



## TO STUDY THE MATERNAL AND FETAL OUTCOME IN OBSTETRIC CHOLESTASIS :- A PROSPECTIVE STUDY

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**ABSTRACT** **Background** – Obstetric cholestasis is most common causes of liver diseases in pregnancy. This study was done to study maternal and fetal outcome in obstetric cholestasis.

**Methods** – This was a prospective study done in Patna Medical College and Hospital from May 2019 to May 2020 in 100 pregnant ladies suffering from pruritus and having obstetric cholestasis. They were followed up and maternal fetal outcome recorded.

**Results** – The mean gestational age of onset of Pruritus was 32 weeks. Maternal complication in form of sleep disturbances (56%) coagulation abnormality (18%), PPH (9%), LSCS (60%) were found. Fetal Outcome were LBW (12%), IUFD (2%), Meconium stained liquor(20%), NICU admission (17 %).

**Conclusions**- Early diagnosis and treatment may improve maternal and fetal outcome.

**KEYWORDS** : Obstetric Cholestasis, Pruritus

**INTRODUCTION –**

Obstetric cholestasis is also known as intrahepatic cholestasis of pregnancy. It is a liver disease of pregnancy characterized by pruritus in the absence of a skin rash with abnormal liver function tests. It occurs mainly in second and third trimester of pregnancy and disappear spontaneously after delivery.

The pathophysiology of obstetric cholestasis is poorly understood. The etiology of obstetric cholestasis is a combination of hormonal, genetic and inflammatory factors that impair bile secretory function, which increases maternal serum bile acid and elevates the reduction of liver enzymes. The incidence varies between 0.4 and 15% in different countries and populations. Obstetric cholestasis can be complicated by fetal distress, preterm labor and sudden intrauterine death. It is also associated with significant maternal morbidity. In our study we find the outcome of obstetric cholestasis in both mother and the fetus.

**MATERIALS AND METHOD:**

This was a prospective study done in Patna Medical College and Hospital from May 2019 to May 2020 in 100 pregnant ladies suffering from Pruritus and having obstetric cholestasis was made with symptom of pruritus, worsening at night with raised liver enzymes (ALT and AST) with or without elevated serum bilirubin level. 100 cases were studied in this study for monitoring clinical nature of the disease and maternal and fetal outcome. LFT was repeated every 2-4 weeks interval as required. Coagulation profiles were also detected. All patients received in the study period were given ursodeoxycholic acid 300-600mg/day in divided doses for the rest of the antenatal period.

Maternal outcome was studied in view to insomnia due to severe pruritus, deranged coagulation profile (PT), mode of delivery, preterm labor, preterm pre labor rupture of membrane and PPH.

Fetal outcome was studied in view of prematurity; fetal distress; meconium stained liquor; low birth weight; IUGR; NICU admission and IUFD/still born.

**Table – 1 :- Patients Characteristics**

|                                | Minimum-Maximum | Mean SD    |
|--------------------------------|-----------------|------------|
| Age (Years)                    | 19-38           | 26.33 4.05 |
| Gravidity                      | 1-6             | 1.23 2.25  |
| Onset time of Pruritus (Weeks) | 26-37           | 32.25 3.5  |

**Table – 2 :- Biochemical Characteristics Of Patients**

|                         | Minimum-Maximum | Mean SD        |
|-------------------------|-----------------|----------------|
| SGOT IU/L               | 35-600          | 176.12 109.5   |
| SGPT IU/L               | 38-600          | 188.562 116.78 |
| Serum Bilirubin (mg/dl) | 1.2-4.2         | 1.7 1.26       |

**Table – 3 :- Maternal Outcome In Cholestasis Of Pregnancy**

| Maternal Outcome             | Number | Percentage |
|------------------------------|--------|------------|
| Sleep Disturbance            | 56     | 56         |
| Deranged Coagulation Profile | 18     | 18         |
| PPH                          | 9      | 9          |
| PROM                         | 7      | 7          |

**Table – 4:- Prenatal Outcome In Cholestasis Of Pregnancy**

|                            | Number | Percentage |
|----------------------------|--------|------------|
| Preterm Labor              | 4      | 4          |
| PPROM                      | 4      | 4          |
| Meconium Stained Liquor    | 20     | 20         |
| Fetal Distress             | 13     | 13         |
| LSCS                       | 60     | 60         |
| Instrumental Delivery      | 6      | 6          |
| Neonatal Nursery Admission | 17     | 17         |
| IUFD                       | 2      | 2          |
| Low Birth Weight           | 12     | 12         |

**RESULTS :-**

A total number of 100 patients were included in the study. Mean age of the patients was 26.33, In which primigravida was 58 %. Main symptom was pruritus in most of the patients (78%). Patients of obstetric Cholestasis was treated with ursodeoxycholic acid had relief of symptoms. Mean gestational age of onset was 32.5 weeks (Table-1). Table - 2 shows biochemical characteristics of patients. SGOT, SGPT and Alkaline phosphate was raised in most of the patients Serum Bilirubin was raised in 18% of the patients.

Table – 3 shows maternal outcome in cholestasis of pregnancy. Sleeping deprivation in form of insomnia was found 56% of patients due to pruritus. Deranged coagulation profile(DIC, Pro Thrombin time) was present in 18% of patient. These patient was treated with fresh frozen plasma and Vitamin K.

Post Partum hemorrhage was found in 9% of patient. PROM was present in 7 percent of patients.

Table – 4 shows prenatal outcome in cholestasis of pregnancy. Spontaneous delivery was found in 20-25% of patients. In 80% of the patients labor was induced at 37-38 weeks. The rate of LSCS was high(60%). Instrumental delivery was seen in 6% of patient. Most common indication of LSCS was fetal distress. Preterm labor was present in 4% of patients. PPRM was also seen in 4% of patients.

**DISCUSSION :**

The aim of study was to find the maternal and fetal outcome in obstetric cholestasis. The mean age was 26.3 years, this is similar to the results shown by Rashed S et al. (28 years 5.19) and Sosa S et al (29.2 6.8). In our study 58% are primigravida, padmaya et al found 71.8 % were primigravida in their study. The rate of induction of labor was 80 % in

our study, whereas Heinonen and Saarikoski found 12.5 % had undergone labor induction for cholestasis of Pregnancy. [The rate of LSCS was 60% in our study. Kenyon AP et al found caesarean section rate 36% Rasheed S et al reported spontaneous delivery rate of 80% with emergency LSCS rate of 16.7 % and elective LSCS rate of 3.3%.

Obstetric Cholestasis was associated with increased risk of PPH. Dang A et al (29.7%) reported increased incident of PPH as a result of Mal absorption of Vitamin K leading to DIC. Kenuon AP et al found a high incidence of PPH in obstetric cholestasis who did not received vitamin K compared to those who did 45% Vs 12%. Here 18 patient had deranged coagulation profile and among them 9% patients had PPH.

Cholestasis of pregnancy was associated with increased risk of Meconium staining of amniotic fluid (20%), fetal bradycardia (13%), NICU stay (17%), Low Birth weight (12%).

#### CONCLUSION:

In Our study rate of cesarean section was high. Pruritus decreased with urodeoxycholic acid. Meconium stained liquor and NICU admissions are also increased.

So Early diagnosis and close monitoring improve maternal and fetal outcome.

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