CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.2801423

Available online at: http://www.iajps.com *Research Article*

ANALYSIS OF FETO-MATERNAL OUTCOME IN JAUNDICE COMPLICATING PREGNANCY

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Article Received: March 2019 **Accepted:** April 2019 **Published:** May 2019

Abstract:

Introduction: *Jaundice in pregnancy is a known high-risk factor that increases fetomaternal morbidity and mortality. While hepatitis B and C are deepening their roots in the developed world, hepatitis A and E are still more common in the developing world.*

Aims and objectives: *The basic aim of the study is to analyse the feto-maternal outcome in jaundice complicating pregnancy.*

Material and methods: *This cross sectional study was conducted in DHQ Hospital, Sheikhupura during April 2018 to December 2018. This study was done with the permission of ethical committee of hospital. This study include 100 pregnant women who were suffer from jaundice during their pregnancy. Jaundice was diagnosed by physical examination but a confirmation was made using liver function tests. The prevalence of jaundice in pregnancy was calculated along with percentages of hepatitis A, hepatitis B, hepatitis C positivity and hepatic encephalopathy.*

Results: *The data were collected from 100 pregnant female patients. The women with jaundice were studied in detail and data were classified patients who were HBV positive, hepatitis A virus (HAV) positive, HCV positive, HEV positive, and those who did not have positive viral markers but had jaundice due to other causes such as severe preeclampsia, sepsis, typhoid, dengue or no definite cause. The age of the patients ranged between 20-38 years with a mean age of 25 years. The mode of delivery and fetomaternal outcomes were recorded.*

Conclusion: *It is concluded that there are 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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Please cite this article in press Fatima Arif Butt et al., ***Analysis Of Feto-Maternal Outcome In Jaundice Complicating Pregnancy.,*** *Indo Am. J. P. Sci, 2019; 06(05).*

INTRODUCTION:

Jaundice in pregnancy is a known high-risk factor that increases fetomaternal morbidity and mortality. While hepatitis B and C are deepening their roots in the developed world, hepatitis A and E are still more common in the developing world. The uniqueness of hepatitis E lies in its transformation from a relatively self-limiting disease in the non-pregnant state to a highly virulent disease during pregnancy [1]. Hepatitis E virus (HEV) belongs to genus Hepevirus and family Hepeviridae. The RNA genome remains enclosed within a capsid composed of one or possibly two proteins, but many questions remain regarding its antigenicity.

Endemics usually occur during the rainy season. Once ingested, the virus first infects the liver followed by viremia and shedding in stool [2]. Liver injury coincides with an elevation of transaminases and the appearance of anti-HEV immunoglobulin (Ig) M. The mechanisms behind its aggressive course during pregnancy are still not clearly understood. Clinical presentation varies from asymptomatic infection to anicteric, icteric, and fulminant hepatitis [3]. Common presenting symptoms include yellowing of the eye and urine, fever, chills, anorexia, nausea, and abdominal pain. Aminotransferases are markedly elevated and may precede the onset of symptoms. Unlike hepatitis B virus (HBV) and hepatitis C virus (HCV), HEV infections are not known to cause cirrhosis or hepatocellular carcinoma [4].

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 [5]. Jaundice in pregnancy is caused by the number of causes, some related and some coincidental. 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 [6]. 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 [7].

Aims and objectives

The basic aim of the study is to analyse the feto-maternal outcome in jaundice complicating pregnancy.

MATERIAL AND METHODS:

This cross sectional study was conducted in DHQ Hospital, Sheikhupura during April 2018 to December 2018. This study was done with the permission of ethical committee of hospital. This study include 100 pregnant women who were suffer from jaundice during their pregnancy. Jaundice was diagnosed by physical examination but a confirmation was made using liver function tests. The prevalence of jaundice in pregnancy was calculated along with percentages of hepatitis A, hepatitis B, hepatitis C positivity and hepatic encephalopathy. Hepatitis B and C positivity was diagnosed using and enzyme-linked immunosorbent assay and hepatitis A and E were confirmed through IgM positivity.

Statistical analysis

The data were collected and analysed using SPSS version 19.0. All the values were expressed in mean and standard deviation.

RESULTS:

The data were collected from 100 pregnant female patients. The women with jaundice were studied in detail and data were classified patients who were HBV positive, hepatitis A virus (HAV) positive, HCV positive, HEV positive, and those who did not have positive viral markers but had jaundice due to other causes such as severe preeclampsia, sepsis, typhoid, dengue or no definite cause. The age of the patients ranged between 20-38 years with a mean age of 25 years. The mode of delivery and fetomaternal outcomes were recorded.

Table 01: analysis of fetomaternal outcomes in patients

	HBV	HCV	HAV	HEV	Others
Total	54	15	8	32	68
Term	41	10	6	9	15
Preterm	13	5	2	23	53
PPROM	2 (3.7%)	0	1 (12.5%)	9 (28.1%)	2 (2.9%)
Preterm <28 weeks	1 (1.8%)	0	1 (12.5%)	9 (28.1%)	14 (20.5%)
Fetal outcomes					
Live births	49	13	6	18	42
Still births	5	2	2	14	26
Antepartum	3 (5.5%)	1 (6.6%)	2 (25%)	12 (37.5%)	18 (26.4%)
Intrapartum	2 (3.7%)	1 (6.6%)	0	2 (6.2%)	8 (11.7%)
Maternal outcome					
Maternal death	0	1 (6.6%)	0	7 (21.8%)	11 (16.1%)
HE	0	0	0	7 (21.8%)	14 (20.5%)
Coagulopathy	0	0	0	10 (31.2%)	10 (14.7%)

HBV: Hepatitis B virus, HCV: Hepatitis C virus, HAV: Hepatitis A virus, HEV: Hepatitis E virus, HE: Hepatic encephalopathy, PPROM: Preterm premature rupture of membranes

DISCUSSION:

Viral hepatitis is one of the most common causes of jaundice encountered during pregnancy. Amongst all types of viral hepatitis, hepatitis E causes the most damage and is most prevalent in Asia and Africa. The prevalence of the disease in the developed world is less and the difference is remarkable. Lachish et al in a 10-year retrospective analysis found only fifteen pregnant women infected with HEV in Israel [5]. Five (33%) patients in their series resulted in fulminant hepatitis, and two patients underwent urgent liver transplantation. They had no mortality among the mothers and fetuses, even in cases that resulted in fulminant liver failure. Other industrialized countries also rarely encounter autochthonous cases of hepatitis E in pregnancy [7]. We should realize that the scenario in developing countries like India, Pakistan and Bangladesh needs to be identified where both prevalence, morbidity, and mortality is high, and advanced modalities of treatment such as liver transplantation are not freely available [8]. The high prevalence is also a constant threat for pregnant women travelling from industrialized countries.

Jaundice in pregnancy is associated with high maternal and perinatal mortality rates. In the present study jaundice in pregnancy accounted for perinatal mortality in 6 (33.3%) cases [9]. Various studies also report jaundice as one of the major cause of maternal death, responsible for 5-30% of all maternal deaths. Hepatorenal failure, encephalopathy, DIC and postpartum hemorrhage were responsible for the maternal deaths [10].

CONCLUSION:

It is concluded that there are 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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