



Jaundice In Pregnancy And Fetal Outcome

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ABSTRACT

Introduction:- Jaundice in pregnancy, though it is rare, occurs in approximately one in 1500 pregnancies and has potentially deleterious effect on fetal health also. **Objectives:** To study the fetal outcome associated with jaundice in pregnancy. **Methods:** 50 pregnant women with jaundice in pregnancy were included in the study. A thorough history, detailed clinical examination and all relevant investigations were carried out in the beginning. The fetal outcome was studied in detail. **Results:** perinatal mortality among the fetuses was 26%, of which 10 % were still birth. Out of 47 delivered babies 40.4% babies had complications in the form of intrauterine fetal death (10.6%) followed by respiratory distress syndrome (8.5%). There was significant association between etiologies of jaundice with fetal outcome. Highest mortality was noted in dengue and leptospirosis. **Conclusion:** Jaundice in pregnancy is associated with high perinatal mortality as well as morbidity even in a tertiary referral center.

KEYWORDS : Jaundice in pregnancy, fetal outcome, perinatal mortality.

INTRODUCTION

Jaundice in pregnancy, though it is rare, occurs in approximately one in 1500 pregnancies and has potentially deleterious effect on fetal health also¹. Abnormal liver tests occur in 3%-5% of pregnancies, with many potential causes, including coincidental liver disease (most commonly viral hepatitis) and underlying chronic liver disease².

Pregnancy in jaundice is associated with various maternal complications (viz. coagulopathy, hepatic encephalopathy, renal failure, abruption placenta, etc.) and fetal complications (IUGR, IUFD, LBW, etc.) that may lead to maternal as well as fetal mortality³.

There is insufficient information about jaundice in the pregnancy and fetal outcome in India. We therefore studied the spectrum of liver diseases in pregnancy and its effect on maternal and fetal outcomes, at the obstetrics and gynecology department of a medical college.

Aims and Objectives

To study the fetal outcome of jaundice in pregnancy

Materials and methods

The present prospective study was undertaken from April 2011 to October 2013 at department of obstetrics and gynecology, Government Medical College, Akola situated in Maharashtra state of India. Permission from the head of the institute and clearance from ethical committee was obtained before starting this study. Informed consent of patients and/or close relatives was taken. Confidentiality of data was maintained and privacy of it was assured.

All the 50 pregnant patients with Jaundice in pregnancy admitted during the study period were included in the study.

On admission a thorough history was taken and a detailed clinical examination was carried out which included pulse, blood pressure, pallor, icterus, fetal heart sounds, abdominal palpation, per speculum and per vaginal examination.

All the patients were subjected to biochemical investigations including complete blood count, HIV, HBs Ag, VDRL test, Liver

function tests (Serum bilirubin, SGOT, SGPT, alkaline phosphatase) renal function tests (serum creatinine, blood urea, serum uric acid), obstetric and abdominal ultrasound.

Special investigations like peripheral smear for malarial parasite, malarial antigen, HAV, HEV, HCV, dengue antibody, widal test, leptospirosis antibody were carried out where there was a suspicion of these cases. Prothrombin time (PT), activated partial thromboplastin time, serum fibrinogen D-dimer levels in cases where coagulation abnormality was suspected. The course of pregnancy was studied and the investigation profile was monitored.

Treatment of the study population was at discretion of attending physician. Intravenous antibiotics and antimalarials were used accordingly. Also antihypertensive and anticonvulsants were used in patients of preeclampsia and eclampsia. Blood and blood products (platelets, fresh frozen plasma and cryoprecipitate) were transfused as per deficiency and associated clinical evaluation.

Critically ill patients were managed in medical intensive care unit and specialized measures like mechanical ventilation and renal replacement therapy were given to respective patients.

For fetal outcome, mode of delivery, weight on birth, APGAR score, NICU requirement and perinatal mortality was noted.

Data was collected in predesigned and pretested proforma. Suitable descriptive and inferential statistics was applied accordingly.

OBSERVATIONS AND RESULTS

The main etiological factors causing jaundice in pregnancy found were viral hepatitis (30.00%), pregnancy induced hypertension (22.00%) and eclampsia (6.00%). In 17 patients (34%) etiology could not be established.

In the study 6 maternal deaths were recorded out of which 2 were due to dengue and 1 each due to eclampsia, Hepatitis A, leptospirosis and unknown etiology.

Out of the 42 live born babies 76.3% had an Apgar score of 7 and

above (good APGAR score) and remaining 23.7% babies had a Apgar of less than 7 (poor APGAR Score).

According to this study 48.9 % babies had birth weight less than 2500 grams of which 31.9 % had weight between 1500 to 2499grams, 12.8 % babies had birth weight between 1000 grams to 1499 grams and 4.3% babies were less than 1000 grams.

There was significant association between birth weight and fetal outcome with (P-value 0.000485). Mortality in babies with very low birth weight and extremely low birth weight was much higher (66.6% and 100% respectively) as compared to 12.5 % mortality rate in babies with birth weight > 2500 gram.

There was significant association between etiologies of jaundice with fetal outcome (P-value 0.0069). Highest mortality was noted in dengue and leptospirosis

According to this study, out of 47 delivered babies 40.4% babies had complications in the form of intrauterine fetal death (10.6%), respiratory distress syndrome (8.5%), hypoxic ischemic encephalopathy, meconium aspiration syndrome, necrotizing enterocolitis (4.3% each), neonatal jaundice and respiratory distress with sepsis (2.1%)

In this study perinatal mortality was 26% of which 10 % were still birth. These patients were all referred with IUFD. 10% were neonatal death and 6% were undelivered IUFD.

DISCUSSION

50 patients were included in this study who satisfied the inclusion criteria after screening 18720 patients in the hospital during the given period.

In 17 patients (34%) etiology could not be established. Viral hepatitis was the most common etiological factor among 30% cases, followed by pregnancy induced hypertension (22.00%) and eclampsia (6.00%). This correlates with the observations of the study done by K Kalaivani et al⁴.

Total 6 (3 before and 3 after delivery) mothers died during the study period. Maternal mortality recorded was comparatively lower (12%) than that by Nagaria Tripti et al (30.3%)⁵.

Out of the 3 patients who died undelivered, one presented at 16 weeks with leptospirosis associated with multiorgan failure and DIC, one at 16 weeks and one at 37 weeks with dengue associated with multiorgan dysfunction.

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In this study, 23.7% babies had an APGAR of less than 7 (poor APGAR score). The causes were respiratory distress syndrome due to prematurity, meconium stained amniotic fluid and hypoxic ischemic encephalopathy. All these babies required either NICU or TCU. Out of these, 50% babies expired showing significant association between poor APGAR score and fetal outcome.

In this study, out of 42 live borne babies, 23.4 % babies required NICU admission and 25.5 % babies required admission in TCU. Total perinatal mortality was 26%. Percentage of still birth was 10% as compared to study by Oladokun A. et al⁶ where still birth rate was 8.3%. Neonatal deaths rate was 10% similar to study by Nagaria Tripti et al⁵ in which neonatal deaths were 11.76%. Causes of death were DIC with sepsis, thick MSAF with sepsis, respiratory distress syndrome and respiratory distress syndrome with pulmonary hemorrhage. 6% babies died in utero.

Out of 37 babies that were discharged, 32 followed up at 6 weeks in PNC OPD. No morbidity was noted in them. 5 babies missed to follow up.

CONCLUSION:-

Our study shows that Jaundice in pregnancy is associated with high perinatal mortality as well as fetal complications along with the maternal mortality and morbidity, even in a tertiary referral center.

Table No. 1: Fetal Outcome

Fetal Outcome	No.	Percentage
Neonatal death	5	10.0%
Still-birth	5	10.0%
Undelivered	3	6.0%
Discharged	37	74.0%
Total	50	100.0%

Table No. 2: Fetal Complications

Complication	No.	Percentage
IUFD	5	10.6%
Respiratory Distress Syndrome	4	8.5%
Hypoxic Ischemic Encephalopathy	2	4.3%
Meconium Aspiration Syndrome	2	4.3%
Necrotizing Enterocolitis	2	4.3%
Neonatal Sepsis	2	4.3%
Neonatal Jaundice	1	2.1%
Respiratory Distress, Sepsis	1	2.1%
No complication	28	59.6%
Total	47	100.0%

Table No. 3: Distribution according to etiology of jaundice and fetal outcome

Etiology of Jaundice	Fetal Outcome		Total
	Died/Undelivered	Discharged	
Hepatitis E	No.	11	12
	%	8.3%	91.7%
Preeclampsia	No.	5	11
	%	54.5%	45.5%
Eclampsia	No.	2	3
	%	33.3%	66.7%
Dengue	No.	0	2
	%	100.0%	0.0%
Cholestatic Jaundice and Hepatitis E	No.	1	1
	%	0.0%	100.0%
Hepatitis A	No.	1	1
	%	0.0%	100.0%
Leptospirosis	No.	0	1
	%	100.0%	0.0%
Portal Hypertension	No.	0	1
	%	100.0%	0.0%
Preeclampsia+ Hepatitis E	No.	1	1
	%	0.0%	100.0%
Unknown etiology	No.	16	17
	%	5.9%	94.1%
Total	No.	37	50
	%	26.0%	74.0%

Table No. 4: Birth weights of Newborn babies

Birth Weight (grams)	No.	Percentage
Extremely LBW (> 1000 grams)	2	4.3%
Very low BW (1000-1499 grams)	6	12.8%
LBW (1500-2499 grams)	15	31.9%
Normal BW (> 2500 grams)	24	51.1%
Total	47	100.0%

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