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Research Article

**ANALYSIS OF DIFFERENT FETOMATERNAL OUTCOME IN  
JAUNDICE COMPLICATING PREGNANCY IN LAHORE****Dr Ayesha Shafaq<sup>1</sup>, Dr. Shahjahan Anwar<sup>2</sup>, Dr Momina Masud<sup>3</sup>**<sup>1</sup>Mayo Hospital Lahore, <sup>2</sup>MO at BHU Lalian, <sup>3</sup>Sir Ganga Ram Hospital, Lahore.**Article Received:** March 2019**Accepted:** April 2019**Published:** May 2019**Abstract:**

**Introduction:** Jaundice refers to yellow appearance of skin, sclera and mucous membranes resulting from increased bilirubin concentrations in body fluids. It is usually detectable clinically when plasma bilirubin exceeds 3 mg/dl.

**Aims and objectives:** The basic aim of the study is to find the fetomaternal outcome in jaundice complicating pregnancy in Lahore.

**Material and methods:** This cross sectional study was conducted in Mayo Hospital, Lahore during March 2018 to November 2018. The data was collected from 50 pregnant female patients who were suffering from jaundice and visited the OPD of the hospital regularly. All the patients were assessed thoroughly by both clinical examination and investigations in the form of complete blood count, liver function. Viral markers for hepatitis such as IgM HAV antibody, HBV (HBsAg, HBeAg, anti-HBe), HCV (anti-HCV antibody), HEV antibody (IgM) were done in all patients. The data was analyzed using SPSS version 19.0.

**Results:** The data was collected from 50 pregnant females who were suffering from jaundice. . The data suggest clearly that CD4 count decreases in abnormal liver function. There were non-significant relationship present in diseased group treated with different therapies like interferon and glutathione as as  $p < 0.05$ . Maternal mortality was 4.76% due to jaundice. Among 2 deaths one patient died due to leptospirosis infection and one died due to HELLP syndrome and DIC. Two cases serum bilirubin was around 11 mg/dl.

**Conclusion:** It is concluded that viral hepatitis is the most common cause of jaundice in pregnancy. The factors responsible for high maternal mortality in our country were poor nutrition, prevalence of anemia, delay in seeking medical advice and delay in referral to the hospital.

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**INTRODUCTION:**

Jaundice refers to yellow appearance of skin, sclera and mucous membranes resulting from increased bilirubin concentrations in body fluids. It is usually detectable clinically when plasma bilirubin exceeds 3 mg/dl. Jaundice in pregnancy is caused by the number of causes, some related and some coincidental [1]. Liver disease complicating pregnancy is divided into 3 general categories. First includes those specifically related to pregnancy, examples are hyperemesis gravidarum, intra hepatic cholestasis, acute fatty liver, hemolysis, elevated liver enzymes and low platelets (HELLP) syndrome [2]. Second category includes acute hepatic disorders that are coincidental to pregnancy, such as acute viral hepatitis. Third category includes chronic liver diseases. Worldwide, most common cause of jaundice is viral hepatitis. Jaundice in pregnancy is associated with high maternal and perinatal mortality rates [3].

Pregnancy is characterized by number of physiological changes in various organs including liver. High levels of serum estrogen and progesterone affect the metabolic, synthetic, and excretory function so of the liver during pregnancy [4]. Hence, the course of both acute and chronic liver disease and the fetomaternal outcome is altered due to the various hemodynamic, immunological and hormonal changes of pregnancy. Physical findings like spider angiomas and palmar erythema seen in cases of liver disease may be normally seen in pregnancy due to the high estrogen levels. Liver disorders complicate 3-5% of pregnancies and constitute an important cause of neonatal and maternal morbidity and mortality. It accounts for 60% perinatal and 14% of maternal mortality [5].

Viral hepatitis is the most common cause of jaundice in pregnancy followed by cholestasis. The most common viruses responsible for viral hepatitis are

hepatitis A (HAV), hepatitis B (HBV), hepatitis C (HCV), hepatitis E virus (HEV). Jaundice is the most common symptom of acute hepatitis. In developing countries like India, hepatitis E is the commonest cause of fulminant hepatic failure in pregnancy, mostly occurring in the third trimester of pregnancy leading to high maternal mortality ranging from 15-45% [6].

**Aims and objectives:**

The basic aim of the study is to find the fetomaternal outcome in jaundice complicating pregnancy in Lahore.

**MATERIAL AND METHODS:**

This cross sectional study was conducted in Mayo Hospital, Lahore during March 2018 to November 2018. The data was collected from 50 pregnant female patients who were suffering from jaundice and visited the OPD of the hospital regularly. All the patients were assessed thoroughly by both clinical examination and investigations in the form of complete blood count, liver function. Viral markers for hepatitis such as IgM HAV antibody, HBV (HBsAg, HBeAg, anti-HBe), HCV (anti-HCV antibody), HEV antibody (IgM) were done in all patients. The data was analyzed using SPSS version 19.0.

**RESULTS:**

The data was collected from 50 pregnant females who were suffering from jaundice. . The data suggest clearly that CD4 count decreases in abnormal liver function. There were non-significant relationship present in diseased group treated with different therapies like interferon and glutathione as as  $p < 0.05$ . Maternal mortality was 4.76% due to jaundice. Among 2 deaths one patient died due to leptospirosis infection and one died due to HELLP syndrome and DIC. Two cases serum bilirubin was around 11 mg/dl.

**Table 01: Associations of Clinical Parameters with Abnormal Liver Function Tests**

Parameter	Normal LFTs	Abnormal LFTs	P value
Age (years)	35.3 + 6.7	36.5 + 10.1	0.54
Sex (M:F)	237:35 (87.1%:12.5%)	45:3 (93.8%:6.2%)	0.91
BMI (kg/m <sup>2</sup> )	21.8 ± 1.8	21.7 ± 2.7	0.88
Duration of HIV infection (months)	36 ± 50.3	38 ± 43.8	0.95
CD4 count (/mm <sup>3</sup> )	280 ± 182	234 ± 212	0.12
Significant alcohol consumption	106 (38.9%)	24 (50%)	0.15
HBV & HCV Co-infection	47 (17.2%)	19 (39.6%)	0.002
HBsAg positive	26 (9.6%)	11 (22.9%)	0.01
Anti HCV positive	21 (7.7%)	06 (12.5%)	0.27
Combined HBV & HCV	0	02 (4.1%)	–
NAFLD	2 (1.2%)	1 (2.0%)	–
Disseminated TB	0	1 (2.0%)	–
No obvious cause	–	3 (6.25%)	–

**Table 02:** Maternal outcomes due to jaundice in pregnancy

Maternal complications	Number of cases
Preeclampsia	8
Eclampsia	5
Acute renal failure	3
Disseminated intravascular coagulation	6
Sickle cell crisis	2
Postpartum hemorrhage	4
Multiorgan failure	2
Fever	4
Shock	3
Death	3

**DISCUSSION:**

Viral hepatitis was the cause in 52.38% cases comparable to the study by Shukla et al who reported 57% and Harshad et al reported 47% cases of viral hepatitis. 21.42% of cases had HELLP syndrome in present study. Rathi U et al reported 52.3% cases with liver dysfunction due to preclampsia and HELLP. 2 cases had chronic liver disease. Among them 1 had portal vein thrombosis and portal hypertension. Agarwal et al studied 50 pregnant patients with NCPH and reported that in 56% patients, NCPH was detected first during pregnancy [7]. In India it is commonly due to non-cirrhotic portal fibrosis and extra hepatic portal vein obstruction. But in western countries portal hypertension is mostly due to cirrhosis. Intrahepatic cholestasis of pregnancy was diagnosed in 6 patients, one had history of jaundice in her mother during antenatal period [8]. Leptospirosis was diagnosed in 2 cases by MSAT. Shalini et al reported a case of leptospirosis with jaundice, coagulopathy and intra uterine death [9].

Mortality due to viral hepatitis was not seen in the present study. Study by Jayanthi et al observed that mortality rate of hepatitis E infection in southern India was very low 3-4% compared to high mortality 30-100% seen in studies. Study by Harshad et al reported that mortality was 41% in pregnancy associated liver disease and 7.5% in viral hepatitis and concluded mortality due to hepatitis E was low [10].

**CONCLUSION:**

It is concluded that viral hepatitis is the most common cause of jaundice in pregnancy. The factors responsible for high maternal mortality in our country

were poor nutrition, prevalence of anemia, delay in seeking medical advice and delay in referral to the hospital.

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