

# A Study on Maternal Morbidity and Mortality in Jaundice Complicating Pregnancy - A Retrospective Study in a Tertiary Care Hospital

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**Abstract:** ***Aims and objectives:** To study the incidence and distribution of jaundice in relation to age, parity, socioeconomic status and the relation of serum bilirubin levels to maternal morbidity and mortality. **Methodology:** This is a retrospective study carried out on 46 patients at the Department of obstetrics and gynaecology, Coimbatore medical college hospital, Coimbatore. All pregnant women with jaundice are included in the study. Demographic data, clinical course and outcome were analysed. **Results:** The incidence of jaundice complicating pregnancy in Coimbatore medical college is 3/1000. Viral hepatitis is the commonest cause. Higher serum bilirubin levels associated with high mortality rates. **Conclusion:** The factors responsible for higher incidence of jaundice and associated maternal mortality in our country are malnutrition, poor personal hygiene, ignorance, delay in seeking medical advice.*

**Keywords:** Bilirubin, jaundice, mortality, hepatitis

## 1. Background

Jaundice in pregnancy carries a grave prognosis and is responsible for 10% of maternal deaths. Abnormal liver function test occur in 3% -5% of pregnancy.

The causes may be

- 1) Coincidental –viral hepatitis, gall stones
- 2) Underlying chronic liver disease-cirrhosis, portal hypertension, chronic viral hepatitis, cholestatic jaundice.
- 3) Pregnancy related
  - a) Associated with pre eclampsia: Preeclampsia, HELLP syndrome, Acute fatty liver of pregnancy.
  - b) Without pre eclampsia: Hyperemesis gravidarum, Intrahepatic cholestasis of pregnancy.

## Physiological changes during pregnancy

In developing countries like India, there is high mortality and morbidity in jaundice complicating pregnancy. This is due to associated factors like lack of awareness, poor hygiene, malnutrition, unbooked cases, late referral in moribund condition. This study analyses the various causes for jaundice in pregnancy, the factors affecting its course and to determine the outcome of pregnancy among the pregnant women treated at Coimbatore medical college hospital.

## 2. Methodology

This is a retrospective study carried out on 46 patients at the department of obstetrics and gynaecology, Coimbatore medical college hospital from august 2013-august 2014. All the pregnant woman with jaundice were evaluated with serum bilirubin, liver enzymes, viral markers, PT, BT, CT, USG Abdomen. The age ,parity ,gestational age at presentation are entered in excel sheet and compared with maternal outcome to find out various contributing factors for maternal morbidity and mortality.

## 3. Results

Out of 46 patients, 41.3% were primi, 45.7% were in the age group of 21-25 years, 93.5% presented in third trimester, 13% had high bilirubin levels (>15mg/dl), viral hepatitis is the most common etiology (54.3%), DIC is the most common cause of death (37.5%).

**Table 1:** Age distribution

Age in years	Frequency	Percentage
<20	5	10.9
21-25	21	45.7
26-30	14	30.4
31-35	6	13
Total	46	100

**Table 2:** Parity distribution

Parity	Frequency	Percentage
Primi	19	41.3
G2	14	30.4
G3	6	13
G4		0
G5	3	6.5
G6	1	2.2
G9	1	2.2
PIL1	2	4.3
TOTAL	46	100

**Table 3:** Trimester distribution

Trimester	Frequency	Percentage
i.	1	2.2
ii.	2	4.3
iii.	41	93.5
	46	100

**Table 4:** Level of initial bilirubin

Initial bilirubin	Total	percentage
<5	25	54.3
5-10	10	21.7
10-15	5	10.9
>15	6	1.3

**Table 5:** Etiology of jaundice

Etiology	Total	Percentage
Viral	25	54.3
HELLP	12	26.1
AFLP	3	6.5
IHCP	3	6.5
Cirrhosis	3	6.5
Total	46	100

**Table 6:** Viral etiology

Etiology	Total	Percentage
HBV	21	84
HEV	4	16
HCV		
	25	100

**Table 7:** Maternal complications

Complications	Total	Percentage
DIC	5	10.9
Atonic PPH	3	6.5
Hepatic encephalopathy	1	2.2
Prerenal ARF	1	2.2
Splenic rupture	1	2.2
Variceal bleed	1	2.2
Vulval hematoma	1	2.2
Nil	33	71.7
	46	100

**Table 8:** Cause of death

Cause of death	Total	Percentage
DIC	3	37.5
Atonic pph	2	25
Hepatic encephalopathy	1	12.5
Splenic rupture	1	12.5
Variceal bleed	1	12.5
Total	8	100

AFLP – Acute fatty liver of pregnancy  
 IHCP- Intrahepatic cholestasis of pregnancy  
 PPH-Postpartum haemorrhage  
 ARF-Acute renal failure  
 DIC- Disseminated intravascular coagulopathy  
 HBV- Hepatitis B virus  
 HEV-Hepatitis E virus  
 HCV-Hepatitis C virus

#### 4. Discussion

The incidence of jaundice among the pregnant women attending Coimbatore medical college hospital from august 2013 to august 2014 is 3 per 1000 population. This is consistent with the study of Sarkar et al, 1992 which is 2.3

In this study, viral hepatitis was found to be the commonest cause (54.3%). This is comparable with the study by Jain A , Sharma J K in 1999.

In the present study 45.7% of pregnant jaundice women were between 20-24 years. This correlates with the study of shethabhay et al , 1990, devinderkaur et al , 2001.

In this study, 41.3% of patients were primi gravida . it correlates with the study of reddy rani et al, 1993 (50%).

93.5% of patients presented in third trimester. This correlates well with the study of C M Alvani et al,1986,reddy rani et al,1993.

In this study 50% of maternal mortality were with serum bilirubin more than 15 mg /dl which is consistent with the study of chadda et al, 1983.

Maximum maternal deaths (37.5%) is due to viral hepatitis. Maternal mortality among women with viral hepatitis is 14.3% whereas non pregnant women it is 5.6%(de sweit 2002).

#### 5. Conclusion

To conclude ,the incidence of jaundice complicating pregnancy in coimbatore medical college is 3/1000. Viral hepatitis is the commonest cause with about 25 cases.of those 21 had hepatitis B and 4 hepatitis E. Higher serum bilirubin levels associated with higher mortality rates. Incidence is high in primigravida and in third trimester. The factors responsible for high maternal mortality in our country are malnutrition,poor personal hygiene,ignorance,delay in seeking medical advice.

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