

## Research Article

# Outcome and management of antenatal patients with jaundice in tertiary care centre of eastern India: a retrospective study

Kalpana Singh<sup>1\*</sup>, Gopal Kumar<sup>2</sup>, Anshu Singh<sup>3</sup>, Anjali Rani<sup>1</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

<sup>2</sup>Department of Microbiology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

<sup>3</sup>Department of Pathology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

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### \*Correspondence:

Dr. Kalpana Singh,

E-mail: [kalpana11dec@yahoo.com](mailto:kalpana11dec@yahoo.com)

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## ABSTRACT

**Background:** Aim of current study was to know the etiological factors of jaundice among pregnant patients, outcome and their management.

**Methods:** A retrospective study done at IMS, BHU in obstetrics and gynecology department among pregnant patients with jaundice admitted in obstetric wards and labour room in six months duration.

**Results:** Among total 1960 admissions, 78 (3.97%) patients presented with jaundice. Out of all admissions 27 (1.37%) were HBsAg, 8 (0.40%) HEV, 7 (0.35%) HCV, 6 (0.30%) of HBsAg and HEV co-infection, cholestasis with pregnancy 20 (1%) and 10 (0.51%) patients with pre-eclamptic liver disease with HELLP.

**Conclusions:** Jaundice in pregnancy may be lethal to mother and fetus. As the course of disease is also rapid and in short period it may affect the fetus in utero also, early detection and prompt management of these cases should be done.

**Keywords:** Pregnancy, Jaundice, Viral markers, Hepatic encephalopathy

## INTRODUCTION

Jaundice in pregnancy whilst relatively rare, has potentially serious consequences for maternal and fetal health.<sup>1</sup> Incidence of jaundice in pregnancy in developing country is much higher, due to poor nutrition and poor sanitation.

Jaundice in pregnancy can be caused by viral hepatitis, intrahepatic cholestasis of pregnancy, choledocholithiasis, HELLP syndrome (hemolysis, elevated liver enzymes, and a low platelet count), severe preeclampsia, and acute fatty liver of pregnancy.<sup>2</sup> Course of hepatitis is unaltered by pregnancy the exception is hepatitis E, where the pregnant women who contract the

disease exhibit fatality rates of 10-15%.<sup>3</sup> Jaundice in the pregnancy can be a grave prognosis for both mother and fetus, causing maternal mortality in 10%.<sup>4,5</sup> Most common cause of jaundice is viral hepatitis, hepatitis B is most commonly involved. In our study also viral hepatitis was responsible for jaundice among 61.5% cases. Early detection and management can prevent the dreaded complications of jaundice like hemorrhage and encephalopathy.

## METHODS

A retrospective study was conducted among pregnant patients with jaundice admitted in the antenatal wards and labour room of department of obstetrics and gynecology,

IMS, BHU. The duration of study is 6 months from Jan 2014 to June 2014. Primigravida and multigravida both were included. 52 patients were unbooked and 26 were booked but with irregular follow up. 30 patients were preterm and 48 were term. Detailed history was taken about the symptoms, their mode of onset, progression and duration of. Patients were investigated for routine ANC investigations and liver function test, coagulation profile and platelet count done.

## RESULTS

Age group of the patient was 20-42 years. Most of the patients with jaundice were primigravida 52 (66.66%) and 26 (33.33%) multigravida. 59 (75.6%) patients were unbooked and 19 (24.35%) booked cases but showed an irregular follow up. 56 (71.7%) patient belonged to rural background and 22 (28.2%) lived in urban areas. According to socioeconomic condition, 38 (48.17%) belonged to lower middle class, 30 (38.4%) to middle class and 10 (12.82%) to upper class.

**Table 1: Obstetric history (n=78).**

Parity	(N)	%
Primigravida	52	66.66%
Multi gravid	26	33.33%

**Table 2: Booking status.**

	(N)	%
Unbooked	59	75.6%
Booked	19	24.35%

**Table 3: Socioeconomic status.**

	(N)	%
Lower middle class	38	48.17%
Middle class	30	38.46%
Upper class	10	12.82%

Among the 1960 patients admitted in the ward 78 patients with jaundice. Out of them 27 (1.37%) of HBSAg, 8 (0.40 %) HEV, 7 (0.35%) HCV, 6 (0.30%) of HBSAg and HEV co-infection, cholestasis with pregnancy 20 (1%) and 10 (0.51%) patients with pre-eclamptic liver disease with HELLP. 48 patient were at term (61.53%) >37 weeks and 30 patients before term (38.46%) <37 weeks gestation.

**Table 4: Etiological factors of jaundice in pregnancy.**

	(N)	%
Hepatitis B	27	1.37%
Hepatitis E	8	0.40%
Hepatitis C	7	0.35%
Hepatitis B and HEV co-infection	6	0.30%
Cholestasis of pregnancy	20	1.0%
Pre-eclamptic liver diseases with HELLP	10	0.51%

Among these patients 10 patients reported in very serious condition with severe jaundice and deeply comatose state. These were the badly neglected cases of hepatic encephalopathy.

Their management was planned according to gestational age. Those who were preterm 2 doses of betnesol 12 mg was given 24 hours apart for lung maturity. Total 38 LSCS done, out of which 30 were elective LSCS and 8 were done due to failed induction. Out of 36 deliveries, 25 delivered spontaneously and 11 were induced. Among the vaginal delivery cases, 30 live babies delivered and 6 were IUD. Those patients who underwent LSCS 36 baby were live and 2 died NICU due to very poor APGAR score at the time of birth.

**Table 5: Mode of delivery.**

	(N)	%
<b>LSCS (38)</b>		
Elective LSCS	30	38.46%
Failed induction/progress	8	10.25%
<b>Vaginal delivery (36)</b>		
Spontaneous	25	32.05%
Induced	11	14.1%

**Table 6: Neonatal outcome.**

Neonatal outcome		
LSCS	Live - 34 (43.58%)	Expired - 2 (2.56%)
Vaginal delivery	Live - 30 (38.46%)	IUD - 6 (7.69%)

Patient admitted in wards, 12 (15.38%) expired due to complications of jaundice. These patient having severe jaundice, altered coagulation profile (DIC), anemia due to hemolysis (HELLP) and few of them developed sepsis with multiorgan failure. Out of 12 patients, 4 patients died undelivered.

**Table 7: Maternal mortality (N=12).**

Causes	(N)	%
Hepatic encephalopathy	4	33.33%
DIC (hemorrhage)	3	25%
HELLP	2	16.66%
Sepsis with multiorgan failure	3	25%

Thus jaundice in pregnancy may be fatal for both mother and neonate. The course of disease may suddenly deteriorate even after delivery. Rapid progression of disease, leads to hepatic failure, altered coagulation profile, uncontrolled bleeding and finally multiorgan failure.

## DISCUSSION

Incidence of jaundice in pregnancy varies around the world, in developed countries incidence is around 0.1%,

in developing countries incidence is much higher ranging 3-20%. In our study incidence was 3.97 %. Viral hepatitis is the most common etiological agent causing jaundice in pregnant females.<sup>6</sup> Cholestasis of pregnancy is another cause of jaundice among pregnant females occurring in about 1%, similar to study done by Joshi D et al. (2010).<sup>7</sup> In our study the most common maternal complications was hepatic encephalopathy (33.33%), DIC (disseminated intravascular coagulation) (25%), sepsis and multiorgan failure (25%), which were comparable to those stated by Tripti Nagaria et al. - encephalopathy (26.7%), DIC 15.38%. Similar to the Tripti Nagaria et al.<sup>8</sup> study the maternal mortality was 14.4%. However it was more than found in study by Sapre & Joshi et al.<sup>9</sup> in 2009 of 4.99%. Most of the cases in our study were referrals from rural areas and unbooked cases which may account to increased mortality rates.

## CONCLUSION

Jaundice in pregnancy may be lethal to mother and fetus. As the course of disease is also rapid and in short period it may affect the fetus in utero also, early detection and prompt management of these cases should be done. Cases diagnosed at periphery should be immediately referred to higher centre for better management. Management of these patients involves multidisciplinary approach by the obstetricians, medicine, gastroenterology doctors and for serious ICU admissions, help of anesthesiologist is also required.

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