

# A Case Report of Recurrent Intrahepatic Cholestasis of Pregnancy

Dr. Ayeesha Thasnim<sup>1</sup>, Dr. Vidhya Selvam<sup>2</sup>

<sup>1</sup>Junior Resident, Department of OBG SBMCH

Email: [ayeasha.dr\[at\]gmail.com](mailto:ayeasha.dr[at]gmail.com)

<sup>2</sup>Associate Professor, Department of OBG, Sree Balaji Medical College and Hospital

Corresponding Author Email: [vidhyarajan3\[at\]gmail.com](mailto:vidhyarajan3[at]gmail.com)

*Running Title:* Case Report of Recurrent Intrahepatic Cholestasis of Pregnancy.

## 1. Introduction

Intrahepatic cholestasis of pregnancy (ICP) also known as Obstetric cholestasis, Usually presents after 28 weeks of gestation. ICP is a cholestasis disorder characterized by

- 1) Pruritus more common in the third trimester, without any primary skin lesions,
- 2) elevated fasting serum bile acids > 10µmol / L (and elevated serum transaminases),
- 3) Relief of signs and symptoms spontaneously within two to three weeks after delivery, and iv) In absence of other disease which cause jaundice and pruritus.

ICP affects approximately 0.2–2% of pregnant women worldwide. ICP is more common in women with history of gall stone, hepatitis C infection, multifetal pregnancy, in vitro fertilization treatment. It has good maternal prognosis but can result in adverse fetal outcomes like meconium - stained liquor, fetal bradycardia and fetal loss. Timely diagnosis and treatment is needed in order to prevent fetal complications. Ursodeoxycholic acid (UDCA) is the mainstay of treatment.

## 2. Case Report

A 25 year old, Mrs. X, G2P1L1 who is 32 weeks of gestation, married since 4year, housewife by occupation. Patient was admitted in Sree Balaji Medical College and hospital with the chief complaints of itching all over the body most commonly in abdomen, palms and soles since 2 weeks which was intense during night time. Able to perceive fetal movements well. No H/o allergy. No previous H/o Jaundice. No complaints of vomiting, abdominal pain and diarrhea.

Past obstetric history - H/O obstetric cholestasis in previous pregnancy diagnosed at 32 weeks of gestational age, Emergency LSCS done in view of meconium stained liquor at 36 weeks+2days. Postnatal period uneventful. Baby alive and healthy.

IN present pregnancy - On examination patient had no pallor/no icterus, all investigations were done which showed normal bilirubin, elevated bile acid and normal liver enzymes SGOT and SGPT suggestive of intrahepatic

cholestasis of pregnancy. Patient was started on Ursodeoxycholic acid for symptomatic improvement. Maternal and fetal monitoring was done closely during course of hospitalization.

At 36 weeks plus 4 days NST suggested fetal distress hence the patient was taken up emergency cesarean section. Alive late preterm female baby was delivered. Postpartum period were uneventful. Hence patient discharged. Repeat Liver Function test done 2weeks postpartum found to be normal.

### Pathogenesis and Etiology:

Pruritus is caused due to bile acid deposition in the subcutaneous tissues and skin.

The exact etiology is unknown but theories include:

- 1) A defect in biliary transport of bile secretion.
- 2) Receptor changes affecting detoxification of bile acids.
- 3) A possible link to maternal estrogen and progesterone levels.
- 4) Mutation of the ABCB4 gene associated with progressive familial intrahepatic cholestasis.
- 5) Some drugs like Azathioprine following renal transplantation interferes with the canalicular transport of bile acids.

### Clinical Features

The most common symptom are itching or pruritus

- 1) Itching that is intense in the evening
- 2) Elevated Liver function test (serum bile acid and transaminase)
- 3) Itching that does not respond to anti - histamines
- 4) Dark coloured urine
- 5) Pale stools
- 6) Fatigue
- 7) Nausea
- 8) Loss of appetite
- 9) Jaundice
- 10) Pain in right upper quadrant

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### 3. Diagnosis

Liver function tests, including serum bile acid levels, AST, ALT, Alkaline phosphatase, serum bilirubin should be done for women presenting with pruritis.

Other causes of cholestasis is liver injury which is drug induced, viral hepatitis and autoimmune liver disease which should be ruled out to make the diagnosis.

Coagulation profiles should be checked in women with ICP along with steatorrhea (fatty stools), due to risk of malabsorption of fats and fat - soluble vitamins.

To rule out other causes of cholestasis, Liver ultrasound is performed. Gallstones, with or without symptoms are reported in up to 13% of women with ICP.

#### Maternal Risk:

- Premature labor
- Intense and debilitating itching
- Deranged clotting

#### Fetal Risk:

- Fetal distress
- Meconium aspiration syndrome
- Respiratory distress syndrome
- Stillbirth

#### Management:

The aim of management is to reduce maternal symptoms and fetal complications

#### Drugs:

- 1) Ursodeoxycholic acid (UDCA), It lowers serum levels of ethinyl - oestradiol 17 $\beta$  - glucuronide, a major cholestatic metabolite of oestrogen, Dosage - 10 to 15mg/kg/day
- 2) Antihistamines for symptomatic relief of pruritis
- 3) Corticosteroids - Dexamethasone 12mg
- 4) Cholestyramine - 8 to 16 g/day in divided doses.
- 5) Vitamin K

#### Early Delivery:

The majority of IUPD occurs after 37 weeks of gestation. Therefore delivery is recommended not later than 37 to 38 weeks of gestations

#### Prognosis

ICP does not cause permanent hepatic damage. Recurrence of ICP is about 45 to 70% of cases. Progesterone only contraception is recommended in case of ICP.

### 4. Conclusion

Intrahepatic cholestasis of pregnancy usually present in third trimester with pruritis and with elevated serum bile acid levels. It is associated with perinatal morbidity and mortality hence the baby should be delivered at 37 weeks of gestation. Recurrence is common in subsequent pregnancy therefore timely diagnosis and treatment is necessary to prevent perinatal morbidity and mortality.

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