

ORIGINAL ARTICLE

Assessment of maternal and fetal outcome in patients with jaundice complicating pregnancy

¹Aasif Abdullah, ²Saima Gayas

¹Senior Resident, Dept of Obstetrics, SKIMS, Soura, Srinagar, Jammu and Kashmir, India;

²Gynaecologist, Department of Health, Jammu and Kashmir, India

ABSTRACT:

Background: Jaundice in pregnancy can be due to liver diseases unique to pregnancy, prehepatic causes, hepatic causes, posthepatic causes and underlying chronic liver diseases. The present study was conducted to assess the maternal and fetal outcome in patients with jaundice complicating pregnancy. **Materials & Methods:** 60 women with jaundice complicating pregnancy were included. Parameters such as parity, gestational age, booking status, mode of delivery, maternal complications, Perinatal outcome in terms of birth weight, perinatal morbidity and mortality were studied. **Results:** Age group <20 years had 15, 20-30 years had 35 and 30-40 years had 20 subjects. The difference was significant ($P < 0.05$). Parity was Primiseen in 25, Gravia 2 was seen in 15, Gravidia 3 in 20. Booking status was booked in 40 and unbooked in 20. Mode of delivery was LSCS in 22, ABD in 14, emergency hysterotomy in 7 and vacuum in 17. Diagnosis was HELLP in 22, hemolytic anemia in 3, HELLP with SPE in 7 and viral infection in 28. Maternal complications was abruption in 5, atonic in 3 and AKI in 1 patient. The difference was significant ($P < 0.05$). 54 were alive and 6 were dead. The difference was significant ($P < 0.05$). **Conclusion:** Jaundice in pregnancy is associated with high maternal mortality and perinatal mortality viral hepatitis is the leading cause of jaundice.

Key words: hemolytic anemia, Jaundice, Pregnancy

Corresponding Author: Saima Gayas, Gynaecologist, Department of Health, Jammu and Kashmir, India

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INTRODUCTION

Jaundice is defined as a clinical manifestation of hyperbilirubinemia which consists of deposition of bile pigments in the skin, resulting in yellowish staining of the skin and mucous membrane. Normal serum bilirubin level is less than 1 mg/dl.¹ Clinical jaundice is manifested if serum bilirubin level > 2 mg/dl. Jaundice complicates 3 to 5% of pregnancies and is one of the important causes of maternal and neonatal morbidity & mortality worldwide. It is responsible for 10% of maternal deaths. Jaundice in pregnancy can be due to liver diseases unique to pregnancy, prehepatic causes, hepatic causes, posthepatic causes and underlying chronic liver diseases.²

Abnormal liver test results are obtained in 3% to 5% of pregnancies because of many potential causes and the clinical outcomes ranges from self-limiting to rapidly fatal.³ The main causes are pregnancy-related liver disease, hyperemesis gravidarum (HG) intractable vomiting and nausea during 1st trimester of pregnancy, intrahepatic cholestasis of pregnancy (ICP) is multifactorial, involving, genetic, hormonal and exogenous factors, preeclampsia, hemolysis elevated liver enzymes, and low platelets (HELLP) and acute fatty liver of pregnancy (AFLP) etc.⁴ Preeclampsia related liver dysfunction and viral hepatitis are the most commonly encountered causes

of jaundice in pregnancy. India is hyperendemic for viral hepatitis A&E.⁵ Viral hepatitis particularly (faeco-oral hepatitis) is fairly common in lower socioeconomic, densely inhabited areas of urban slums lacking basic hygiene with seasonal increase in incidence throughout summer and monsoon seasons.⁶ The present study was conducted to assess the maternal and fetal outcome in patients with jaundice complicating pregnancy.

MATERIALS & METHODS

The present study comprised of 60 women with jaundice complicating pregnancy. The consent was obtained from all enrolled patients.

Data such as name, age, etc. was recorded. Systemic and obstetric examinations were carried out. Investigations included liver function tests, serum bilirubin, SGOT, SGPT, alkaline phosphatase, Viral markers, prothrombin time (PT), partial thromboplastin time (PTT), bleeding time (BT), clotting time (CT), platelet count and ultrasound abdomen were carried out. Parameters such as parity, gestational age, booking status, mode of delivery, maternal complications, perinatal outcome in terms of birth weight, perinatal morbidity and mortality were studied. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Age group (years)	Number	P value
<20	15	
20-30	35	
30-40	20	

Table I shows that age group <20 years had 15, 20-30 years had 35 and 30-40 years had 20 subjects. The difference was significant (P< 0.05).

Table II Assessment of parameters

Parameters	Variables	Number	P value
parity	Primi	25	0.93
	Gravia 2	15	
	Gravida 3	20	
Booking status	Booked	40	0.01
	unbooked	20	
Mode of delivery	LSCS	22	0.05
	ABD	14	
	Emergency hysterotomy	7	
	vacuum	17	
Diagnosis	HELLP	22	0.03
	Hemolytic anemia	3	
	HELLP with SPE	7	
	Viral infection	28	
Maternal complications	Abruption	5	0.05
	Atonic	3	
	AKI	1	

Table II, graph I shows that parity was Primi seen in 25, Gravia 2 was seen in 15, Gravida 3 in 20. Booking status was booked in 40 and unbooked in 20. Mode of delivery was LSCS in 22, ABD in 14, emergency hysterotomy in 7 and vacuum in 17. Diagnosis was HELLP in 22, hemolytic anemia in 3, HELLP with SPE in 7 and viral infection in 28. Maternal complications was abruption in 5, atonic in 3 and AKI in 1 patient. The difference was significant (P< 0.05).

Graph I Assessment of parameters

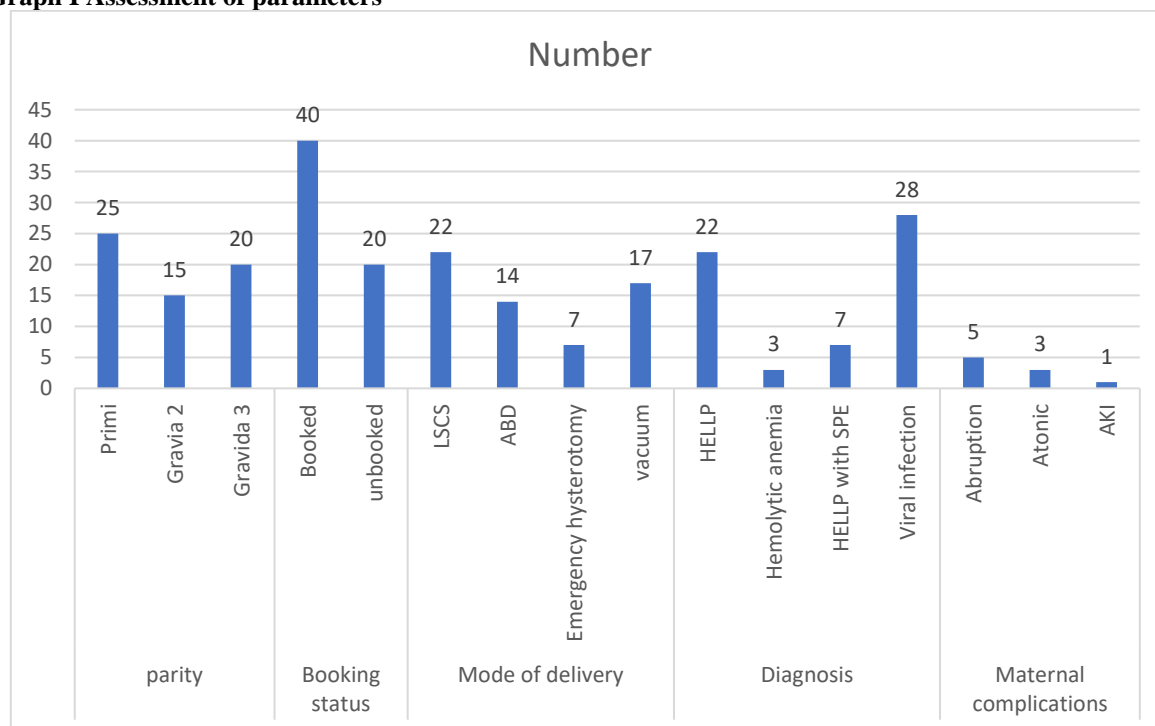


Table III Fetal outcome

Fetal outcome	Number	P value
Alive	54	0.01
Dead	6	

Table III shows that 54 were alive and 6 were dead. The difference was significant ($P < 0.05$).

DISCUSSION

The incidence of jaundice in India varies from 0.4 to 0.9/1000 deliveries.⁷ Jaundice in pregnancy carries a grave prognosis for both the mother and the fetus, and is responsible for 10% of maternal deaths.⁸ Liver disease in pregnancy is an important medical disorder seen more often in developing countries than in developed ones. which complicates about 3% all pregnancies.⁹ Maternal complications that may result include hepatic encephalopathy, ascites, hypoglycaemia, renal failure, hematemesis, preeclampsia and PPH. Fetal outcome may include preterm birth (live/ IUD), term birth (live/IUD).¹⁰ Prognosis of fetus depends on factors such as underlying cause of jaundice, gestational age at the presentation and the timing of delivery.¹¹ The present study was conducted to assess the maternal and fetal outcome in patients with jaundice complicating pregnancy.

We found that age group <20 years had 15, 20-30 years had 35 and 30-40 years had 20 subjects.

Krishnamoorthy et al¹² aimed to find out the effect of jaundice during pregnancy on maternal and fetal outcome. Results showed that 51 patients had jaundice during pregnancy. The incidence of jaundice was 0.29%. 74% of patients was between 20-29 years of age. Maximum numbers of cases were Primigravida. The most common cause of jaundice was Viral Hepatitis. Maternal mortality was 7.8%. The common maternal complications were atonic postpartum haemorrhage 9.8%, hepatic encephalopathy 7.87%, disseminated intravascular coagulation 5.88% and hepatorenal failure 4%. Perinatal mortality was 35.5%. Authors concluded that jaundice in pregnancy has adverse fetomaternal outcome. Improvement in health awareness, education and regular antenatal checkups, early referrals result in early diagnosis and treatment of jaundice during pregnancy thus reducing maternal and fetal mortality and morbidity.

We found that parity was Primi seen in 25, Gravidia 2 was seen in 15, Gravidia 3 in 20. Booking status was booked in 40 and unbooked in 20. Mode of delivery was LSCS in 22, ABD in 14, emergency hysterotomy in 7 and vacuum in 17. Diagnosis was HELLP in 22, hemolytic anemia in 3, HELLP with SPE in 7 and viral infection in 28. Maternal complications was abortion in 5, atonic in 3 and AKI in 1 patient.

We found that 54 were alive and 6 were dead. Reddy MG, et al¹³ aimed at determining maternal and fetal outcome in women with jaundice complicating pregnancy in 181 pregnant women. Results showed that all cases in this study were in their third trimester of pregnancy. Serum bilirubin was >10 mg in 8

(44.4%) cases. In patients with jaundice related to pregnancy serum glutamic oxaloacetic transaminase, serum glutamic pyruvic transaminase and alkaline phosphatase were raised in a majority of them. Hemolysis, elevated liver enzymes, low platelets (HELLP) syndrome, acute fatty liver of pregnancy, intrahepatic cholestasis of pregnancy, viral hepatitis, malaria and sickle cell anemia were the causes of jaundice in this study. In this study, HELLP syndrome (33.3%) was the most common cause of jaundice. Of 18 women, 10 (55.6%) of women the onset of labor was spontaneous and 16 (88.9%) delivered vaginally. Perinatal mortality in 6 cases (33.3%) among them 1 (16.6%) stillbirth and 5 (83.3%) intrauterine deaths. 15 (83.3%) women were discharged in improved condition. Maternal mortality in 3 cases (16.66%) 1 case died within 24 h of delivery, 1 on the 4th postnatal day and 1 on the 8th postnatal day. Cause of death was acute fatty liver of pregnancy with multiorgan failure with disseminated intravascular coagulation (DIC) with shock in 2 cases, HELLP syndrome with DIC with renal failure in 1 case. Authors concluded that Jaundice and pregnancy is a deadly combination resulting in a very high perinatal as well as maternal morbidity and mortality, and requires an early diagnosis and careful management.

Hepatic disorder of pregnancy present as a benign disease with abnormal elevation of liver enzyme levels and a good outcome or it can manifest as a serious entity affecting hepatobiliary function resulting in hepatic failure and death of the mother and the baby.¹⁴

CONCLUSION

Authors found that jaundice in pregnancy is associated with high maternal mortality and perinatal mortality viral hepatitis is the leading cause of jaundice.

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