

**MANAGEMENT OF OBSTETRIC CHOLESTASIS**

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## MANAGEMENT OF OBSTETRIC CHOLESTASIS

### 1 INTRODUCTION

Obstetric cholestasis is a multifactorial condition of pregnancy, characterised by pruritis in the absence of a skin rash with abnormal liver function tests (LFTs), neither of which has an alternative cause and both of which resolve after birth.

### 2 PURPOSE

This document sets out guidance on the diagnosis and management of obstetric cholestasis.

### 3 SCOPE

This guideline applies to all medical staff/midwives within the Hull & East Yorkshire NHS Trust.

### 4 DUTIES

The following section details staff duties and responsibilities for the implementation of this guideline. The following list is a guide only and is not exhaustive.

#### 4.1 Midwives

- To refer any women who present with itching with no other known cause for further review at the Antenatal Day Unit
- Ensure that bloods are obtained for LFT and Bile Acid at referral so results are available for review
- To manage women identified as having obstetric cholestasis according to their individual management plan identified by the obstetrician

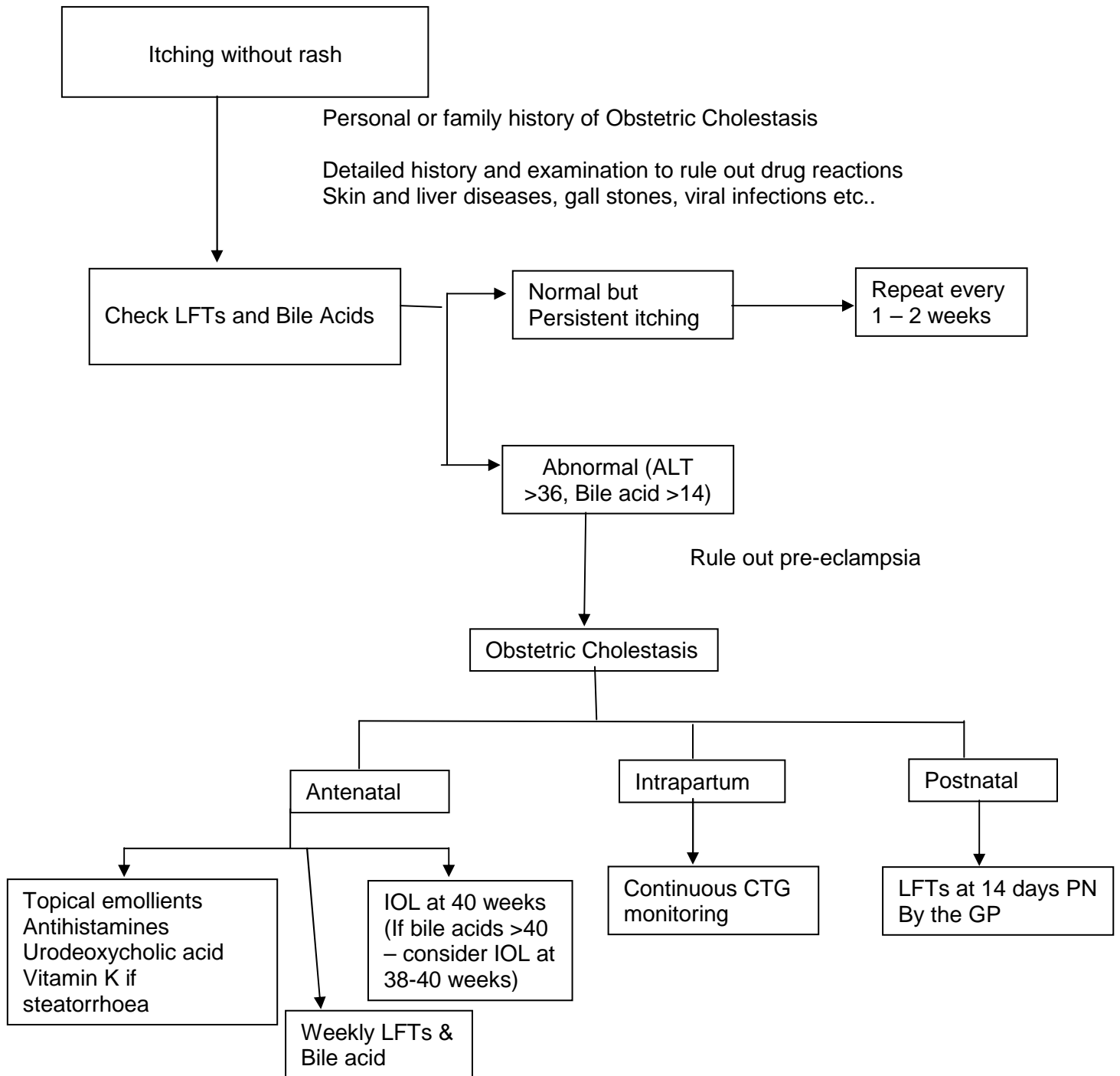
#### 4.2 Obstetrician

- To review women referred to them by the midwives with suspected obstetric cholestasis
- To devise a management plan in discussion with women identified with obstetric cholestasis for her management of pregnancy, and document this in her maternity records.

### 5 CONTENT/PROCESS

**See overleaf for flowchart on management of obstetric cholestasis, followed by further detailed information.**

## Flowchart on management of Obstetric Cholestasis



### 5.1 Occurrence of Obstetric Cholestasis

In the United Kingdom OC affects 7 in 1000 pregnancies and is more common in twin and triplet pregnancies. The number affected among South Asian women is slightly increased (1.5%) and much higher still in South American countries and in Scandinavia (over 2%).

## 5.2 Causes and Risk Factors

The exact cause is unclear however the cause is thought to be either:

- **Hormonal** – the raise in oestrogen and progesterone is thought to affect the liver by slowing down the rate of bile out from the bile ducts, some women are more susceptible to these hormonal effects.
- **Genetic factors** –An increased incidence in family members and ethnic differences point to the genetic factors. Recent genetic studies have identified gene variants of hepatocanalicular transport proteins which are involved.

*Whatever the underlying cause, pregnancy triggers the problem and following birth the condition clears and there are no long-term liver problems.*

### **Risk Factors:**

History in previous pregnancies (45-70%)

Family history (35%)

Multiple pregnancies

## 5.3 Diagnosis

### 1. History

Itching (pruritis) – It is the most common, typical and only symptom.

The pruritis of obstetric cholestasis is typically worse at night, is often widespread and may involve the palms of the hands and/or the soles of the feet.

Take a detailed history to exclude other causes of pruritis and abnormal LFT's like rash and other skin conditions, viral infections, drug reactions, gall stones, hepatitis and other liver disorders.

### 2. Skin Inspection

Dermatographia artefacta (skin trauma from intense scratching), which may be seen in obstetric cholestasis, should be differentiated from other common skin conditions such as eczema or atopic eruption of pregnancy. If rash is present, other diagnosis should be considered

### 3. Bloods

- Blood for LFT's and bile acid should be taken.
- For Alanine aminotransferase (ALT), and bilirubin, pregnant specific ranges should be used (20% lower than non-pregnant range). For our trust ALT>36 IU/L and bilirubin > 19 µmol/l in pregnancy is abnormal. Transaminases are non toxic markers and there is no relationship with fetal outcome.
- Bile acids- Levels >14 micromol/L support the diagnosis of OC. Levels>40 micromol/L anytime during pregnancy might be associated with significantly increased fetal complications. Inform consultant in these cases to individualise management and to consider IOL between 38-40 weeks
- If pruritis is unexplained and persistent with normal biochemistry LFT's should be repeated every 1-2 weeks
- Repeat LFT and bile acids weekly if abnormal. Exclude preeclampsia and other causes of abnormal LFT's by history and examination before diagnosis of OC is made.

#### 5.4 Risks Associated with Obstetric Cholestasis

- *Premature birth* - the incidence of premature birth is increased (7-25%) mostly because of iatrogenic reasons and smaller proportion due to spontaneous preterm labour
- *Meconium stained Liquor*- passage of meconium more common with preterm OC and in those with severe cholestasis (bile acids >40 µmol/l). Meconium stained liquor has been reported to be present in 44% of women with bile acid > 40 µmol/l.
- *Caesarean section* – rates are high (10 – 36%). The reasons include the OC itself, induction of labour, other obstetric indications, obstetrician/patient anxiety.
- There is little evidence for increased risk of PPH.
- High bile acid levels have been linked with preterm delivery, passage of meconium, abnormal CTG and asphyxial events, and these fetal risks increase significantly at bile acids levels > 40 µmol/L.
- The association of OC to perinatal mortality is uncertain; early studies reported an increase risk of stillbirth, but some recent studies have cast doubt on the magnitude of the increased risk. The current perinatal mortality rate (5.7/1000) for OC as reported by studies between 2001-2011 is comparable to that of the general population in England and Wales (5.4/1000 in 2008). Interpretation has been complicated by lack of consistency in diagnostic criteria, the impact of drug treatment and elective delivery, and more general reductions in perinatal mortality from improved obstetric care.

So in a hospital setting, the current additional risk of stillbirth in OC has not been determined but is likely to be small.

#### 5.5 Management

*Women with obstetric cholestasis should be booked in under consultant-led; team based care and give birth in a hospital unit.*

There is no evidence that any specific treatment improves fetal or neonatal outcomes. All such therapies should be discussed with the individual woman with this in mind.

- General measures which can be used to relieve the itch include: cool showers/baths, soaking feet/hands feet in cold water, wearing cool clothes – non synthetic.
- Topical emollients like Diprobase, calamine lotion and aqueous cream with menthol are safe but efficacy is unknown.
- Antihistaminics- chlorpheniramine, promethazine may provide some welcome sedation at night but do not have a significant impact on pruritis.
- Ursodeoxycholic Acid – It improves pruritis and LFTs in OC but there is lack of data regarding protection against stillbirth and safety to the fetus and neonate.
  - Not licensed to use in pregnancy but is commonly prescribed agent in UK in OC
  - Dose-10-15 mg/kg per day in a single or 2-3 divided doses, increased up to 25 mg/kg/day if no clinical or biochemical improvement. For example, start with 250mg twice a day in a 50 kg women and increase by 250-500mg/day every 7-14 days if itching persists.
  - 75% respond to UCDA. Rifampicin has complimentary effect to UCDA in 25% of women with OC who do not respond.
- Vitamin K - Soluble Vitamin K 10mg tablet per day is reasonable in presence of steatorrhoea.

## 5.6 Monitoring

1. Weekly ANC and LFTs through ANDU to allow monitoring of the condition and exclusion of other diagnoses .If LFTs escalate very rapidly consider other diagnosis.
2. No specific fetal monitoring can be recommended as no current methods have been shown to be effective in predicting fetal death. Mother should be asked to monitor fetal movements and to attend ADU for CTG monitoring if any concerns.
3. Fetal growth restriction and oligohydramnios are not features of the disease, so liquor volume and umbilical artery Doppler assessment should be done only if indicated e.g. evidence of fetal growth restriction.
4. If bile acid is > 40 micromol/L, consider steroids between 34 to 36 weeks as the risk of RDS is increased with high bile acids.

## 5.7 Timing of Delivery

There is not enough evidence to warrant early delivery. The decision of delivery should be made by consultant after careful counselling about the risks of early delivery (prematurity, respiratory distress, failed induction) versus the uncertain fetal risk of continuing the pregnancy (stillbirth). Each case should be individualised but in uncomplicated cases, IOL should be offered at 40 weeks gestation. The case for intervention at earlier gestation may be stronger in those with more severe biochemical abnormality (Bile acids > 40 µmol/L, rising ALT).

## 5.8 Intrapartum

Continuous fetal monitoring should be offered.

## 5.9 Postnatal Care

There is no evidence to contraindicate breastfeeding with OC

Postnatal resolution of pruritis and abnormal LFTs is required to secure the diagnosis. In normal pregnancy, LFTs may increase in the first 10 days of the puerperium, so in OC routine measurement of LFTs should be deferred beyond this time. LFTs should be checked 2 weeks after delivery by the GP.

Persistent pruritis and abnormal LFTs at 6 weeks would necessitate referral for specialist advice.

## 6 PROCESS FOR MONITORING COMPLIANCE

The process for monitoring is summarised below. A more detailed version is described in appendix A.

## 7 REFERENCES

- Royal College of Obstetricians and Gynaecologists (2011) Obstetric Cholestasis Guideline No 43
- Lucy Chappell et al, BM J 2012;344:e3799-Ursodeoxycholic acid versus placebo, and early term delivery versus expectant management in women with intrahepatic cholestasis of pregnancy : semifactorial randomised clinical trial.
- European Association for the study of the Liver(EASL) Clinical Practice Guidelines: Management of cholestatic liver diseases. Journal of Hepatology 51(2009) 237-267

## 8 APPENDICES

Appendix A – Monitoring overview

## MONITORING OVERVIEW

Elements to be monitored	Lead	Tool	Frequency	Reporting arrangements	Acting on recommendations and Lead(s)	Change in practice and lessons to be shared
Fetal outcome in women with diagnosis of Obstetric Cholestasis	Reeta Jha	Identify through ANDU	2 yearly audit by Dr Dalmia	In audit meeting (at perinatal meeting)	Reeta Jha	Through governance