Original Article

Fetomaternal Outcome in Jaundice Complicating Pregnancy

Syed Masuma Rizvi[1], Renuka Raina[2]

[1,2]Postgraduate Department of Obstetrics and Gynaecology
Government Lalla Ded Hospital, GMC Srinagar

Correspondence: *Dr. Renuka Raina*
Government Lalla Ded Hospital, GMC Srinagar
Email: dr.rraina23@gmail.com

Abstract

Objectives: (i) To study the effect of jaundice on maternal outcome in terms of mode of delivery and any complications if occurring. (ii) To study the effect of jaundice on fetal outcome in terms of birth weight, NICU admission and neonatal death.

Methodology: A total of 100 women with jaundice complicating pregnancy admitted and treated at Government Lalla Ded Hospital, Srinagar were studied.

Results: Most of the patients in our study were >30 years of age and were primigravida. Itching was the most common symptom. 70 women (70%) were diagnosed with intrahepatic cholestasis of pregnancy and 18% with viral hepatitis. LSCS was done in 69 patients (69%), normal vaginal delivery in 24 patients (24%). 64% (64 babies) were term live births and 63% babies were having birth weight between 2.5-3.5kgs.

Conclusion: Jaundice with pregnancy is a bad combination. It affects a small percentage of pregnant woman, yet is associated with high morbidity and mortality.

Keywords: Jaundice, Hepatitis E, Perinatal outcome.

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Introduction

Jaundice in pregnancy provides both the hepatologist and the obstetrician with an interesting and urgent challenge as it is considered a high-risk pregnancy and carries a bad prognosis for both the fetus and the mother. It complicates 3 to 5% of pregnancies and is one of the important causes of maternal and neonatal morbidity and mortality worldwide.[1] In developed countries, the incidence is around 0.1% whereas in developing countries it can range from 3 to 20% or higher.[2]

Obstetric cholestasis is seen in second half of pregnancy, resolving after delivery. Recurrence in subsequent pregnancies is widely seen. Its incidence ranges from 0.1 to 1.5% of pregnancies compared with a much significant incidence in Scandinavia. Obstetric cholestasis has little contribution to maternal morbidity but it has important impact on fetal outcome. It can lead to chronic placental insufficiency, resulting in fetal complications that include anoxia, prematurity, perinatal death, fetal distress and even stillbirth.[3]

Acute fatty liver of pregnancy occurs in about one in 16,000 to 20,000 pregnancies usually in second or third trimester. Maternal mortality is up to 20% with a fetal mortality up to 23%.[4]

The primary hepatotrophic viruses (hepatitis A, B, C and E virus) are the most common cause of acute liver disease. In developing countries, HEV and HBV infections is the most frequent cause of fulminant hepatic failure in pregnancy, with hepatitis E virus taking precedence with a maternal mortality ranging

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from 15 to 45%.[5]It can have serious health implications in pregnant women including septicemia, PPH, DIC, hepatic encephalopathy and coma with high mortality. Fulminant hepatitis is more common in third trimester pregnant women with high maternal mortality ranging from 15 to 45%.

Fetal implications include risk of vertical transmission in HBV, 10% in first trimester to 90% in third trimester. Perinatal transmissions are also seen in hepatitis C infection. Where as in HEV the perinatal mortality is 51.5% that is high due to prematurity and sepsis.[6]

Methodology

A total of 100 women with jaundice complicating pregnancy admitted and treated at Government Lalla Ded Hospital, Srinagar were studied over a period of 6 months from January 2018 to July 2018.

A detailed history including patient's age, parity and details of menstrual history to arrive at the expected date of delivery was obtained. Patients were enquired in detail about their complaints and duration like nausea, vomiting, pruritus, anorexia, yellow coloured urine, pale stools, edema legs, bleeding tendency, joint pain, fever and others. Past history of jaundice especially in previous pregnancy and history of blood transfusion were elicited. Systemic and obstetric examinations were carried out. Investigations included liver function tests, serum billirubin, SGOT, SGPT, alkaline phosphatase, Viral markers, prothrombin time (PT), partial thromboplastin time (PTT), bleeding time (BT), clotting time (CT), platelet count and ultrasound abdomen were carried out as and when required. HIV screening was done in all patients. Physician's opinion was obtained for all cases. Labour was closely monitored. Jaundice perse was not an indication for cesarean section. Vaginal delivery with close monitoring was preferred and cesarean sections were done only for obstetric indication. After cross matching fresh blood was kept ready as alteration in coagulation profile was expected in jaundice complicating pregnancy.

Atonicity was managed with oxytocin drip, injection 15 methyl PGF2α. Patient were kept in the labour ward for close observation. Soon after delivery all babies were assessed by paediatrician. Alive or dead, gestational age at birth, weight, apgar score and presence or absence of any congenital anomalies were looked for and noted. As per paediatrician opinion sick babies were admitted in NICU ward for intensive care.

The maternal outcome was noted in terms of the mode of termination of pregnancy, maternal complications and maternal mortality. Fetal outcome was assessed by perinatal morbidity and mortality.

Statistical Analysis: Data obtained was entered into Microsoft Excel and was analysed using Statistical Package for Social Sciences (SPSS Ver. 20).

Results

In our study, 68 patients were >30 years of age, 23 in age group of 21-29 and 9 patients <20 years of age. In our study, 67 patients were primigravidas and 33 were multigravidas.

Table I: Basic Parameters

		No. of Patients	Percentage
Age in Years	< 20	9	9.00
	21-29	23	23.00
	>30	68	68.00
Parity	Primigravida	67	67.00
	Multigravida	33	33.00

In our study, 77 patients had itching, 39 had nausea vomiting, 16 had pain abdomen, 13 had high BP, 11 complained of loss of appetite, 10 had fever and 7 had bleeding Per Vagina.

Table II: Signs, Symptoms and LFT

		No. of Patients	%
Symptoms	Nausea, vomiting	39	39.00
	Loss of appetite	11	11.00
	High blood pressure	13	13.00
	Itching	77	77.00
	Pain abdomen	16	16.00
	Vaginal bleeding	7	7.00.
	Fever	10	10.0
Signs	Icterus	100	100.0
	Hepatomegaly	5	5.0
	Splenomegaly	0	0.0
	Ascitis	9	9.0
	Scratch marks	80	80.0
	Edema	13	13.0
	Abdominal tenderness	5	5.0
LFT		**No. of Patients**	**%**
Serum Bilirubin	< 5	81	81.0
	6-10	9	9.0
	11-15	7	7.0
	16-20	3	3.0

SGOT	<200	65	65.0
	200-500	20	20.0
	>500	15	15.0
SGPT	<200	65	65.0
	200-500	20	20.0
	>500	15	15.0
ALP	<400	65	65.0
	400-800	20	20.0
	>800	15	15.0

Table III: Blood Component Transfusion, Diagnosis, Mode of Delivery, Complications and Outcome

		No. of Patients	%
Blood component transfusion	Given	20	20.0
	Not given	80	80.0
Diagnosis	Intrahepatic cholestasis of pregnancy	70	70.0
	Cholelithiasis	3	3.0
	Viral hepatitis	18	18.0
	HELLP syndrome	7	7.0
	Acute fatty liver of pregnancy	2	2.0
Mode of Delivery	Normal vaginal delivery	24	24.0
	Instrumental	7	7.0
	LSCS	69	69.0
Complications	Atonic PPH	16	16.0
	Abruption	6	6.0
Outcome	Term live babies	64	64.0
	Term IUD babies	6	6.0
	Preterm live babies	22	22.0
	Preterm IUD babies	3	3.0
	Early neonatal death	5	5.0
	Perinatal mortality	16	16.0
Baby birth weight (kg)	<1.5	11	11.0
	1.5-2.5	19	19.0
	2.5-3.5	63	63.0
	>3.5	7	7.0

In our study, all 100 patients had icterus, 80 had scratch marks, 13 had edema, 9 had ascitis, 5 had hepatomegaly and abdominal tenderness.

In our study, 81 patients had bilirubin <5 and 3 had bilirubin >16. SGOT and SGPT was < 200 in 65 patients and > 500 in 15 patients. ALP was < 400 in 65 and >800 in 15 patients.

Blood was given in 20 patients and 80 did not need any transfusion.

In our study, 70 patients were diagnosed as having intrahepatic cholestasis, 18 viral hepatitis, 7 as HELLP syndrome, 3 had cholelithiasis and 2 had acute fatty liver of pregnancy.

In our study, 24 pregnant females delivered vaginly, 69 by LSCS and 7 had instrumental deliveries. In our study, atonic PPH occurred in 16 patients and abruption occurred in 6 patients. In our study, 64 babies delivered were term live, 22 were preterm live, 9 were IUDs and 5 died in early neonatal period. The baby birth weight was 2.5-3.5kg in 63 (63%) followed by 1.5-2.5 in 19 (19%) patients. NICU admission was present among 23 babies, out of which 5 died.

Discussion

Majority of patients in our study were >30 years of age. We had 33 multies (33%) and 67 primigravidas (67%) women in our study which is comparable to a prospective study conducted by Mahajan N[7] in 2006 at this hospital in which 62.67% patients were primigravidas. Itching was the presenting symptom in majority of our patients followed by nausea vomiting. In study conducted by Pranathi Mitta, 59.52% patients had nausea, vomiting and yellowish discoloration of urine.[11]

In our study icterus was found in 100 (100%) of patients with scratch marks in 80 (80.0%) while in Paranathi study, icterus was present in 100% patients and scratch marks were present in 23.80% patients.[11] In our study, intrahepatic cholestasis of pregnancy was found in 70 (70%) of our patients, viral hepatitis in 18 patients (18%) with one patients each having cholelithiasis and acute fatty liver of pregnancy and in 7 women (7%) the jaundice was due to HELLP syndrome. According to a study conducted by yasmeen jan[8] at LD Hospital Srinagar in 2012, incidence of viral hepatitis was present in 0.8 per 1000 pregnant women while in a study conducted by Mohd sultan khuroo[9] in 1981 in Srinagar, incidence of viral hepatits in pregnancy was 17.3% but this study was conducted during period of epidemics of HEV in the state. According to study conducted by Meena Satia, intrahepatic cholestasis of pregnancy was present in 24% of patients, viral hepatitis in 62% of patients and

HELLP Syndrome in 14% of patients.[10] Most common cause of jaundice being intrahepatic cholestasis of pregnancy in our study can be due to major chunk of our population being meat eaters, high prevalence of IVF pregnancies and elderly primigravidas. In our study, there was LSCS in 69 (69.0%) patients followed by normal vaginal delivery in 24 (24%) patients, there were only 7 (7%) instrumental delivery in our patients. According to Mahajan study, 57.33% patients had normal vaginal delivery, LSCS was done in 38.67% patients and instrumental delivery in 4% of patients[7]. In our study, most of the babies delivered were term live babies in 64 (64%) patients, term intrauterine fetal death in 6 (6%) patients, preterm live births in 20 (20%) patients and preterm intrauterine death in 3 (3%) patients. According to study conducted by Pranathi Mitta, 61.5% babies were term live, 17.94% babies were preterm live, 17.94% were preterm IUDs, 10.2% were early neonatal deaths and 2.56% were term IUDs.[11] In our study, the baby birth weight was 2.5-3.5kg in 63 (63%) followed by 1.5-2.5kg in 19 (19%) patients. Perinatal mortality was present in 16% of babies. In study by Pranathi Mitta, 14 babies had birth weight of 2.5-3.5 kgs followed by 10 babies having birth weight of 1.5-2.5 kgs and perinatal mortality was 30.76%.[11]

Conclusion

Jaundice with pregnancy is a bad combination. It affects a small percentage of pregnant woman, yet is associated with high morbidity and mortality. In a country like India, beginning from health education to the pregnant mother regarding warning signs and [12]. immediate visit to the doctor, to medical personnel at primary health center for early transfer can go long way in lowering maternal and perinatal mortality and morbidity due to jaundice in pregnancy. Lastly, a team collaboration of obstetric, internal medicine, gastroenterology, and anesthesia and critical care is very much essential to combat complications of this condition and achieve a fruitful outcome.

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