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Research Paper

Outcome of Pregnancy in Cases of Jaundice

Medical Science

KEYWORDS : Jaundice, Hepatitis, pregnancy in jaundice

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ABSTRACT

Objective To study the effect of jaundice on maternal health in pregnancy and assess the complications of jaundice in pregnancy. To evaluate the outcome of labour in pregnancy complicated with jaundice and to study the maternal mortality associated with jaundice in pregnancy. And to acknowledge the effect of jaundice on fetus and perinatal mortality rates. Method This study was carried out at our institute from May 2012 to April 2014. 100 patients were included with history of amenorrhea and increase in serum bilirubin (› 3mg%). Result Maternal mortality rate was 9% in this study. Most common cause of jaundice during pregnancy was viral hepatitis accounting for 57% of cases. Most common maternal complication was Hepatic Encephalopathy found in 16% of cases followed by DIC. Conclusion Jaundice in pregnancy is a bad combination. The most common cause of jaundice was viral hepatitis which spreads through feco-oral route. So improvement in sanitation facility and education level in rural area is must to reduce the rate of jaundice in pregnancy and improve its outcome.

INTRODUCTION :

The word "jaundice" is derived from the French word "jaune" meaning yellow. By definition (oxford dictionary) jaundice is yellowish discouloration of skin and sclera because of increase in serum bilirubin.

Alterations in normal physiological and hormonal profiles occur throughout pregnancy. Moreover, changes in liver biochemical profile are normal in pregnancy. However, upto 3% of all pregnancies are complicated by liver disorders[1]. Jaundice in pregnancy carries a grave prognosis for both the foetus and the mother. It is responsible for about 60% of perinatal mortality and about 14% of maternal mortality[2].

The hemodynamic, hormonal and immunological changes unique to pregnancy not only alter the course of both acute and chronic liver disease in pregnancy, but they may in turn affect the outcome of pregnancy. The hepatic functions during pregnancy are affected by increased serum oestrogen and progesterone levels. Physical findings such as palmer erythema, spider angiomas which may suggest liver disease, may be found normally during pregnancy[3].

Hence, the present study analyses the cause and feto-maternal outcome in pregnancies in lower and middle socioeconomical classes which are affected with jaundice.

MATERIALS AND METHODS:

This study was carried out at our institute from May 2012 to April 2014. 100 patients were included with history of amenorrhea and increase in serum bilirubin (› 3mg%).

All such patients were prospectively followed in antenatal, intranatal and postnatal period.

All the patients were examined clinically with complete blood count, liver function tests, viral hepatitis markers, coagulation profile, hepatobiliary-abdominal and fetal ultrasonography.

Advice from internal medicine and gastroenterology department was taken for better and comprehensive management of the patients.

Critically ill patients were managed in intensive care unit.

RESULTS :

In this study 100 cases of jaundice were analyzed with regards to, sociodemographic profile, maternal and fetal morbidity and mortality.

Table 1 Age Distribution & Gravidity of the patients at the time of admission

Age (in years)	No. of patients	% of patients
‹ 20	02	02
20 – 24	41	41
25 – 29	42	42
≥ 30	15	15
Gravida		
Primi	37	37
Second gravida	31	31
Multi gravida	32	32

Above table shows that maximum number of patients belong to the age group 20 – 29 (83%). Majority of the patients were primi gravida in this study but there is no significant correlation with gravidity of patients.

Table 2 Residential area of patients % Registered or Emergency patients

Residence	No. of patients	% of patients
Urban	35	35
Rural	65	65
Registered	26	26
Emergency	74	74

In this study majority of patients belong to rural area (65%). This table shows 74% of patients were emergency admissions. This is because most of the patients were from rural area and from lower socioeconomic class where probably the importance of antenatal registration and visit is not well established.

Table 3 Liver function tests at admission
(i) Serum Bilirubin :

Value (mg%)	No. & % of patients	Maternal Death	% of Maternal Death
‹ 5	30	1	3.3
5 – 9	37	3	8.1
10 – 14	25	4	16
≥ 15	08	5	62.5

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(ii) Serum ALT :

Value (iv/ml)	No. & % of patients	Maternal Death	% of Maternal Death
‹ 35	10	0	-
35 - 999	82	12	16.43
≥ 1000	8	1	12.5

(iii) Co-agulation Profile

Test		No. of patients	% of patients
PT	Normal	74	74
	Raised	26	26
aPTT	Normal	74	74
	Raised	26	26
FDP	Normal	74	74
	Raised	26	26
d-dimer	Normal	74	74
	Raised	26	26

The above table shows that in 70% of patients serum bilirubin was more than 5mg% and maternal death rate increases as initial bilirubin level increases on admission.

Majority of the patients had serum ALT between 35 to 999 IU/ml. In 26% of the cases coagulation profile was abnormal. So early detection of jaundice at lower serum bilirubin levels and aggressive treatment will help in reducing maternal mortality rate.

Table 4 Causes of jaundice in pregnancy

Cause	No. of patients	% of patients
1) Infective hepatitis includes following	(total) 57	57
Hepatitis A Virus	13	13
Hepatitis B Virus	5	5
Hepatitis C Virus	0	0
Hepatitis E Virus	39	39
2) Cholestatic jaundice of pregnancy	16	16
3) Pre-eclampsia, eclampsia, HELLP syndrome	19	19
4) Malaria induced haemolytic jaundice	6	6
5) Others	2	2

Most common cause was viral hepatitis as seen in 57% of the patients. Among them major cause of viral hepatitis in pregnancy was Hepatitis E Virus which accounted for 39% of total cases & 69.4% among the viral hepatitis cases.

Second most common cause was pre-eclampsia & out of all pre-eclampsia patients (19%) 4 went in HELLP syndrome.

Cholestasis of pregnancy accounted for 16% of cases & malaria induced haemolytic anaemia accounted for 6% of cases.In this study one case we found of cirrhosis of liver secondary to portal hypertension & other case of gall bladder stone disease.

Table 5 Administration of Blood Component

Component	No. of patients	% of patients
Given	43	43
Not Given	57	57

In this study 43% of patients required blood transfusion so management of jaundice with pregnancy should be done in a tertiary centre where blood component facility is freely available.

Table 6 Maternal Morbidity & Mortality

Complication	% of patients in this study	Tripti et al27 (% of pts.)
Encephalopathy	16	26.7
DIC	15	21.8
Thrombocytopenia	7	21
Septicemia/wound infection	6	4.8
Death	9	24.3

In this study most common complications were encephalopathy and DIC occurring in 16% and 15% of cases respectively & other causes are shown in above table.

Table 7 Relation of Maternal Deaths and cause of jaundice

Cause	No.of Death	Case Fatality Rate
Viral Hepatitis	6 (57)	10.5%
Malaria induced hemolytic jaundice	2 (6)	33.3%
Pre-eclampsia and HELLP syndrome	1 (19)	5.26%

In this study highest case fatality rate was observed in malaria induced haemolytic jaundice (33.3%).

Case fatality rate for pre-eclampsia,eclampsia & HELLP induced jaundice is 5.26%.

All the death because of viral hepatitis were attributed to hepatitis E Virus. So, case fatality rate for hepatitis E virus is (5/39) 12.8%

Table 8 Pregnancy Outcome

Outcome		No. of patients	% of patients
Delivered	Vaginal Delivery	80	80
	LSCS	17	17
Undelivered	Expired	03	03

In this study 80% patients delivered vaginally ,17% by caesarean section & 3% patient expired before any obstetric outcome.

Table 9 Perinatal Outcome

Outcome	No. of Patients	% of Patients
Preterm <37 weeks	61	61
Full term >37 weeks	22	22
IUD	14	14
Undelivered Expired	3	3
Outcome in terms of Birth Weight		
LBW (< 2.5kg.)	31	31
Normal Weight (>2.5 kg.)	52	52

Above table shows that 61% of patients delivered pre-term. NICU admission rate was 48.19% & major cause for admission was low birth weight contributing upto 70% of all NICU admission.

DISCUSSION :

Jaundice in pregnancy is a rare medical disease but when present it significantly endangers maternal and foetal wellbeing. Most of the patients were coming from rural area and from

lower socioeconomic class. The most common cause of jaundice was viral hepatitis which spreads through feco-oral route. Majority of cases were admitted as unregistered case with no previous antenatal visits. So improvement in sanitation facility and education level in rural area will not only decrease the overall incidence of disease but also the maternal and perinatal mortality rates and morbidity.

Jaundice in pregnancy is a bad combination. Complication and mortality rates (in this study 9%) are high with disease and during management they require blood bank facility and tertiary level intensive care. So these types of cases should be identified immediately, referred immediately to tertiary care centre and managed aggressively.

CONCLUSION :

Clinical jaundice is found as a complication in 1:1000 pregnancies in india. Most common cause of jaundice is viral hepatitis. The frequency is higher whenever there is outbreak of epidemic hepatitis. Most common symptoms are yellowish discouloration of sclera, urine or stool followed by abdominal pain and nausea and vomiting.

Jaundice can be prevented to some extent by creating public health awareness regarding various routes of transmission of different viruses. Sanitation facilities should be improved. Routine screening for HBsAg is recommended in all antenatal patients. All babies delivered from HBsAg positive mother should be given hepatitis immunoglobulin immune prophylaxis at birth and hepatitis B vaccine at one week, one month and six months. This regime has reduced the incidence of hepatitis B vertical transmission to less than 3%.

Management of patient with jaundice should be a team approach. Such patients should be managed in tertiary care hospitals where all other speciality doctors are available and blood components facility is available. Patients should be explained the importance of routine antenatal check up.

REFERENCE

1) Ch'ng CL, Morgan M, Hainsworth I, Kingham JG. Prospective study of liver dysfunction in pregnancy in Southwest Wales 2002. | 2) NagariaTripti, AgarwalSarita, fetomaternal outcome in jaundice during pregnancy. ObstetGynecol India 2005. | 3) Ian Donald's Practical Obstetric Problems 7th edition. | 4) Harison's principles of internal medicine vol 1 section 6 chap 42. | 5) William's Obstetrics 23rd Edition, chapter 50, hepatic, biliary tract and pancreatic disorders. | 6) Date, R.S, Kaushal and Ramesh, A review of the management of gallstone disease and its complications in pregnancy Am J Surg 2008. | 7) Strand, Ronald T. Infectious aetiology of jaundice among pregnant women in Angola. Scand J infect Dis 2003. |