

A Study of Etiological Factors and Fetomaternal Outcome in Jaundice Complicating Pregnancy at Tertiary Care Centre

Dr. Vemu Aruna¹ MD (OBG) Associate professor

*Dr. Y. Jhansi Vani² MD, DGO (OBG) Associate professor

^{1,2} Department of Obstetrics and Gynecology, Guntur Medical College, NTRUHS, AP, India

Corresponding author: *Dr. Y. Jhansi Vani² MD, DGO (OBG)

Abstract:

Objective: To evaluate the etiological factors of jaundice and its effects on maternal and fetal outcome.

Material & Methods: A retrospective hospital based study was carried out in the Department of Obstetrics & gynecology of Guntur general hospital; a tertiary health care referral centre in guntur, Andhra Pradesh over a period of 1 year from August 2016 to July 2017.

Results: 50 patients had jaundice during pregnancy. the incidence of jaundice was 3.9%. 64% of patients were between age group 20-25. most common cause of jaundice was viral hepatitis 46%. most common complication were thrombocytopenia (28%), ICU stay 6%, renal failure 8%, hepatic encephalopathy 2%, Maternal mortality was 12% and perinatal mortality-28%

Conclusion: jaundice in pregnancy has adverse maternal outcome. improved health awareness, education, regular ANC checkup can result in early diagnosis and treatment of jaundice in pregnancy thus reducing fetal and maternal morbidity and mortality.

Keywords: jaundice, fetomaternal outcome, mortality, morbidity.

Date of Submission: 22-11-2017

Date of acceptance: 05-12-2017

I. Introduction

Jaundice is defined as yellowish discoloration of the skin and sclera where the serum bilirubin level exceeds 2 mg (normal 0.2 -0.8 mg%). overall incidence in India is 1-4/per 1000 deliveries.

The cause of jaundice during pregnancy may be grouped as follows;

Jaundice peculiar to the pregnant state	Jaundice unrelated to pregnant state.	Jaundice when pregnancy is superimposed on chronic liver diarrhea
Intrahepatic cholestasis Severe pre eclampsia Eclampsia, HELLP syndrome Acute fatty liver Severe hyperemesis gravidarum Endotoxic shock	Viral hepatitis A, E, G Gall stones Drug induced ;isoniazid Phenothiazid Hemolytic jaundice-mismatched blood transfusion	Chronic hepatitis cirrhosis

Viral hepatitis is the most common cause of jaundice in pregnancy in the tropics. hepatitis is the mostly restricted to the ill nourished mother, living in unhygienic environment. cholestatic jaundice is the second most common cause. HELLP syndrome is the important cause of maternal mortality and morbidity. Hence the present study was conducted to analyse the etiological factors and fetomaternal outcome of jaundice in pregnancy.

II. Materials And Methods

A prospective hospital based study was carried out in the Department of Obstetrics & gynecology of Guntur Medical College; a tertiary health care referral centre in Guntur, Andhra Pradesh over a period of 2 years from July 2016 to July 2017. This prospective study of maternal and fetal outcome included 50 pregnant women with jaundice admitted at our hospital during the study. Elaborate history and through general, systemic and obstetric examination were carried out, liver function tests like total, indirect, direct bilirubin level, serum transaminases, hemogram, ALP, clotting time, bleeding time, USG, coagulation profile, viral markers study such as HBSAG, ANTI HAV Igm, anti HCVab Anti HEV IGM, antibodies were done depending on clinical situation.

Maternal outcomes were noted in terms of mode of termination of pregnancy, maternal morbidity and mortality. fetal outcome was assessed by perinatal morbidity and mortality.

2.1 Age Disribution

AGE(YEARS)	No of patients	Percentage
< 20	6	12%
20-25	32	64%
25-30	11	22%
>30	1	2%

2.2 Socioeconomic Background

Socio economic status	No of patients	Percentage
Lower	39	78%
Middle	11	22%
Upper		

2.3 Booking Status

Booking status	No of patients	Percentage
Booked	10	20%
Unbooked	40	80%

2.4 obstetric Status

Gravidity	No of patients	Percentage
Primi	24	48%
G 2-3	22	44%
G>_4	4	8%

2.5.Clinical Presentation

Symptoms & signs	No of patients	Percentage
Nausea & vomiting	12	24%
Loss of appetite	6	12%
Fever	14	28%
Pallor	31	62%
Icterus	32	64%
Yellowish discoloration of urine	18	36%
Pedal edema	25	50%
Itching	6	12%
Petechial haemorrhages	6	12%
High BP recordings	23	46%
Unconscious/ Coma	2	4%

2.6 Lft At Admission

S. bilirubin (mg%)	No of patients	Percentage
<5	37	74%
5 – 9	11	22%
10- 14	1	2%
>15	1	2%
AST (IU/ml)		
<40	19	38%
>40	31	62%
ALT (IU/ml)		
<40	15	30%
>40	35	70%
ALP (IU/L)		
<140	14	28%
>140	36	72%

2.7.Coagulation Profile

PT	No of patients	Percentage
Normal	39	78%
Raised	11	22%
APTT		
Normal	34	68%
Raised	16	32%
FDP		
Normal	46	92%
Raised	4	8%

D- dimer		
Normal	49	98%
Raised	01	2%

2.8. Etiological Factors Of Jaundice In Pregnancy

Diagnosis	No of patients	Percentage
Viral hepatitis	23	46%
HELLP Syndrome	13	26%
Cholestasis of jaundice in pregnancy	11	22%
Hyperemesis gravidarum	1	2%
Chronic liver disease	2	4%

2.9. Mode Of Delivery

Mode of delivery	No of patients	Percentage
Spontaneous vaginal	26	52%
Forceps	0	
Ventouse	0	
Caesarean section	21	42%

2.10.Fetal Outcome

Outcome	No of patients	Percentage
Preterm birth	10	20%
Term delivery	31	62%
IUFD	7	14%
Undelivered (mother died)	3	6%
LBW (<2.5kg)	10	20%
Normal B.Wt >2.5kg	31	62%
NICU admission	4	8%
Perinatal deaths		
• Still birth	1	2%
• Earlyneonataldeaths		

2.11.Maternal Morbidity & Mortality

Complications	No of patients	percentage
Hepatic encephalopathy	1	2%
DIC	2	4%
Thrombocytopenia	14	28%
ICU Stay	3	6%
Ventilatory support	3	6%
Renal failure	4	8%
Death	6	12%

III. Results

1. The incidence of jaundice was 50 in 12698 deliveries(3.9%)
2. The most common age group were between 20-25 (64%).
3. Most patients were unbooked (80 %) and belonged to lower socioeconomic status(78%) and most are primigravida (48%).Out of 50 cases 64 % presented with jaundice during third trimester.
4. On analyzing the presenting symptoms 64% had icterus, 24% had nausea & vomiting, 36 % had yellowish discoloration of urine other predominant symptoms were fever, itching and high blood pressure. On analyzing the study S. bilirubin levels varied widely between 3-6 mg/dl, and 2% of patients had high s.bilirubin of >15mg/dl. Serum transaminase level was below 40 in62% of patients. Serum alkaline phosphatase was more than 140U/L in 72% of patients. Coagulation profile was derranged in 16% of cases.

IV. Discussion

The incidence of jaundice in India varies from 0.4 to 0.9/ 1000 deliveries. The common causes of jaundice in pregnancy in our study were viral hepatitis (46%), HELLP syndrome (26%) intrahepatic cholestasis (22%),Chronic liver diseases (4%). Cholestatic jaundice is also common during pregnancy, in which serum bilirubin levels of up to 6 mg% are seen with either minimal or no increase in serum enzyme levels. In our study, 22% of the cases had serum biliserum bilirubin levels of up to 6 mg% with minimal rise in enzyme levels.

It is associated with prematurity (20%) and a perinatal mortality rate (28%). Maternal mortality of 12% found in our study and out of which 6% were undelivered. In our study the most common cause of maternal mortality was HELLP syndrome and hepatorenal failure. There are 4 cases with acute renal failure were found. Jaundice in pregnancy is associated with high maternal and perinatal mortality rates. Our perinatal mortality rate was 28%, and Intrauterine fetal demise of 14% was noted. High perinatal mortality rate of 45% was observed by Singh et al and 22.2% was observed by Ambreen A et al.10 . Our maternal mortality was 12%.

A similar high mortality is reported by various authors. Kamalajayaram and Devi R reported 33.3% maternal mortality and Singh et al reported 10%.4 Hepatorenal failure, encephalopathy, DIC and postpartum hemorrhage were responsible for the deaths. Various studies also report jaundice as one of the major indirect cause of maternal death, responsible for 5 to 30% of all maternal deaths. Maternal deaths were directly proportional to the level of the serum bilirubin. Trivedi et al also observed the same. Maternal deaths were directly proportional to the level of the serum bilirubin. The factors responsible for a high maternal mortality in our country may be poor nutrition, prevalence of anemia, delay in seeking medical advice, and delay in referral to the hospital. Many of the patients when brought to the hospital are already in moribund condition and often, do not respond to treatment. Jaundice, which complicates 1 in every 1000 pregnancies in India, is associated with adverse maternal and foetal prognosis. Viral hepatitis is the most common cause of jaundice in pregnancy. Generating public awareness about the various routes of transmission of the different types of infective hepatitis, improving sanitary conditions & habits, imparting health education and knowledge of preventive measures, routine and regular antenatal checkups and viral markers as a part of routine antenatal screening can help in reducing the burden .

References

- [1]. Neha N, Juhi A, Babu S. Outcome of pregnancy in cases of jaundice. International journal of scientific research. 2014;3(8).
- [2]. Renu Mishra, Ian Donald practical obstetric problems. 7th edition. Wolter Kluwer, 2014. p 154.
- [3]. Cunningham G, Leveno KG et al. Hepatic, biliary and pancreatic disorders. Williams obstetrics. 23rd edition. Mc Graw Hill, New York; 2010. p 63. [4]. Begum N, Devi SG et al. Seroprevalence of subclinical HEV infection in pregnant women from north India: a hospital based study. Indian J Med Res. 2009;130:709-13.
- [4]. Harshad D, Walter KK, Ross D et al. Pregnancy-associated acute liver disease and acute viral hepatitis: differentiation, course and outcomes. Journal Hepatology. 2008;49:930-5.
- [5]. Shukla S. Prospective study on acute viral hepatitis in pregnancy; seroprevalance and fetomaternal outcome of 100 cases. JBiosci Tech, 2011;2(3):279-86.
- [6]. Rathi U, Bapat M et al. Effect of liver disease on maternal and fetal outcomes-a prospective study. Indian J Gastroentero 2007;26:59-63
- [7]. Aggarwal N, Sawhney et al. Non cirrhotic portal hypertension in pregnancy. Int J Gynaecol Obstet. 2001;72(1):1-7.
- [8]. Gainder S, Singla R et al. Leptospirosis as a cause of intrauterine fetal demise: short report of rare presentation materno-fetal. Med Archives Gynecol Obst. 2010;281(6):1061-3.
- [9]. Jain S, Pendyala P et al. Effect of renal dysfunction in fulminant hepatic failure. Indian J med Res. 2009;130(6):709-13.
- [10]. Westbrook RH, Yeoman et al. Model for end stage liver disease score predicts outcome in cirrhotic patients during pregnancy. Clin Gastroenterol Hepatol. 2011;9(8):694-9.
- [11]. Rasheeda CA, Udaykumaretal. Diseases in pregnancy and its influence on maternal and fetal mortality- a prospective study from Chennai, southern India. Eur J Gastroenterol Hepatol. 2008;20:362-6
- [12]. Kumar A, Beniwal M et al. Hepatitis E in Pregnancy. Int J Gynecol Obstet. 2004;85(3):240-4. [14]. Williamson C, Miragoli et al. Bile acid signaling in fetal tissues: implications for intrahepatic cholestasis of pregnancy. Dig Dis. 2011;29(1):58-61.

*Dr. Y. Jhansi Vani. " A Study of Etiological Factors and Fetomaternal Outcome in Jaundice Complicating Pregnancy at Tertiary Care Centre." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) 16.11 (2017): 36-39