



# Feto-Maternal Outcomes In Patients With Jaundice In Pregnancy- Experience of a Tertiary Care Center

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## ABSTRACT

Pregnancy-a physiological state is often complicated by various pathologies and jaundice is one those, which carries a grave prognosis for both mother and fetus. Course of the disease is rapid and in a short period can affect the mother and the fetus (in utero) . So early diagnosis and prompt and active multidisciplinary management is required in these cases. This was a retrospective observational study carried out at a tertiary care hospital of north India during a period of 1 year in which all pregnant females presenting with jaundice in the 3<sup>rd</sup> trimester of the age group of 18-35 years were included. A predesigned Performa was made in which data was entered retrospectively. Maternal outcomes and complications were recorded which included hepatic encephalopathy, DIC, APH, PPH and death whereas fetal outcomes in the form of prematurity, LBW, IUGR, APGAR scores, need for NICU admission were considered. Out of the total 22,500 deliveries, 150 (0.66%) were admitted with jaundice. Viral hepatitis remained the most common cause of jaundice followed by eclampsia/ pre-eclampsia. IHCP was the third most common cause of jaundice. Early diagnosis and prompt treatment of jaundice in pregnancy is the key to improvement of both maternal and fetal outcomes.

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## Introduction

Pregnancy is a physiological state but is often complicated by various pathologies and jaundice is one those. It has a grave prognosis for both the mother and fetus as it has a rapid course, so within a short period both mother and the fetus can be affected.

Owing to population inflation, low resources and poverty, poor nutrition, poor hygiene, poor sanitation are found more in developing countries than developed countries.[1]. Jaundice in pregnancy can be due to multiple etiology including viral hepatitis, intrahepatic cholestasis of pregnancy (IHCP), acute fatty liver of pregnancy (AFLP), pre-eclampsia/ eclampsia, syndrome of haemolysis, elevated liver enzymes and low platelets (HELLP) etc. poor sanitation and poor hygiene is the root cause for hepatitis, which is leading cause of jaundice.

Maternal mortality is as high as 10% according to different studies [2]. Viral hepatitis has been found to be the most common cause of jaundice in pregnancy in most of the available recent literatures.

Keeping in mind, the grave prognosis of jaundice in pregnancy for both the mother and the fetus, early detection and active, prompt and multi-speciality management is the need of an hour.

## Methodology

This study was carried out in the department of Obstetrics and Gynaecology at Safdarjung Hospital, New Delhi- a multispecialty tertiary centre. It is a retrospective

observational study in which data of all women admitted to labour wards in third trimester with jaundice were taken during the period September 2014- August 2015.

Those females in which jaundice started in the first or second trimester or had jaundice started before pregnancy were excluded from the study. Mothers who had jaundice due to chronic liver disease, haemolytic anaemia, cholelithiasis or any hepatic or biliary tract carcinomas were also excluded from the study.

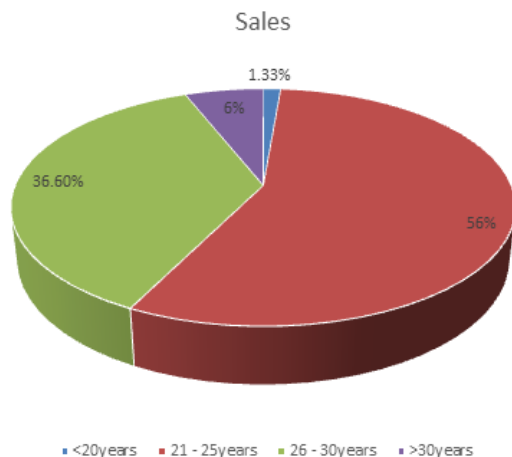
All the data was entered retrospectively in the predesigned Performa which had both maternal and fetal components. The maternal outcome variables and complications which were considered included hepatic encephalopathy, disseminated intravascular coagulation (DIC), ante-partum haemorrhage (APH), post-partum haemorrhage (PPH) and death.

The fetal outcomes which were recorded were prematurity, low birth weight, intra uterine growth restricted babies, APGAR scores, need for neonatal ICU admission were considered.

## Results

In total 22,500 deliveries took place during this period, out of this 150 (0.66%) women had jaundice developed in the 3<sup>rd</sup> trimester . mostly women were in the age group between 21-30 yrs and only 2 women were less than 20 years and 9 of them were more than 30 years old.

Diagram 1 shows the age distribution of the jaundiced pregnant women:



Out of the total 150 females, 63 (42%) were primigravida whereas 87 (58%) were multigravida women. Viral hepatitis remained the most common type of jaundice followed by eclampsia/ pre-eclampsia. The causes of jaundice in the pregnant females are depicted below in Table 1:

Table 1.

Causes	Number of jaundiced women	Percentage
Viral hepatitis	94	62.6
Eclampsia/ pre-eclampsia	23	15.3
Intrahepatic cholestasis of pregnancy	19	12.6
HEELP syndrome	8	5.3
AFLP	6	4

The total number of maternal deaths were 18 (12%). Table 3 shows different causes of maternal morbidities due to jaundice:

Table 2.

Maternal outcomes	Number of jaundiced women	Percentage
Hepatic encephalopathy	8	5.33
DIC	6	4
APH	11	7.33
PPH	4	2.66
Death	18	12

12% of pregnant jaundice patients were expired. These patients had encephalopathy, altered coagulation profile (DIC), HELLP syndrome, PPH and few of them had multi organ failure.

Table 3 .causes of mortality.

Cause of death	Number of patients (n=18)	percentage
Hepatic encephalopathy	08	44.4%
DIC	04	22.2%
HELLP	03	16.6%
PPH	01	05.5%
Multi organ failure	02	11.1%

Out of 150 jaundice patients, two died antepartum. 52/148 (35.1%) had intra uterine death. Perinatal outcome shown below in a table in these patients.

Table 4.

Perinatal outcome	Number	percentage
Still birth	52/148	35.13%
Preterm birth (<37weeks)	41/148	27.7%
Low birth weight <2.5kgs)	72/148	48.6%
IUGR	36/148	24.3%
Apgar score <7 at 1min	16/96	16.6%
NICU admission	37/96	14.5%
Early neonatal death	14/96	38.5%

## Discussion

Jaundice in pregnancy has a bad prognosis for both the mother and the fetus. As high as 10% of maternal death has

been reported in the literature [2]. This was also depicted in our study where maternal mortality was 12%. So, its management in time is important to save two lives (mother & baby). Management mainly depends on the underlying etiology of jaundice, its prompt identification and active multi-speciality management of the same.

The present study found viral hepatitis to be the most common cause of jaundice in the third trimester of pregnancy [62.6% ]. These findings were in concordance with the studies of Nagaria and Agarwal[2], Mitra et al[3], Wolf JL[4], Sookoian S[5], Jan et al[6]. Ching et al [7] found 50% of patients to be of viral hepatitis in their study where as Lahiri BC[8] reported viral hepatitis to be as high as 90%.

Jaundice due to eclampsia and pre-eclampsia occupied the next space ie 15.33% (23/150). This is in contrast to the previous studies by Dhawan and Sainani[9] in which intrahepatic cholestasis of pregnancy was found to be the second most common cause of jaundice in pregnancy. In our study intrahepatic cholestasis of pregnancy was the third commonest cause [19%] , whereas Ching et al [7] found only 10% intrahepatic cholestasis of pregnancy in his study.

There were 10 % of HELLP and AFLP cases in our study. This was different from Suri et al[10] who found only 4% HELLP and Ching et al [7] who also found 4% HELLP in their study. Ante- partum haemorrhage was the most common complication and occurred in 7.33% of all pregnant females with jaundice which was higher than other referral studies (1). Post-partum haemorrhage occurred in 2.66% of all jaundice pregnant females. Hepatic encephalopathy and disseminated intravascular coagulation occurred in 5.33% and 4% of pregnant women respectively, which was comparable to singh K et al study and much lower than tripti N et al study where it was 26.7% & 21.8% respectively. A total of 18 pregnant mothers died due to jaundice in pregnancy which is comparable to the literature quoted data 2. Most common cause of maternal mortality was hepatic encephalopathy (44.4%) which was similar to singh K et al study. Other causes of mortality were DIC (22.2%), HELLP (16.6%), multi-organ failure (11.11%) and PPH (5.55%).

Jaundice in pregnancy is as detrimental to the fetus as well as for mother. In current study two patients were died antepartum. 35.13% patients had intra uterine death which is different from tripti N et al and krishnamoorthy J et al study which is 50% and 26.6% respectively. Half of the babies born were of low birth weight (<2.5 kg birth weight) which had both preterm (27.7%) and intrauterine growth restricted babies (24.3%). Results were comparable to jayanthi K et al study in which 47.05% of babies were low birth weight, out of which 26.6% contributed by preterm birth (12). 16 out of 96 live born had some form of asphyxia which required resuscitation (APGAR score of <7 at 1 minute of life), among which two-thirds had moderate asphyxia and one third had severe asphyxia, which is different from tripathi N et al study in which 17.6% of live born babies had birth asphyxia, out of them two third had severe form of birth asphyxia(2). 37/96 live born needed NICU admission for at least initial 48 hours of life, which is similar to tripathi N et al study, where 41.1% of the babies required nursery admission. [2] Out of all live births 14.5% had early neonatal deaths which is similar to tripti N et al study.

## Conclusion

Jaundice in pregnancy is not an uncommon complication. Timely and multi-speciality approach in management yields better outcome for the mother and baby.

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