



A Prospective Study on Maternal and Fetal outcome in Jaundice complicating Pregnancy

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Introduction

Hepatobiliary disorders that occur during pregnancy can be a clinical challenge. During pregnancy the hemodynamic, hormonal and immunological changes alter the course of both acute and chronic liver diseases. Hepatic disorders complicate about 3% of all pregnancies. Certain hepatic disorders like hyperemesis, Acute Fatty Liver of pregnancy, Intrahepatic cholestasis of pregnancy and HELLP syndrome are unique to pregnancy. Pre existing liver diseases like viral hepatitis, cirrhosis and portal hypertension and Wilson's disease can have an impact on pregnancy.

AFLP is an obstetric emergency that can lead to fulminant hepatic failure. It is associated with fatty infiltration of hepatocytes without inflammation or necrosis. Maternal genetic mutation affects mitochondrial fatty acid oxidation leading to fetal deficiency of the enzyme Long chain 3-hydroxyacyl-CoA dehydrogenase. This results in deposition of long chain fatty acids in maternal liver and leads to impaired hepatic function.

Intrahepatic cholestasis of pregnancy is associated with pruritis and elevated bile acids in the 2nd half of pregnancy, accompanied by high levels of aminotransferases and mild jaundice. Maternal management is symptomatic with ursodeoxycholic

acid for the fetus. HELLP syndrome is the commonest cause of hepatic dysfunction in pregnancy. Immediate delivery is the only definitive therapy, though complications like abruption placenta, Acute renal failure, subcapsular hematomas can occur.

Pregnancy results in alterations in the standard liver function. A rise in ALT and AST suggest hepatocellular necrosis. Increase in ALP and GGT suggest cholestasis. Synthetic liver function is assessed by serum albumin and prothrombin time. Early recognition, diagnosis and intensive supportive care is essential for both maternal and fetal survival.

Method

This is a prospective study conducted in the Department of Obstetrics and Gynecology in a tertiary care referral hospital Govt, Mohan Kumaramangalam medical college and Hospital, Salem from May 2020 to November 2020. During this period, 30 patients with clinical and laboratory evidence of jaundice who were admitted, were selected for this study.

A detailed history was taken, general, systemic and obstetric examinations were done. LFT including Sr.bilirubin, AST, ALT, ALP, prothombin time, partial thromboplastin time, bleeding time, clotting time and platelet count

were done. Maternal outcome was studied in terms of maternal complications and maternal end result. Perinatal Outcome was assessed by

perinatal morbidity and mortality, neonatal intensive care need.

Results

Demographic profile

Age in years	number of cases (n=30)	percentage
15-20	3	10
21-25	18	60
26-30	9	30
Socioeconomic status		
Lower class	26	86.6
Lower middle class	4	13.3
Booking status		
Booked	28	93.3
Unbooked	2	6.6
Parity		
Primi	13	43.3
Multi parity	17	56.6
Gestational age		
Term	21	70
Preterm	9	30

The above table shows the peak age of incidence between 21-25 years and majority were primigravida. All cases were in third trimester of pregnancy, among them 93.3% was booked, 70% were term, 86.6% were from low socioeconomic status.

Clinical presentation at admission

Signs & symptoms	Number of cases	Percentage
Nausea/vomiting	15	50
Pruritis	12	40
Yellow discoloration of skin, eye & urine	21	70
Abdominal pain	6	20
Pallor	27	90
Icterus	30	100
Edema	17	56.6
Petechiae	4	13.3

Nausea and vomiting were the most common presenting symptom seen in 50% of cases. Other complaints were pruritis, hypertention, edema and petechiae

Aetiology of jaundice in pregnancy (n=30)

Aetiology of pregnancy	Number of cases	Percentage
HELLP	14	46.6
PIH	3	10
ICP	2	6
AFLP	9	30
Hepatitis A	0	0
Hepatitis B	2	6
Hepatitis C	0	0

From the above table it is seen that HELLP syndrome is the most common cause of jaundice. Other causes being pre eclampsia, intra hepatic cholestasis of pregnancy, AFLP and viral hepatitis

Maternal complications (n=30)

Maternal complications	Number of cases	Percentage
Preterm labour	9	30
Acute renal failure	2	6.6
DIVC	2	6.6
PPH	14	46.6
Encephalopathy	2	6.6
Fever	8	26.6
Multiorgan failure	3	10
ICU admission	30	100
Maternal death	2	6.6

PPH was seen as the most common complication from the above table. 2 maternal death were seen in this study.

Fetal complications

Fetal complication	Number of cases	Percentage
Preterm	9	30
Intrauterine death	6	20
Meconium stained liquor	14	46.6
Fetal growth restriction	12	40

9 were preterm deliveries of which 3 died.6 were IUD, 14 had fetal distress with meconium stained liquor and 12 had fetal growth restriction.

Discussion

Total antenatal admissions during the study period were 15040, of which 30 patients had jaundice and the incidence is 0.19%. The incidence of jaundice is high in 3rd trimester and the complications were also high during that period. All the patients were kept in the ICU for intensive monitoring. PPH was the most common maternal complications in 46.6% of patients for which ballon tamponade was done and blood products were transfused.

46.6% of cases with liver dysfunction were due to pre eclampsia and HELLP which had the maximum incidence among jaundice complicating pregnancy. Intrahepatic cholestasis of pregnancy was diagnosed in 2 patients. Both cases of viral hepatitis reported had a high level of Sr.bilirubin, SGOT and SGPT levels were above 500 IU/ml .Viral hepatitis (B) accounted for about 6% of cases.

In this study 2 patients died. Both patients died of Disseminated intravascular coagulopathy and multiorgan failure due to Acute fatty liver of pregnancy.

9 cases were preterm deliveries of which 2 died ,6 were Intrauterine fetal death,14 had fetal distress with meconium stained liquor,12 had fetal growth restriction and 2 delivered uneventfully.

Conclusion

This study emphasizes on the fact that there is increased maternal and fetal morbidity and mortality in pregnancy complicated with jaundice and hence requires early diagnosis and management in a tertiary care.

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