmitted through fecal-oral route. Hepatitis viruses B (HBV), D (HDV) and C (HCV) are transmitted through parenteral route. Perinatal transmission is prevalent in HBV but less frequent in HCV. It is about 10% if mother has HBs Ag and 90% when HBeAg is also positive.⁴

Transmission for HBV, HCV, & HDV could be due to needle stick injury to paramedical staff, eye contamination, transfusion of unscreened blood, use of contaminated needles and syringes, homosexual and heterosexual contact, vertical transmission from mother to baby, caesarean, surgical abortions & other operations done by using contaminated equipment, tattooing and transplantation/dialysis of infected blood.⁵

We found that of 68 patients, 42 were multigravid and 26 were primigravid. Hepatitis A was seen in 20 patients, hepatitis B in 28, hepatitis C in 13 and hepatitis E in 7 patients. This is in agreement with Shazie et al.⁶ There were 9 preterm birth, 2 low birth weight and 12 IUD babies. Common maternal complications was ascites (1), abruption (5), DIC (4), cholestasis (1), GI bleed (2), hepatic encephalopathy (1) preeclampsia (4). This is similar to Chatterjee.⁷

HBV infection in early life usually results in chronic carrier state who becomes the reservoir of infection in the community. Vertical transmission accounts for 50 million new cases every 5 year. Vertical transmission is one of the most common routes of HBV transmission which contributes to nearly half of 350 million people with chronic HBV infection burden worldwide.⁸ For reducing the incidence of chronic infections or carrier state, effective strategies like mandatory antenatal screening for HBsAg and HBV vaccination both active as well as passive immediately after birth to all children born to HBsAg positive mothers are necessary. Hepatitis B vaccine is the mainstay to prevent HBV infection and related complications. Our country is considered to have an intermediate level of HBV endemicity with population prevalence of around 4%.⁹ Globally 350 million people remain chronically infected with hepatitis B and become carriers, out of which 1.5 million deaths occur each year due to cirrhosis & hepatocellular carcinoma. HDV co-infects with HBV. The ability of HBV & HCV to survive for prolonged periods on the external surfaces at room temperature increases their infectivity.¹⁰

CONCLUSION

Pregnant mothers should be managed as high risk group to improve their outcome. Neonatal immunization should be both active and passive even if government has to bear the cost. Blood and blood products needs to be screened to reduce hepatitis B and C.

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