Management of Itching in Pregnancy and Obstetric Cholestasis

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AIM OF GUIDANCE

To give guidance to obstetricians and midwives on the management of women with Obstetric Cholestasis (OC).

INTRODUCTION

Pruritus in pregnancy is common, affecting 23% of pregnancies, of which a small proportion will have Obstetric Cholestasis. Obstetric Cholestasis, sometimes referred to as Intrahepatic Cholestasis of Pregnancy (ICP), is a multifactorial condition of pregnancy characterised by pruritus and abnormal liver function tests (either raised ALT or Bile acids or both) both resolving completely after delivery. Itching that involves the palms and soles of the feet, is particularly suggestive of OC.

The clinical importance of OC lies in the potential fetal risks, which may include spontaneous preterm birth, iatrogenic preterm birth and fetal death. There can also be maternal morbidity in association with the intense pruritus and consequent sleep deprivation (RCOG 2011).

Risk Factors

The prevalence of OC is approximately 0.7% in the UK (RCOG). The following factors are associated with an increased risk;

- A personal or family history of obstetric cholestasis
- Multiple pregnancy
- Carriage of hepatitis C
- Presence of gallstones.
- Women of Indian and Pakistani descent have a twofold increase in risk.

Initial assessment for diagnosis of Obstetric Cholestasis

Initial assessment, blood tests and diagnosis is made in the ADAU. Women over 20 weeks gestation are to be tested, under 20 weeks women are to observe symptoms and see GP if concerned:

A detailed history should be taken including the following:

- Unexplained pruritus
• Usually no rash (excoriations only)
• Pale stools, dark urine, jaundice
• Family history or personal history of cholestasis (or gallstones)
• Multiple pregnancy & Hepatitis C (earlier onset before 26 weeks)
• Drug history- herbal remedies or recent antibiotics.

A full antenatal examination should be performed including:
• Abdominal palpation and fundal height measurement
• Fetal heart auscultation
• Check for presence of normal fetal movements
• Blood pressure and maternal pulse
• Urinalysis

**Blood Tests**

• FBC
• Liver function tests (LFTs). Pregnancy specific reference range which is 20% lower than non pregnant range should be used.
• Bile acids.
• Clotting screen

<table>
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<th>Clinical Chemistry Test</th>
<th>Normal level</th>
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<tr>
<td>Bile Acid</td>
<td>&lt;14 umol/L</td>
</tr>
<tr>
<td>ALT (Alanine transaminase)</td>
<td>&lt;33 iu/L</td>
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If results are normal but unexplained pruritus persists, bloods should be repeated **fortnightly** until LFT/bile acids become abnormal or symptoms stop. (NICE 2015)

Aqueous menthol 1% cream (dermacool) may be given to alleviate symptoms. If severe a TTO of chlorphenamine (piriton) 4mg can be given (Can have up to 6 times a day).
**Diagnosis**

Obstetric Cholestasis alone is not an obstetric emergency. Therefore, if a woman complains of itching in the absence of other symptoms (i.e AFM), it is perfectly acceptable to arrange an appointment via ADAU Monday to Friday. Urgent out of hours assessment is **not** required for itching alone.

If ALT and/or bile acid levels are raised then a provisional diagnosis of OC should be made and woman should be made an appointment to ADAU for further investigations including 2\textsuperscript{nd} line bloods and Obstetric Consultant antenatal clinic appointment can be arranged.

**2\textsuperscript{nd} line bloods**

- Viral screen for Parvovirus, Epstein Barr and cytomegalovirus and hepatitis C if not checked at booking.
- Liver antibodies in particular AMA for primary biliary cirrhosis
- Gamma GT
- Clotting screen initially as a baseline.
- Liver ultrasound to be arranged if bilirubin raised.

There is no need to repeat the first line bloods again if done a few days before.

Forms to complete/bottles to use.

**Microbiology form.**

2 yellow top bottles
- Parvovirus
- EBV screen
- CMV screen

Normal white blood form.

1 blue bottle
- Clotting screen

2 yellow top bottles
- Gamma GT
- AST
- Liva/AMA
- Hepatitis C (if not done at booking).

Once second line bloods are completed full antenatal check to be completed.

**Associated Risks**

**Fetal**
- Spontaneous or iatrogenic prematurity
- Foetal intracranial bleeding
- Meconium stained amniotic fluid
- Intrapartum fetal distress

**Maternal**
- Postpartum Haemorrhage secondary to Vitamin K deficiency
- Chronic sleep deprivation

**Monitoring of Obstetric Cholestasis**

Women diagnosed with obstetric cholestasis should be transferred to Consultant led care and advised to give birth in an Obstetric Unit.

**Maternal Monitoring;**
- Measure LFT, FBC, U&E and bile acids weekly. (N.B: Currently bile acid specimens from patients who are on URSO treatment are not suitable for the assay kit that is available within the laboratory. We are sending these specimens, but please be mindful of this).
- Weekly blood pressure and urine.

**Fetal Monitoring;**
- Fetal auscultation as part of the antenatal check.
- Maternal monitoring of movements.
- Ultrasound and CTG are not reliable methods for preventing fetal death in OC and are not necessary unless other indications for monitoring exist.
Continuous fetal monitoring in labour should be offered.

No specific method of antenatal fetal monitoring for the prediction of fetal death can be recommended. Ultrasound and cardiotocography are not reliable methods for preventing fetal death in obstetric cholestasis.

The current additional risk of stillbirth in obstetric cholestasis above that of the general population has not been determined, but is likely to be small.

**Treatment**

Although there is no current evidence that any specific treatment improves either maternal symptoms or neonatal outcomes, the following may be considered:

- **Topical emollients** - These are safe in pregnancy and clinical experience suggests that for some women they may provide slight temporary relief of pruritus. Aqueous cream and 1% menthol (Dermacool), Calamine lotion or diprobase can be offered.

- **Antihistamines** (e.g. chlorphenamine 4 mg prn or promethazine 25 mg at night) may help relieve pruritus and provide some sedation if needed.

- **Ursodeoxycholic Acid** commencing at 250 mg TDS increasing to a maximum dose of 500 mg TDS. This is a hydrophilic bile acid that decreases the hydrophobic hepatotoxic bile acids, and may reduce pruritus and abnormal liver function. Ursodeoxycholic acid is not licensed for use in pregnancy, but there are no reports of adverse fetal or maternal effects.

- **Vitamin K** (Water soluble). Only to be given after 34/40 and dependant on baseline coagulation screen. If diagnosed earlier than 34/40 repeat coagulation screen at 33/40 and if deranged commence vitamin K at 34/40. A discussion should take place with the woman regarding the use of vitamin K. The usual dose is 10 mg daily by mouth, aiming to improve both maternal and neonatal levels, which are assumed to be deficient, and therefore reduce postpartum haemorrhage and fetal or neonatal bleeding. The use of water-soluble vitamin K (menadiol sodium phosphate) 5–10 mg daily is indicated.
NB. Postnatal vitamin K must still be offered to the babies in the usual way.

**Timing of Birth**

Poor outcome cannot currently be predicted by biochemical results and decisions regarding timing of birth should not be based on results alone

- A discussion should take place with women regarding induction of labour (IOL). If the bloods are normal and symptoms are well controlled IOL should be arranged for 40/40. If the Bile acids are above 40 umol/L then IOL should be arranged for 37/40.
- Women should be informed of the increased risk of perinatal morbidity from early intervention.
- Women should be informed that the case for intervention (after 37+0 weeks of gestation) may be stronger in those with more severe biochemical abnormality (transaminases and bile acids).
- Women should be advised that there is currently no good evidence that induced early delivery affects the risk of stillbirth
- Women should be informed of the increased risk of maternal morbidity from intervention at 37/40 of gestation.
- Women should be informed of the inability to predict stillbirth if the pregnancy continues.

**Postnatal Management**

Postnatal resolution of symptoms and normalisation of LFTs is crucial in confirming the diagnosis of OC.
All women with provisional diagnosis of OC should have a repeat LFT two weeks after delivery, blood form to be given by postnatal ware foe U + E, LFT, FBC and Bile acids. Community midwife/GP to follow up, if first results abnormal keep checking
every 2 weeks until normal. (LFTs increase in the first 10 days of the puerperium). A discussion regarding future pregnancies and contraception should also be undertaken. If LFT’s/Bile acids are still abnormal after 8 weeks refer to gastroenterology team.

Women with OC should be advised:

- Advise women that there is a 10% risk of developing pruritus or hepatic impairment or both with oestrogen containing contraception.
- The recurrence rate in the following pregnancy is 40-90%
- There are no known developmental problems for the baby and no increased risk of developing neonatal jaundice.
**Flow chart for suspected obstetric cholestasis**

1. Woman presents with itching in pregnancy (No rash)

2. Refer to ADAU for assessment (Weekday no need to be seen out of hours as suspected OC is **not** an emergency situation).

3. Investigations:
   - LFT/U&E/ Bile acids/FBC
   - Fetal auscultation if not done (CTG if altered fetal movements)

4. **Normal blood results**
   - Reassure woman
   - If MLC, no need to transfer to CLC.
   - Repeat assessment in 2 weeks if symptoms persist.

5. **Abnormal blood results**
   - Typical history of pruritis without a rash
   - Abnormal ALT
   - Bile acid >14umol/L
   - Exclusion of other causes of abnormal liver function. Viral screen (2nd line bloods)
   - Liver scan if indicated.
   - Refer to CLC if MLC. If CLC ensure ANC Appt in place within the next 2 weeks.
ANTENATAL CARE

Consultant led care

Prescribe: topical emollients, Ursodeoxycholic acid, vitamin K, Antihistamines

Weekly LFT’s, Blood pressure, urine, check symptoms and medication review if needed.

Ultrasound and CTG are not necessary unless other indications to do so.

BIRTH

Should be in an obstetric unit

**Consider** IOL after 37+0 weeks gestation if bile acids above 40umol/L

40/40 if bloods normal.

Continuous fetal monitoring in labour

POSTNATAL FOLLOW UP

LFT’s 2 weeks after delivery to confirm diagnosis of OC, blood form to be given by postnatal ward for U+E, LFT, FBC and Bile acids. Community midwife/GP to follow up if abnormal recheck every 2 weeks.

Blood anomalies may be raised for longer with breast feeding.

If results remain abnormal after 8 weeks refer to specialist gastroenterology team.
References:


Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

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<th>Management of Itching in Pregnancy and Obstetric Cholestasis</th>
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<tr>
<td>Name(s) of Author:</td>
<td>Jayne Bowden, Midwife</td>
</tr>
<tr>
<td>Chair of Group or Committee approving submission:</td>
<td>Antenatal Forum</td>
</tr>
<tr>
<td>Brief outline giving reasons for document being submitted for ratification</td>
<td>For the care and management of pregnant women presenting with itching and / or diagnosed with Obstetric Cholestasis</td>
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<tr>
<td>Details of persons included in consultation process:</td>
<td>Dr Louise-Emma Shaw (Obstetric Consultant), Dr Chinley Ch’ng (Gastroenterologist)</td>
</tr>
<tr>
<td>Name of Pharmacist (mandatory if drugs involved):</td>
<td>Ann (Cath) Wilson</td>
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