



RETROSPECTIVE ANALYSIS OF CHOLESTASIS IN PREGNANCY AT URBAN TERTIARY CARE CENTRE, NORTH INDIA

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ABSTRACT **OBJECTIVE:** Maternal, fetal, and neonatal outcomes in parturient with intrahepatic cholestasis of pregnancy (ICP) have been retrospectively documented. We aimed to present pregnancy outcomes of parturient with ICP who underwent delivery. The study was conducted during a 6-month period in urban tertiary center, North India.

METHODOLOGY AND RESULTS: Study was carried out in Chandan hospital, Lucknow a tertiary care centre after approval from the ethical committee of the institute. Total opd patient from July to December 2021 were 2024 in which 39 patients of intrahepatic cholestasis of pregnancy were recruited in our study who had taken antenatal care in our centre and delivered here, 45 patients were still in follow up and 10 patients drop out from study. We found 4.6% incidence of cholestasis in our centre which is quite high. 27 (69.2%) patients were delivered by cesarean section in which 7 (25.9%) had LSCS due to non reassuring NST and others had due to NPOL, previous lscs not willing for trial of labor or cesarean on maternal request etc. 12(30%) cases had vaginal delivery, we found meconium in 5(18.5%) who underwent LSCS. 5(18.5%) babies required NICU admission due to hypoglycemia and neonatal jaundice. No neonatal mortality was coocurred.

CONCLUSION: Antenatal testing and timed intervention of patients with intrahepatic cholestasis of pregnancy is associated with a reduction of the previously reported adverse perinatal outcomes.

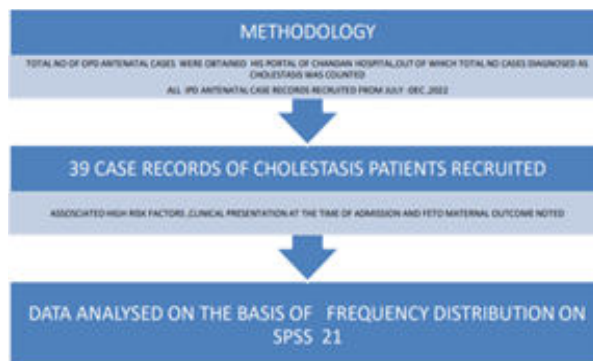
KEYWORDS : Cholestasis, Parturients, Perinatal Outcome

INTRODUCTION

Cholestasis of Pregnancy has become very common in India. The reported incidence is highest in Chile and Bolivia(5-15%) while in western countries like North America incidence is less than 1%. In India still no reliable statistics available for the incidence but still in some studies it is 1.2-1.5%.[1] The biggest problem with this disease is the pruritus which is troublesome for the mothers and with increased risk of post-partum hemorrhage, high risk of sudden intrauterine fetal demise, passage of meconium and sudden fetal distress. Various associated medical comorbidity in pregnancy needs to be studied to know its association with cholestasis in pregnancy. Though its common clinical presentation is itching without rash in third trimester but its presentation in Indian race needs to be studied further. With this concept in mind a retrospective analysis to study the incidence of cholestasis and its fetomaternal outcome has done in our study and its association with different risk factors were studied.

METHODOLOGY

It is a retrospective analysis of case records of known case of cholestasis from July to December, 2021 after approval from Ethical committee of Chandan Hospital and MRD Department.



RESULTS AND DISCUSSION

Total no of OPD antenatal cases coming to Chandan hospital were 2024 from July-Dec, 2021. Amongst these total OPD antenatal cases, 39 cases got admitted with cholestasis for different indications and rest 45 are still in follow-up and 10 were drop out case. According to our study incidence of cholestasis at our urban Centre is 4.6% which is quite high than reported western countries. According to a review article by Sangita et al (2013) the reported incidence has wide geographical difference varying from 0.2-2.4%.

Mean age in our study population was 29 years; age group varying from 18-35 years. Similar to our study Sita et al (2016) had maximum patients in this age group. The total no of cases diagnosed with cholestasis and admitted to our side were 39, out of which 30%(12) delivered vaginally and around 69.2%(27) cases were delivered by LSCS. Similar to our study Amita Gupta et al (2009) in their study reported cesarean section rate to be 66%.

Out of these 27 cases terminated by LSCS 7(25.9%) cases got operated because of Non-reactive NST and rest of the 20 cases were operated for different indications like previous LSCS not willing for trial of labour, non-progress of labour, cesarean on maternal request etc. Meconium was noted in 5(18.5%) cases, whereas Amita Gupta et al noted abnormal cardiotocography in 7.2% and meconium in 9.6%.

There were 5(18.5%) NICU admissions among which 3 were for neonatal jaundice and 2 for hypoglycemia but no perinatal mortality was seen. Sita Pokhrel et al (2016) from Nepal reported intensive care requirement of around 48.7% for neonates.

According to the study by Michelle Rook et al (2012) vaginal delivery rate and cesarean section rates were 84% and 14.9%. This difference in our results might be due to increasing incidence of pregnant women with previous delivery by lscs giving negative consent for trial of labour and increased rate of associated comorbidities in our study population.

Out of these 27 cases 7 cases had PPH which was managed medically followed by uterine tamponade. These cases were transfused 1-2 units of PRBC post-delivery. According to the study done by Sita Pokhrel et al (2016), PPH was found in 11.5% of the cases in their study group.

All these cases were terminated between 36-37 completed weeks. All of these cases had clinical feature of pruritus without rashes with the onset in third trimester, although there were 2 cases which had itching since 2nd trimester. All the cases were given ursodeoxycholic acid in the dose of 300 mg bid to 450 mg bid and itching responded well on the medication.

90% cases (35) had raised bile acid more than or equal to 5 micromol/l and all cases has deranged SGOT and SGPT. Although the bile acid levels were below than 10 micromol/l in many cases but all the alternative diagnosis were excluded in them, and this finding give an insight to establish a new threshold for Indian races.

Many high-risk factors have been found associated with these 39 cases which are as follows:

TABLE 1: Distribution of High risk factors in patients of cholestasis

Risk Factor	N(number)	Percentage
PPROM	3	7.6
Preterm Labour	4	10.2
Hypothyroidism	16	41
GDM	15	38.4
PIH	7	17.9
FGR	6	15.3
Oligohydramnios	3	7.6
Twin gesation	2	5.1
Previous LSCS	7	17.9

It was found that maximum no of patients with cholestasis had hypothyroidism(41%) followed by GDM(38.4%).This relationship needs to be studied further for genetic correlation.

CONCLUSION

Incidence of Cholestasis is rising day by day and so its associated problems of perinatal morbidity. Antenatal testing and timed intervention of patients with intrahepatic cholestasis of pregnancy is associated with a reduction of the previously reported adverse perinatal outcomes. More studies need to be done to further understand the demographic factors associated with it and causal relations with other endocrinological disorders.

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