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Cholestasis of Pregnancy

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Confirm the diagnosis of cholestasis[1]

Initial management

- Take a detailed history, perform a physical examination[1,2]
- Exclude other dermatologic diagnoses[3]
- Confirm gestational age and fetal wellbeing
- Ultrasound for estimated fetal weight (EFW)
- √ baseline bile acids and liver function tests

Unable to confirm diagnosis

- Regular outpatient visits q 1–2 weeks
- Kickcounts to confirm fetal wellbeing[4]

Clinically stable

Continue outpatient management

Continued suspicion for cholestasis

- Regular outpatient follow-up
- Serial ultrasound for EFW
- *Consider serial blood testing for serum bile acid levels*

Diagnosis confirmed

- Regular outpatient visits q 1–2 weeks
- Kickcharts to confirm fetal wellbeing[4]
- Serial ultrasound for EFW, amniotic fluid volume assessment
- *Consider serial blood testing for serum bile acid levels*

Treatment with UCDA[5]

Initiate regular (weekly or twice weekly) fetal surveillance after 32 weeks of gestation

Persistent symptoms

Proceed with delivery[6]

- Deliver at or beyond 36 weeks
- Non-reassuring fetal testing
- Neonatology consult, if indicated
- **Administer antenatal corticosteroids, if appropriate**
- Cesarean delivery should be reserved for the usual obstetric indications

Asymptomatic[6]

- Reassuring fetal testing
- Continue regular outpatient follow-up and fetal surveillance
- Consider routine induction of labor at 38–39 weeks (earlier if fetal lung maturity can be verified)

1. Cholestasis of pregnancy (also referred to as intrahepatic cholestasis of pregnancy (ICP)) represents a clinical syndrome that results from a complex interplay between reproductive hormones, biliary transport proteins, and genetic factors that contribute to an inability to adequately metabolize and excrete bile acids during pregnancy.

2. Risk factors for cholestasis include cholestasis in a prior pregnancy (recurrence rate is >90%), multiple gestation, pregnancies conceived through IVF, and underlying liver, renal, and/or bowel disease.

3. Cholestasis of pregnancy is a clinical/biochemical diagnosis. Patients typically present with complaints of acute onset of severe pruritus in the latter half of pregnancy, usually >30 weeks' gestation. Physical examination may reveal jaundice and/or skin excoriations, but is often unremarkable. Bile acids will usually be elevated at values >10–14 micromoles/L (6–10 micromoles/L in the fasting state). Bile acids are derived from hepatic cholesterol metabolism. Cholic and chenodeoxycholic acid are the dominant fractionated constituents. Liver function tests, specifically serum transaminases, will frequently be elevated.
4. The differential diagnosis of cholestasis includes
    1. skin allergy,
    2. parasitic infections,
    3. systemic lupus erythematosis (SLE),
    4. syphilis,
    5. viral/drug-induced hepatitis,
    6. preeclampsia, metabolic disorders, and
    7. gall bladder diseases.

1. Cholestasis of pregnancy is associated with adverse perinatal outcome, including increase perinatal mortality (unexplained stillbirth), premature birth, and meconium passage and aspiration. Many of these adverse outcomes are directly associated with elevated bile acids, particularly with values ≥40 micromol/L.
2. The association with IUGR is less clear. For these reasons, regular (weekly or twice weekly) fetal surveillance is recommended after 32 weeks of gestation.
3. However, it is not clear whether fetal testing is associated with an improvement in perinatal outcome.
4. Ursodeoxycholic acid (UDCA)) has become the preferred therapeutic intervention for ICP.
5. Although treatment with UDCA has not been conclusively shown to improve perinatal outcome, it does significantly reduce pruritis and normalize LFTs.
6. The recommended initial dose of 300 mg TID can be upward adjusted as needed to a maximum of 2 gms/day in divided doses.
7. Other agents that have been used for symptomatic relief include
   hydroxyzine (25–50 mg/day, which may have significant somnolent side effects) and
   cholestyramine (a foul-tasting resin that binds bile acids in the gastrointestinal system).
8. Response to such medications may take several weeks and is highly variable.
9. Alternative treatment options that are less well established include ultraviolet light, rifampicin, phenobarbitone, epomediol, or S-adenosyl-L-methionine.

1. In contrast to the effects on the fetus, cholestasis of pregnancy is not associated with adverse maternal outcome.
2. Many patients remain symptomatic despite treatment and live with anxiety relative to the small risk of fetal death, which is seen most commonly >38 weeks. As a consequence, some consensus bodies recommend delivery at 37–38 weeks even with reassuring fetal testing. Earlier delivery is reserved for fetal indications or maternal jaundice despite treatment.
3. Mode of delivery should be governed by routine obstetric indications. Patients should be aware that symptoms generally resolve in the immediate postpartum period, but recurrence in future pregnancies can be as high as 90%.