



When Itching Signals Danger: A Detailed Case-Based Review of Intrahepatic Cholestasis of Pregnancy

Introduction

Pruritus during pregnancy is a common symptom, but in certain cases it may indicate significant hepatobiliary pathology. Intrahepatic cholestasis of pregnancy (ICP) is a pregnancy-specific liver disorder characterized by pruritus and biochemical abnormalities, and is associated with adverse fetal outcomes, including stillbirth. Early recognition and appropriate management are essential.

Case Presentation

Patient Information

A primigravid patient in the third trimester presented with generalized itching.

(All personal identifiers have been removed to maintain confidentiality.)

History

History of Present Illness

- Generalized itching for 2 days
- Initially involved **palms and soles**, later became generalized
- Symptoms were **more severe at night**, disturbing sleep
- **No associated rash**

Associated symptoms:

- Dark-colored urine (+)
- No clay-colored stool
- No fever
- No jaundice
- No abdominal pain or vomiting
- No vaginal bleeding
- Fetal movements initially normal

Antenatal History

- Regular antenatal care since second trimester
- No previous antenatal complications
- Routine antenatal investigations were within normal limits

Past History

- No history of:
 - Liver disease
 - Skin disorders
 - Hypertension or diabetes
- No regular medications
- No known drug allergies

Family & Surgical History

- No relevant family history
- No prior surgical history

Examination

General Examination

- Afebrile
- No pallor
- No jaundice
- Blood pressure: within normal limits
- Pulse rate: normal

Systemic Examination

- Cardiovascular system: normal
- Respiratory system: normal

Abdominal Examination

- No surgical scars
- No dilated veins
- **Scratch marks present over trunk**
- No primary skin lesions or rash

Obstetric findings:

- Fundal height consistent with gestational age
- Symphysis-fundal height appropriate
- Fetal lie: longitudinal
- Fetal heart sound: present, regular (~135/min)
- No uterine tenderness

Investigations

Initial Laboratory Results (At First Presentation)

Test	Result	Reference Range
ALP	155 U/L	35–104
ALT	59 U/L	<33
AST	40 U/L	<32
Total Bilirubin	0.6 mg/dL	0.1–1.2

Interpretation:

- Mild elevation of liver enzymes
- Bilirubin within normal limits

Serum bile acid testing was requested but **not available**.

Follow-Up Investigations (After Symptom Persistence)

Test	Initial	Follow-up
ALP	155	434
ALT	59	106
AST	40	61
Total Bilirubin	0.6	1.4

Interpretation:

- **Progressive rise in liver enzymes**
- Mild increase in bilirubin

Subsequent Investigations

Test	Initial	Follow-up	Later
ALP	155	434	358
ALT	59	106	92
AST	40	61	38
Total Bilirubin	0.6	1.4	1.1

Interpretation:

- Partial improvement with treatment

- Persistent biochemical abnormality

Other Laboratory Results

- Electrolytes: within normal limits
- Renal function: normal
- Coagulation profile (PT/INR): normal
- Complete blood count: within normal limits

Ultrasound Findings

- Single viable intrauterine pregnancy
- Estimated fetal weight appropriate for gestational age (~2.7 kg at 36 weeks)
- Amniotic fluid index within normal range

Diagnosis

Intrahepatic cholestasis of pregnancy

Management

Initial Treatment

- Ursodeoxycholic acid
- Antihistamines
- Topical calamine lotion
- Antenatal corticosteroids

Clinical Course

- Patient initially declined admission despite counseling
- Symptoms improved temporarily
- Re-presented with **reduced fetal movements**

Definitive Management

- Admission for monitoring
- Emergency cesarean section performed

Outcome

- Healthy neonate delivered
- Good Apgar scores
- No intraoperative complications

Postpartum:

- Maternal itching resolved
- Liver function tests returned to normal within a few days
- Patient discharged in stable condition

Discussion

Clinical Significance of ICP

- Presents with **pruritus without rash**
- Easily overlooked or misdiagnosed
- Associated with **serious fetal complications**

Pathophysiology

- Hormonal influence (estrogen, progesterone)
- Genetic predisposition
- Impaired bile acid transport

Clinical Features

- Severe pruritus (palms & soles)
- Worse at night
- No primary skin lesions
- Dark urine
- Rare jaundice

Diagnosis

- Clinical suspicion
- Elevated serum bile acids (*gold standard*)
- Elevated liver enzymes

Fetal Risks

- Stillbirth
- Preterm delivery
- Fetal distress
- Meconium-stained liquor

Important Clinical Insight

- Risk increases significantly when bile acids $>100 \mu\text{mol/L}$
- CTG and ultrasound **cannot reliably predict fetal demise**

Management Principles

- Symptomatic relief
- Monitoring of fetal movements
- Planned early delivery depending on severity

Key Learning Points

- Pruritus in pregnancy must be carefully evaluated
- Absence of rash is a key diagnostic clue
- ICP requires **high clinical suspicion**
- Early intervention reduces fetal mortality

Conclusion

This case highlights the importance of recognizing intrahepatic cholestasis of pregnancy as a potentially serious condition. Accurate diagnosis and timely management are essential to prevent adverse fetal outcomes.

References

- Green-top Guideline No. 43 (2022)
- Handbook of Obstetric Medicine