



ORIGINAL RESEARCH PAPER

Gynaecology

A PROSPECTIVE STUDY OF CASES WITH JAUNDICE IN PREGNANCY AT A TERTIARY CARE CENTRE.

KEY WORDS: Jaundice, Hepatitis, HELLP syndrome

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ABSTRACT

INTRODUCTION- Liver disorders can occur during pregnancy and are associated with high perinatal and maternal morbidity and mortality.
AIMS- To study the incidence of jaundice, etiological factors for jaundice and fetomaternal outcome in cases with jaundice in pregnancy.
METHODS- The present study was conducted at a tertiary care hospital, Bareilly from September 2015- June 2016. Total 37 antenatal females presented with jaundice were subjected to routine antenatal investigations, specific investigations like liver function tests, coagulation profile.
RESULTS- The commonest cause of jaundice in the present study was viral hepatitis (40.6%), followed by HELLP syndrome (32.4%), there were three maternal deaths in the present study i.e 8.1%.
CONCLUSION- Jaundice in pregnancy is associated with poor fetomaternal outcome, regular antenatal checkups, early diagnosis and timely intervention can cause reduction in maternal and fetal morbidity and mortality.

INTRODUCTION-

Jaundice is defined as yellowish discolouration of skin and sclera due to increased concentration of bilirubin¹.

Liver disorders in pregnancy can be divided into three categories:
 Group I- Liver disorders caused by pregnancy which includes hepatic dysfunction from hyperemesis gravidarum, acute fatty liver of pregnancy, intrahepatic cholestasis, liver damage due to pre eclampsia and HELLP syndrome.

Group II- Liver disorders coincidental to pregnancy like acute viral hepatitis, drug induced liver damage.

Group III- Chronic liver diseases that predates pregnancy like chronic hepatitis, liver cirrhosis.

The incidence of jaundice is 3% of all the pregnancies². It accounts for 60% perinatal and 14% of maternal mortality³.

METHOD-

The present study was conducted in Rajshree Medical Research Institute Bareilly from September 2015- June 2016. In the present study total 37 pregnant females admitted with jaundice willing to participate in the study were included in the study.

Detailed medical, surgical and obstetrical history was taken from the subjects. General physical, systemic and obstetrical examination was carried out. Cases were subjected to routine antenatal investigations, specific investigations like liver function tests, coagulation profile, ultrasound for fetal well being with whole abdomen and viral markers. Maternal outcome was noted on terms of complications and mortality and fetal outcomes were measured in terms of perinatal morbidity and mortality.

AIMS AND OBJECTIVES-

- 1- To study the incidence of jaundice in the study population.
- 2- To study various etiological factors for jaundice in pregnancy.
- 3- Fetomaternal outcome in cases with jaundice in pregnancy.

OBSERVATIONS-

Total 9250 antenatal cases were seen during the study period out of which 37 cases had jaundice. So the incidence of jaundice was 0.4%.

1. Age wise distribution-

| Age(in yrs) | Number | Percentage |
|-------------|--------|------------|
| 20-24 yrs | 12 | 32.5% |
| 25-29 yrs | 15 | 40.5% |

| | | |
|-----------|---|-------|
| 30-34 yrs | 7 | 18.9% |
| 35-39 yrs | 3 | 8.1% |

The above table shows that the majority of cases were in the age group 25- 29 years(40.5%) followed by 20-24 years(32.5%) then 30-34 years(18.9%) and 35-39 years(8.1%).

2- Distribution according to socioeconomic status-

Majority of the cases were from lower socioeconomic status.

3- Distribution according to gravidity-

| Gravidity | Number | Percentage |
|-----------|--------|------------|
| Primi | 21 | 56.8% |
| Multi | 16 | 43.2% |

The above table shows that the cases were more commonly primigravidas than multigravidas.

4-Distribution of cases according to period of gestation-

| Trimester | Number | Percentage |
|-----------|--------|------------|
| First | 2 | 5.4% |
| Second | 5 | 13.5% |
| Third | 30 | 81.1% |

The maximum number of cases developed jaundice in third trimester i.e 81.1% followed by second trimester 13.5% then first trimester 5.4%.

5-CLINICAL FEATURES-

Symptoms

| Symptoms | Number | Percentage |
|-----------------------|--------|------------|
| Yellow skin and urine | 24 | 64.8% |
| Fever | 8 | 21.6% |
| Loss of appetite | 11 | 29.7% |
| Nausea, vomiting | 24 | 64.8% |
| Pain upper abdomen | 10 | 27% |
| Itching | 16 | 43.2% |
| Abdominal distention | 9 | 24.3% |

The commonest symptom with which the cases presented were yellow skin and urine and nausea and vomiting(64.8%). It was followed by itching(43.2%), loss of appetite, pain in upper abdomen, abdominal distention and fever.

Signs-

| Signs | Number | Percentage |
|--------------|--------|------------|
| Icterus | 37 | 100% |
| Hepatomegaly | 9 | 24.3% |

| | | |
|-----------------------|----|-------|
| Splenomegaly | 2 | 5.4% |
| Ascitis | 11 | 29.7% |
| Epigastric tenderness | 9 | 24.3% |
| Edema | 13 | 35.1% |

Icterus was seen in 100% cases. Edema of lower extremities and abdominal wall was present in 35.1% cases, ascitis was present in 29.7% cases, hepatomegaly and epigastric tenderness was seen in 24.3% cases. Splenomegaly was present only in 5.4% cases.

6- Etiology of jaundice in pregnancy

| Diagnosis | Number | Percentage |
|-----------------------|--------|------------|
| Viral hepatitis | 15 | 40.6% |
| HELLP | 12 | 32.4% |
| ICP | 2 | 5.4% |
| AFLP | 5 | 13.5% |
| Chronic liver disease | 2 | 5.4% |
| Leptospirosis | 1 | 2.7% |
| Others | - | - |

The above table depicts that the commonest cause of jaundice in the present study was viral hepatitis (40.6%), followed by HELLP syndrome (32.4%), AFLP (13.5%), ICP and chronic liver disease (5.4%) and one cases was diagnosed as leptospirosis.

7- Pregnancy outcomes-

| Outcome | Number | Percentage |
|-------------------------|--------|------------|
| Abortion | 1 | 2.7% |
| Preterm delivery | 14 | 37.9% |
| Term delivery | 17 | 45.9% |
| Improved and discharged | 2 | 5.4% |
| LAMA | 2 | 5.4% |
| Undelivered expiry | 1 | 2.7% |

On analysing the outcome one case out of two presented in the first trimester ended up in abortion(2.7%). 14 cases had preterm deliveries(37.9%), 17 Cases i.e 45.9% delivered at term. Two cases (5.4%) had improvement and were discharged. Two cases left against medical advice due to financial and other reasons and one patient expired undelivered due to hepatorenal syndrome.

8-Maternal outcome-

| Complications | Number | Percentage |
|--------------------------|--------|------------|
| Pre eclampsia/ eclampsia | 11 | 29.7% |
| DIC | 6 | 16.2% |
| Abruptio | 4 | 10.8% |
| PPH | 14 | 37.8% |
| Hepatic encephalopathy | 2 | 5.4% |
| Hepatorenal syndrome | 3 | 8.1% |
| Esophageal varices | 1 | 2.7% |
| Death | 3 | 8.1% |

There were 11 cases with pre eclampsia and eclampsia i.e 29.7% cases. 6 cases out of 37(16.2%) developed disseminated intravascular coagulation which was managed by blood products. 4 cases out of 37(10.8%) had abruptio placentae due to pre eclampsia and eclampsia. 37.8% developed postpartum haemorrhage. 2 cases i.e 5.4% cases passed into hepatic encephalopathy. 3 cases developed hepatorenal syndrome and one cases had esophageal varices due to chronic liver disease and portal hypertension. There were three maternal deaths in the present study i.e 8.1%. out of which two cases expired after delivery one due to DIC and MODS and one due to hepatorenal syndrome. The one case who expired before delivery also had developed hepatorenal syndrome.

9- Fetal outcome-

| Outcome | Number | Percentage |
|---------------------|--------|------------|
| Term live birth | 16 | 51.6% |
| Preterm live birth | 11 | 35.5% |
| Intra uterine death | 4 | 12.9% |

On analysing the fetal outcome there were 16 term live births 11 preterm live birth and 4 intrauterine fetal deaths. There were 9 perinatal deaths amongst which there were 4 intrauterine fetal

deaths and 5 early neonatal deaths so the perinatal mortality rate was 29%.

DISCUSSION-

The incidence of jaundice in the present study is 0.4 which is similar to the study done by Acharya et al⁴ i.e 0.4%, Oladokun et al i.e 0.3%⁵ and Krishnamurthy J et al i.e 0.29%⁶ But the incidence was lower than the study done by Guntupalli et al⁷ and Jayati et al⁷.

In the present study the majority of cases were in the age group 25- 29 years(40.5%) followed by 20-24 years(32.5%) and 56.8% cases were primigravidas. Similar results were seen by Aparaita et al which stated that there was 52.9% incidence of jaundice in pregnancy in younger age group and 51% cases were primigravidas⁸.

The maximum number of cases developed jaundice in third trimester i.e 81.1% followed by second trimester 13.5% then first trimester 5.4%. The commonest symptom with which the cases presented were yellow skin and urine and nausea and vomiting(64.8%) while in the study done by Aparajita et al⁹ pruritus was the commonest presenting symptom. Icterus was seen in 100% cases. Edema of lower extremities and abdominal wall was present in 35.1% cases

In our study the commonest cause of jaundice is viral hepatitis (40.6%), followed by HELLP syndrome (32.4%), AFLP (13.5%), ICP and chronic liver disease (5.4%) and one case was diagnosed as leptospirosis. Viral hepatitis is the commonest cause of jaundice in pregnancy⁹. Contrary to the present study as stated by Acharya et al⁴ Intrahepatic cholestasis is the second most common cause of jaundice in pregnancy. As stated by Reddy MG in their study HELLP syndrome, AFLP, Intra hepatic cholestasis of pregnancy, viral hepatitis, malaria were causes of jaundice in pregnancy¹⁰. According to study done by Karegoudar et al the commonest cause of jaundice in pregnancy were HELLP syndrome(64.86%) followed by acute viral hepatitis and leptospirosis¹¹.

There were 11 cases with pre eclampsia and eclampsia i.e 29.7% cases, 16.2% developed disseminated intravascular coagulation, 10.8% had abruptio placentae due to pre eclampsia and eclampsia. 37.8% developed postpartum haemorrhage. 5.4% cases passed into hepatic encephalopathy. 3 cases developed hepatorenal syndrome and one case had esophageal varices due to chronic liver disease and portal hypertension.

There were three maternal deaths in the present study i.e 8.1%. out of which two cases expired after delivery one due to DIC and MODS and one due to hepatorenal syndrome. The one case who expired before delivery also had developed hepatorenal syndrome. Maternal mortality according to various studies are 24.4% according to Tripti N et al¹², 75.68% according to Karegoudar et al¹¹, 16.6% according to Reddy M et al¹⁰, 7.8% according to Jayati et al⁷ but maternal mortality was higher than study done by Sharma S et al¹³.

On analysing the fetal outcome there were 16 term live births 11 preterm live birth and 4 intrauterine fetal deaths. There were 9 perinatal deaths amongst which there were 4 intrauterine fetal deaths and 5 early neonatal deaths so the perinatal mortality rate was 29%. Perinatal mortality was 30.76% according to study done by Mitta P et al¹⁴ which is similar to our study. Perinatal mortality was higher in studies done by Tripti et al i.e 61.76%¹² and Karegoudar D et al i.e 46.16%¹¹ and was lower than the present study as stated by Jayati N et al⁷.

CONCLUSION- From the present study we conclude that jaundice in pregnancy is associated with poor fetomaternal outcome. So regular antenatal checkups, early diagnosis and timely intervention can cause reduction in maternal and fetal morbidity and mortality.

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