

Maternal and Fetal Outcome of Jaundice during PregnancyMadhu Kumari¹, Kumari Bibha²¹Senior Resident, Department of Obstetrics and Gynaecology, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar²Professor, Department of Obstetrics and Gynaecology, Sri Krishna Medical College & Hospital, Muzaffarpur, Bihar

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Abstract:

Background: The incidence of Jaundice in pregnancy is 3% to 5%. The causes of jaundice in pregnancy can be coincidental liver disease, underlying chronic disease and condition related to pregnancy. Management of pregnant women with jaundice is very challenging because accurate diagnosis sometimes is very difficult and delay in management can be life threatening. Aim of this study to evaluate the etiology of the jaundice among pregnant women and their outcome.

Methods: An observational study was done in Department of Obstetrics and Gynaecology at Sri Krishna Medical College & Hospital, Muzaffarpur, Bihar among pregnant women with jaundice who were admitted in the hospital.

Results: A total of 43 pregnant women were admitted in hospital over the period of 4 months. 18 women were diagnosed as viral hepatitis. Ten women suffered from Intrahepatic cholestasis of pregnancy, 2 from obstructive jaundice, 10 from hypertensive disorder in pregnancy and rest of unknown etiology. 23 women (53.4%) had preterm delivery and 12 women delivered by LSCS. Three women (7.14%) had maternal mortality. All the three mortality belonged to hypertensive disorder in pregnancy and its associated complication.

Conclusion: Main cause of maternal mortality in cases of jaundice in pregnancy was found to be hypertensive disorder in pregnancy and its sequel.

Keywords: Intrahepatic cholestasis, LSCS, maternal mortality, preterm delivery.

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Introduction

Jaundice in pregnancy whilst relatively rare, has potential serious consequences for maternal and foetal health. The incidence of Jaundice in pregnancy is 3% to 5%. [1] Incidence of jaundice is higher in developing countries than developed countries due to poor nutrition, poor sanitation and lack of health facilities. [2] The causes of jaundice in pregnancy can be coincidental liver disease, underlying chronic disease and condition related to pregnancy [3]. Management of pregnant women with jaundice is very challenging because accurate diagnosis sometimes is very difficult and delay in management can be life threatening.

Material and Methods

This observational study was conducted among pregnant patients with jaundice admitted in the antenatal wards and labour room of department of

obstetrics and gynecology, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar over a period of 4 months. All pregnant women with jaundice were included in the study. Detailed history was taken about the symptoms, their mode of onset, progression and duration of disease and clinical examination was done. Patients were investigated for routine ANC investigations, serological tests, liver function test, coagulation profile and platelet count. All the patients were followed till delivery. Descriptive analysis was done to evaluate the cause of jaundice and maternal outcome.

Results

The Sociodemographic distribution of patients with jaundice in pregnancy is shown in Table No. 1.

Table 1: Sociodemographic profile of patients with jaundice in pregnancy

| Sociodemographic Parameter | Number of Patients | Percentage |
|----------------------------|--------------------|-------------|
| Age in Years | <20 | 7 16.3% |
| | 21-25 | 18 41.9% |

| | | | |
|----------------------|--------------------|----|--------|
| | 26-30 | 12 | 27.9% |
| | >31 | 6 | 13.9% |
| Gravidity | Primigravida | 18 | 41.9% |
| | Multigravida | 25 | 58.1% |
| Socioeconomic Status | Lower Class | 7 | 16.3% |
| | Lower Middle Class | 33 | 76.7% |
| | Upper Middle Class | 3 | 7% |
| Period of Gestation | First Trimester | 0 | 0% |
| | Second Trimester | 3 | 6.97% |
| | Third Trimester | 40 | 93.02% |

Forty three patients presented to the Obstetrics and Gynaecology with Jaundice. Majority (69.8%) of the patients presented with Jaundice were in the reproductive age group of 21 to 30 years. There was no significant difference in patient's parity status related to Jaundice. 58.1% were multigravida and 41.9% were primigravida. Majority of patients were from lower socioeconomic status (lower and middle class) i.e. 93%. Majority of patients had government water supply (88.4%). This indicates towards the fact that government supply may be contaminated and is not safe to drink directly. Majority of patients (93%) were in third trimester which indicates increased susceptibility which may be due to increased immunocompromised status in this period of gestation compared to others. Major cause of jaundice in our study was viral hepatitis. Twenty two women (51.2%) were diagnosed as

viral hepatitis (Six women had Hepatitis A and Hepatitis B each, four had hepatitis C and five women had Hepatitis E). Ten women (23.3%) were diagnosed to have hypertensive disorder in pregnancy with Jaundice, ten women (23.3%) suffered from Intrahepatic cholestasis of pregnancy and two women (4.65%) had obstructive jaundice (gallbladder stones and Common Bile Duct stones). 72.1% patients had vaginal delivery, out of which 41.9% patients delivered spontaneously and 30.2% were induced. 11.6% patients had uncontrolled symptoms. Other indications were post-dated pregnancy (37%), PROM(36%), IUD(9%), severe Preeclampsia(9%) and decreased biophysical profile(9%) Caesarean delivery was seen in 27.9% of patients. The indications of LSCS were foetal distress(42%), Eclampsia(42%), Breech(8%) and Placenta previa(8%).

MATERNAL OUTCOME

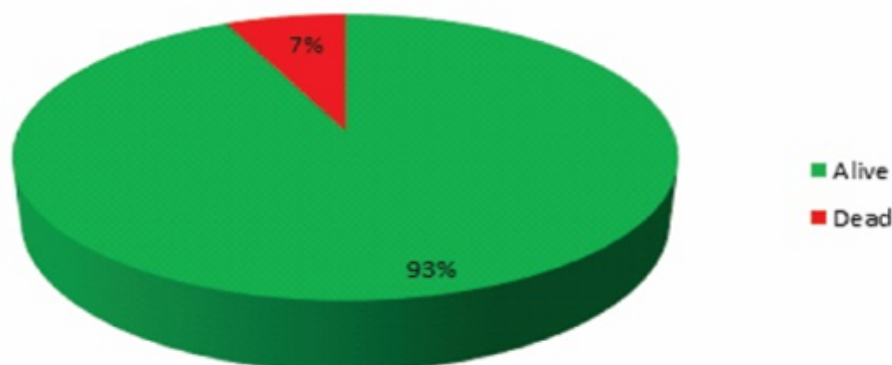


Figure 1: Pie Chart Depicting Maternal Outcome in patients with Jaundice in Pregnancy

Maternal mortality was seen in 3 out of 43 (7%) patients. The cause of maternal death in 2 patients was retro positive status with eclampsia and third patient had HELLP Syndrome.

Discussion

Jaundice in pregnancy has an incidence of 3% to 5%. The most common cause of jaundice in pregnancy is acute viral hepatitis, similar to the trend seen in general population. Viral Hepatitis is also found to be the most common cause of

jaundice in pregnancy in our study i.e. in 51.2% of patients [4]. The differential diagnosis of Jaundice in pregnancy in third trimester includes pregnancy related causes like intrahepatic cholestasis of pregnancy, acute fatty liver of pregnancy, and HELLP (Haemolysis, elevated liver enzymes, and low platelet count) syndrome. It can also be due to gall stone disease such as acute cholecystitis, choledocholithiasis, ascending cholangitis, or gallstone pancreatitis or drug hepatotoxicity in first and second trimester of pregnancy [5]. Liver

disease incidental to pregnancy like acute viral hepatitis A, B and C present similar in pregnancy as in the non-pregnant state [6]. Acute viral hepatitis A and B usually present with highly elevated liver enzymes. Acute viral hepatitis C is frequently subclinical. Maternal mortality is rare in acute viral hepatitis. Liver diseases significantly affected by pregnancy are hepatitis E [7]. It has a more severe course during pregnancy, with frequent fulminant hepatitis [2].

The maternal mortality rate can be upto 20% for an acute infection in third trimester with a high risk of foetal or neonatal morbidity. Chronic hepatitis B and C do not significantly progress during pregnancy, but there is risk of vertical transmission to the neonate (upto 90% in mothers who are hepatitis B-e antigen positive, 25% in mothers who are hepatitis B-e antigen negative and 5% in chronic hepatitis C).

Liver diseases unique to pregnancy are intrahepatic cholestasis of pregnancy (ICP), Preeclampsia, Eclampsia, HELLP Syndrome and acute fatty liver of pregnancy [8]. ICP present with several fold increase in aminotransferase levels and mild hyperbilirubinemia.

The maternal outcome is good, but there is increased incidence of meconium ileus, premature delivery, or stillbirth. Patients who present with mild preeclampsia at term have minimally increased mortality risk. Mortality rate in Eclampsia can be upto 20% [9].

In our study, mortality rate was 7%, out of which 4.7% can be attributed to Eclampsia. 15% of the maternal mortality due to Eclampsia can be attributed to hepatic complications like hepatic failure, haemorrhage, or infarction. HELLP syndrome is a medical emergency, with risk of both maternal and foetal mortality and delivery is the definitive therapy [10].

Acute fatty liver of pregnancy is a rare but severe disease. The definitive treatment is prompt foetal delivery after maternal stabilization. The maternal mortality is low with early diagnosis and foetal mortality is less than 15% [11]. In our study, 2.3% maternal mortality was found to be due to HELLP syndrome out of 7% mortality rate.

Conclusion

Jaundice with pregnancy is a lethal combination. It has high incidence in developing countries compared to developed countries. Hygiene and sanitation plays a key role in preventing this lethal disease. Early diagnosis and prompt treatment plays a key role in saving both the mother and child. Multidisciplinary approach and team work has pivotal role in the management of these patients.

References

1. Mitra AK, Patki PS, Mitra SK. Liver disorders during pregnancy and their management. *The Antiseptic*. 2008;105(4):193-6.
2. Wolf JL: Liver disease in pregnancy. *Med Clin North Am*. 1996; 80:1167.
3. Joshi D, James A, Quaglia A, et al: Liver disease in pregnancy. *Lancet*. 2010; 375: 594.
4. Jan Y, Bilques S, Najmi AM, Qureshi MA, Khan SS, Rafiq M, et al. Viral hepatitis during pregnancy: a study of its socio- clinical profile in a tertiary care hospital. *J Dental and Med Sci*. 2012;3(2):18-22.
5. Shukla S, Mehta G, Jais M, Singh A. A prospective study on acute viral hepatitis in pregnancy; seroprevalence and fetomaternal outcome of 100 cases. *J Biosci Tech*. 2011; 2(3): 279-86.
6. Tong MJ, Thursby M, Rakela J, et al: Studies on the maternal infant transmission of the viruses which cause acute hepatitis. *Gastroenterology*. 1981; 80:999.
7. Kumar A, Beniwal B, Kar P, et al: Hepatitis E: in pregnancy. *Obstet Gynecol Surv*. 2005; 60:7.
8. Sandhu BS, Sanyal AJ: Pregnancy and liver disease. *Gastroenterol Clin North Am*. 2003; 32:407.
9. Walker JJ: Pre-Eclampsia. *Lancet*. 2000; 356:1260.
10. Batron JR, Sibai BM: Care of pregnancy complicated by HELLP syndrome. *Gastroenterol Clin North Am*. 1992; 21:937.
11. Ching LY, Barge N, Dalal AR. Study of jaundice in a tertiary care institution in India. *Bombay Hospital J*. 2011; 53:181-3.
12. Nagaria Tripti, Agarwal S. Fetomaternal outcome in jaundice during pregnancy. *Obstet Gynecol India*. 2005;55(5):424-7.