



MATERNAL AND FETAL OUTCOME IN PREGNANCY WITH JAUNDICE

Gynaecology

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ABSTRACT

Objective- this study evaluate the maternal and fetal morbidity and mortality associated with jaundice in pregnancy. **Methods-** This is a prospective observational study in 40 patients with jaundice in pregnancy for one year in Patna medical college and hospital, Patna, Bihar. **Results-** This study shows that obstetrics cholestasis is the commonest cause of jaundice in pregnancy accounting for 37.5% of patients. In viral hepatitis group hepatitis B is the commonest cause i.e. 25% of patients. The hypoglycemia is the commonest maternal complications of jaundice whereas coagulopathy, encephalopathy & renal failure are the life-threatening complications seen in fatty liver of pregnancy and hepatitis-E viral hepatitis. The mortality is 100% in case of fatty liver of pregnancy and 66.6% in hepatitis-E viral hepatitis. The intrauterine death is seen in 100% of patients with fatty liver of pregnancy and 50% in hepatitis-E infection. **Conclusion-** It is seen that fatty liver of pregnancy has the highest morbidity and mortality to both mother and fetus. Its diagnosis needs high level of suspicion. The hepatitis B infection can be prevented by proper education and vaccination. The hepatitis E infection can be prevented by proper sanitization and providing clean drinking water.

KEYWORDS

Viral Hepatitis, jaundice, Pregnancy,

Introduction

Jaundice in pregnancy is often encountered during obstetrics practice. The jaundice in pregnancy is broadly divided into three categories. First, those cases of jaundice which is specially related to pregnancy that resolve either spontaneously or following delivery example intra hepatic Cholestasis, acute fatty liver, hepatocellular damage associated with pre-eclampsia and eclampsia. Second, jaundice coincidental to pregnancy example acute viral hepatitis, gallstone. Third, jaundice associated with chronic liver disease.[1]

Symptom of jaundice vary from severe nausea and vomiting chronic malaise, anorexia, fever, epigastric pain and progressive jaundice.[2] Pregnant woman with acute viral hepatitis A at higher risk of morbidity and death than pregnant woman with chronic viral hepatitis[3]. The acute fatty liver of pregnancy clinical involvement is relatively minor than laboratory aberrations. In this disorder the spectrum of liver involvement varies from mild involvement that go unnoticed or attributed to pre-eclampsia to hepatic failure.[4]

Methodology

This study is the prospective observational study which was conducted in Patna medical college and hospital, Patna during 1 year of time (January 2019 to January 2020). A total of 40 women of jaundice were with pregnancy were evaluated during this period. The cases of pre-eclampsia-eclampsia and HELPP syndrome were excluded from the study. After admission, all suspected patient of jaundice from history and clinical examination were included in the study. The gestational age of fetus is determined by LMP. These patients underwent blood investigations besides routine sampling the investigations sent are liver function test, kidney function test, coagulation studies (PT-INR) and serological tests for IgM anti-HAV, HBsAg, IgM anti-HEV, anti HCV done. These patients underwent whole abdomen sonography to detect hepatomegaly, gall stone, ascites and for fetal wellbeing. The fatty liver of pregnancy was diagnosed on suspicion and were pre-eclampsia – eclampsia syndrome was excluded. The mental status of consciousness is assessed for these patients. The conservative management was adopted with daily monitoring of clinical, biochemical and hemodynamic parameters were done. The fetus was monitored till term except in cases where fatty liver of pregnancy suspected and LSCS was done for obstetrical indications.

Table1: Demographic profile of patients studied

Mean Age	19.2 years	
Parity	Primigravida	70%
	Second Gravida and more	30%
ANC	Booked	22.5%
	Unbooked	77.5%

The table 1 shows the demographic profile of patients studied. The mean age of patient is 19.2 years. The 70% of patients were primigravida. The 77.5% patients were unbooked.

Table 2: Distribution of aetiology

Obstetrics cholestasis	37.5%
Viral hepatitis-hepatitis A	7.5%
Hepatitis B	25%
Hepatitis C	5%
Hepatitis E	15%
Fatty liver of pregnancy	5%
Gall bladder stone	5%

The table 2 shows the distribution of aetiology of jaundice in pregnancy in this study. The obstetric cholestasis is the commonest cause of jaundice in pregnancy. Among the viral hepatitis the hepatitis B is the commonest cause of jaundice in pregnancy. The fatty liver of pregnancy and gallbladder stone accounts for 5% patients in each group.

Table 3 Biochemical characteristics

Parameters	Mean+-SD	Range
Total bilirubin	10.05+-9.02	1.2-22(mg /dl)
Aspartate aminotransferase (AST)	375+- 532.05	20-3834(U/L)
Alanine aminotransferase (ALT)	323+-466	32-1920(U/L)

Table 3 shows the mean level and range of total bilirubin level and liver enzymes (AST and ALT) levels in the studied population.

Table 4-Maternal complications

	Obstetric Cholestasis	Hepatitis A	Hepatitis B	Hepatitis C	Hepatitis E	Fatty liver of pregnancy	Gall Bladder Stone
Hypoglycaemia 45%	40%	66.6%	10%	50%	83.3%	100%	33.3%
Coagulopathy (PT INR>1.5) 42.5	26.6%	66.6%	40%	-	83.3%	100%	-
Ascites 7.5%	-	-	-	-	16.6%	66.6%	-

Renal failure	-				50%	100%	-
12%							
Encephalopathy	-	33.3%	20%	-	50%	100%	-
20%							
Mortality	-	33.3%	-	-	66.6%	100%	-
17.5%							

The table-4 shows the maternal complications in jaundice in pregnancy. Hypoglycaemia is the commonest complication; the highest rate is seen in fatty liver of pregnancy and next to it is hepatitis E infection. The coagulopathy is seen in 42.5% of patient of which 100% is seen in fatty liver of pregnancy and 83.3 % seen in Hepatitis E infection. The ascites is seen in 7.5% of patient and renal failure is seen 12% of cases. The encephalopathy is seen in 20% of cases. The mortality is 17.5 % jaundice effected pregnancy. The mortality and morbidity are highest among the fatty liver of pregnancy. In viral hepatitis the Hepatitis-E shows highest morbidity and mortality rate.

Table 5-Fetal complications

	Obstetric Cholestasis	Hepatitis A	Hepatitis B	Hepatitis C	Hepatitis E	Fatty liver of pregnancy	Gallbladder Stone
Preterm birth - 32.5%	26.6%	33.3%	60%	-	20%	-	33.3%
Low birth Weight- 30%	40%	33.3%	40%	-	16.6%		
Intrauterine Death- 40%	40%	66.6%	20%	-	50%	100%	33.3%

Maternal and fetal outcome in pregnancy with jaundice The table 5 shows the fetal complications of jaundice in pregnancy. In obstetrics cholestasis patients preterm birth is seen in 26.6%, low birth weight is seen in 40% and intrauterine death is seen in 40% of patients. In viral hepatitis also there is considerable high rate of fetal complications. In fatty liver of pregnancy there is 100% risk of intrauterine fetal death.

DISCUSSIONS

This study is done on 40 patients admitted in state medical college and hospital. This study shows obstetrics cholestasis is most common cause of jaundice in pregnancy. The maternal complications are not so serious but fetal complications is considerable high. In viral hepatitis the hepatitis B is the common cause of jaundice in pregnancy. This is also seen in the study done by Singla et al of India where 36% of studied patients has hepatitis B infections.[5]

The encephalopathy is 100 % in fatty liver of pregnancy in this study. In viral hepatitis group encephalopathy is highest in hepatitis E patients i.e. 50%. This observation is seen congruence with the observation of Jaiswal et al from India and Aziz et al from Pakistan [6,7]. This is similar to the result of Khuroo et al in which fulminant hepatic failure is seen in 61.8% of cases [8].

In this study coagulopathy is seen in 42.5% of patients. This is seen in 100% patients of fatty liver of pregnancy and in viral hepatitis hepatitis E coagulopathy is seen in 83.3% of patients. This correlation of coagulopathy in viral hepatitis E is seen in study done by khuroo et al. [8]

The intrauterine death is 100 % in case of fatty liver of pregnancy and in viral hepatitis-E it is 50%. The preterm birth is 60% in hepatitis B patients. This study is similar to the study done in the study done by Singla et al of India where 68.9% patient of hepatitis E patients has intrauterine death and preterm birth is seen in 40.6% of hepatitis B patients.[5]

CONCLUSION

This study shows that obstetric cholestasis is the commonest cause of jaundice in pregnancy. The fetus complication can be prevented by

proper fetus surveillance both antenatally and intranatally. This study shows fatty liver of pregnancy has highest morbidity and mortality for both mother and fetus. The reason behind this is due to the difficulty in diagnosis and overlapping clinical presentation of it with preeclampsia-eclampsia and high level of suspicion is required. Among viral hepatitis, hepatitis B is commonest cause which can be prevented by proper education, screening and vaccination. The hepatitis E has highest morbidity and mortality for both mother and fetus. This infection can be prevented by proper sanitization and provision of clean water to prevent it transmission.

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