

# Management of Intrahepatic Cholestasis in Pregnancy Guideline

|                    |               |                                     |   |                   |              |
|--------------------|---------------|-------------------------------------|---|-------------------|--------------|
| Guideline Number:  | 656           | Supersedes:                         |   | Classification    | Clinical     |
| LOCSSIP Reference: |               | NATSSIP Standard:                   | List standard<br>( <a href="#">NATSSIPS Standards</a> ) |                   |              |
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| Brief Summary of Document: | To provide safe care and management of women with intrahepatic cholestasis of pregnancy. |
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|       |  |
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| Scope | <p>This guideline summarises the management of intrahepatic cholestasis of pregnancy in order to reduce fetal risks associated with the condition.</p> <p>‘The term “woman/women” in the context of this document is used as a biologically based term and is not intended to exclude trans and non-binary people who do not identify as women.’</p> |
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|                                 |  |
|---------------------------------|--|
| To be read in conjunction with: | <ul style="list-style-type: none"> <li>• Induction of Labour Guideline</li> <li>• Continuous Intrapartum Fetal Monitoring Guideline</li> </ul> |
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|                      |   |
|----------------------|---|
| Patient Information: | <p><b>Include links to <a href="#">Patient Information Library</a></b><br/> <a href="https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-obstetric-cholestasis.pdf">https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-obstetric-cholestasis.pdf</a></p> |
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| Owning committee/<br>group | Obstetric Guideline and Audit Group |
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| Reviews and updates |   |                         |
|---------------------|---|-------------------------|
| Version no:         | Summary of Amendments:  | Date Approved:          |
| 1                   | New guideline   | 21.01.2020              |
| 2                   | Review  | 21.01.2020<br>27.8.2020 |
| 2                   | Amendment to section 7 - Antenatal Management: Amendment to read 'The upper limit of normal reference range of bile acids is 14micromol/l.'<br>And Amendment to Appendix 2 to reflect the above | 13.10.2020              |

### Glossary of terms

| Term | Definition                                  |
|------|---|
| ALT  | Alanine aminotransferase                    |
| AST  | Aspartate transaminase                      |
| BA   | Bile Acids                                  |
| CLC  | Consultant-led care                         |
| CLU  | Consultant-led unit                         |
| CTG  | Cardiotocograph                             |
| EFM  | Electronic fetal monitoring                 |
| FHR  | Fetal heart rate                            |
| ICP  | Intrahepatic Cholestasis of Pregnancy       |
| IOL  | Induction of Labour                         |
| LFT  | Liver function test                         |
| OC   | Obstetric cholestasis (former term for ICP) |
| SFH  | Symphysis fundal height                     |
| UDCA | Ursodeoxycholic acid                        |
| VTE  | Venous thromboembolism                      |

|          |  |
|----------|--|
| Keywords | Cholestasis, intrahepatic cholestasis, ursodeoxycholic acid, vitamin K, pruritus, transminases, pregnancy complications ,bile acids and salt |
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## 1. Aim of Guideline

- To standardise the management of intrahepatic cholestasis of pregnancy remove and reduce maternal and fetal morbidity / mortality.

## 2. Objectives

- To provide safe care and management of women with intrahepatic cholestasis of pregnancy in order to reduce fetal risks associated with the condition.

## 3. Scope

- All clinicians involved in the care of pregnant women with a history suggestive of intrahepatic cholestasis of pregnancy

## 4. Introduction

- Intrahepatic cholestasis of pregnancy is a multifactorial condition of pregnancy characterised by pruritus in the absence of a skin rash with abnormal liver function tests (LFTs) which resolve after birth.
- Pruritis affects 23% of pregnancies of which a small proportion will have Intrahepatic Cholestasis of Pregnancy (ICP)
- The clinical importance of lies ICP 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.

## 5. Risk Associated with Intrahepatic Cholestasis of Pregnancy

- In a hospital setting, 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.
- Obstetricians should advise women that the incidence of premature birth, especially iatrogenic, is increased.
- Women should be advised of the increased likelihood of meconium passage in pregnancies affected by obstetric cholestasis.
- Intrahepatic Cholestasis of Pregnancy has been linked with an increased incidence of fetal distress, delivery by caesarean section and postpartum haemorrhage.

## 6. Diagnosis (Please refer to Appendix 1 – DAU Flowchart)

- Intrahepatic cholestasis of pregnancy (ICP) is diagnosed when otherwise unexplained pruritus occurs in pregnancy and abnormal liver function tests (LFTs) and/or raised bile acids occur and both resolve after delivery.
- Pruritus is notably worse at night and involves the palms and soles of the feet is particularly suggestive.
- The presence of a pale stool, dark urine and jaundice are also suggestive of obstetric cholestasis.
- Pregnancy-specific reference ranges for LFTs should be used.
- Other causes of itching and of liver dysfunction should be excluded.
- Women with persistent pruritus and normal biochemistry should have LFTs repeated every 1–2 weeks.
- Postnatal resolution of pruritus and abnormal LFTs should be confirmed.

## 7. Management: Antenatal (Refer to Flow Chart - Appendix 2)

- The skin should be inspected and care must be taken to differentiate skin trauma from intense scratching.
- If a rash is present, polymorphic eruption of pregnancy or pemphigoid gestations (blisters) should be considered.
- Family and personal history should be taken including family history of obstetric cholestasis, multiple pregnancy, hepatitis C and presence of gallstones.
- Blood should be sent for liver function tests (LFTs) and bile acids (BA).
- Pregnancy specific ranges should be used for all.
- In pregnancy the upper limit of LFTs and bilirubin is 20% lower than normal.
- The upper limit of normal reference range of bile acids is 14micromol/l.
- Bile acids should be sent in a gold topped bottle and the results may take up to 72 hours.
- If LFTs are elevated and Bile acids are normal need to exclude other causes of liver pathology. Send blood for viral screen (Hepatitis A, B, and C), Epstein Barr virus, Cytomegalovirus, liver autoimmune screen for Chronic Active Hepatitis and Primary biliary cirrhosis and arrange a liver ultrasound.
- Pre-eclampsia and acute fatty liver of pregnancy are pregnancy-specific causes of abnormal LFTs that might form part of the differential diagnosis in atypical or early cases.
- Once ICP has been diagnosed bloods should be sent for clotting screen and LFT measurement weekly from 34 weeks onwards,
- There is no clear correlation between severity of disease and transaminase levels, nor is there a clear co-relation between transaminase values and elevated bile acids.
- **Normal levels of bile salts do not exclude the diagnosis.**
- There is no evidence to confirm adverse fetal or neonatal outcomes with BA values less than 40 micromol/l.
- **There is evidence that there is increased risk of preterm delivery, neonatal unit admission and still birth with rising levels of BA over 40micromol/l.**
- High bile acid levels have been linked with fetal death passage of meconium, abnormal cardiotocograph, prematurity and non-fatal asphyxial events.
- Ultrasound and cardiotocography are **not** reliable methods for predicting or preventing fetal death. Fetal growth restriction and oligohydramnios are not features of the disease. Umbilical artery Doppler assessments are not different compared with those taken in other pregnancies.

### 7.1 Treatment

- **Topical emollients** are safe but their efficacy is unknown. Clinical experience suggests that they may provide slight temporary relief of pruritus.
- **Antihistamines** such as chlorphenamine may provide some welcome sedation at night but do not have a significant impact on pruritus.
- **Ursodeoxycholic acid (UDCA)** improves pruritus, liver function and bile acid concentration over 40 micromoles/litre. The PITCH study showed UDCA significantly reduces the itching and meconium staining of liquor. Women should be informed of the lack of robust data concerning protection against stillbirth and safety to the fetus or neonate.
- **Vitamin K:** A discussion should take place with the woman regarding the use of vitamin K.
- Obstetric cholestasis can result in reduced absorption of dietary fats and fat soluble vitamins like vitamin K.

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- Where the prothrombin time is prolonged, the use of water-soluble vitamin K (menadiol sodium phosphate) in doses of 5–10 mg daily is indicated.
- Water-soluble vitamin K has been prescribed widely in the management of obstetric cholestasis.
- Dose: 10 mg daily by mouth. The aim is to improve both maternal and neonatal levels, which are assumed to be deficient, and therefore reduce postpartum haemorrhage and fetal or neonatal bleeding.
- When prothrombin time is normal water-soluble vitamin K (menadiol sodium phosphate) in low doses **should be used only after careful** counselling about the likely benefits but small theoretical risk of neonatal kernicterus and haemolytic anaemia.

### 7.2 Management: Intrapartum

- **Women with obstetric cholestasis should be booked under consultant-led, team-based care and give birth in an obstetric unit.**
- Poor outcome cannot currently be predicted by biochemical results and delivery decisions should not be based on results alone.
- A discussion should take place with women regarding induction of labour after 37<sup>+0</sup> weeks of gestation.
- Women should be informed of the increased risk of perinatal morbidity from early intervention (after 37<sup>+0</sup> weeks of gestation).
- Women should be informed that the case for intervention (after 37<sup>+0</sup> weeks of gestation) may be stronger in those with more severe biochemical abnormality (transaminases and bile acids).
- Women should be informed of the increased risk of maternal morbidity from intervention at 37<sup>+0</sup> weeks of gestation.
- Women should be informed of the inability to predict stillbirth if the pregnancy continues.
- The practice of offering delivery at 37 weeks of gestation or at diagnosis if this is after 37 weeks of gestation, is not evidence based. The iatrogenic consequences of elective delivery must be considered
- Continuous fetal monitoring in labour should be offered.
- Active management of the third stage is advised.

### 7.3 Management: Postnatal

- In normal pregnancy, LFTs may increase in the first 10 days of the puerperium.
- In a pregnancy complicated by obstetric cholestasis, routine measurement of LFTs should be deferred beyond this time and should be deferred for at least 10 days.
- Appropriate follow-up should be arranged by a medical practitioner.
- LFTs 6 weeks after delivery and an appointment at 8 weeks is an appropriate care plan.
- The implications of obstetric cholestasis should be discussed including the high recurrence rate (45–90%) and the increased incidence of obstetric cholestasis in family members.
- Reassurance should be given regarding lack of long-term sequelae for mother and baby. and contraceptive choices (usually avoiding oestrogen-containing methods) should be discussed.

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## 8. Record Keeping

- All documentation and risk assessments must be recorded and filed in the All Wales Maternity Handheld Record and ancillary Health Board documentation.
- Care plans are to be inputted onto Welsh PAS.

## 9. Communication

- All pregnant women with obstetric cholestasis should be provided with accurate and accessible information about the risks associated with the condition and elective delivery versus conservative management.
- Women should be given the RCOG patient information leaflet and be given the opportunity to discuss this information:  
<https://www.rcog.org.uk/en/patients/patient-leaflets/obstetric-cholestasis/>
- **Maternal wishes and concerns should be discussed and documented.**

## 10. Auditable Standards

- Number of women diagnosed with obstetric cholestasis.
- Percentage of women being offered vitamin K with prolonged prothrombin time
- Percentage of women receiving documentation of risks and benefits of UDCA.
- Percentage of women with appropriate investigations performed before confirmation of diagnosis.
- Percentage of women with iatrogenic delivery for obstetric cholestasis at less than 37 weeks of gestation
- Perinatal outcome of cases of obstetric cholestasis
- Percentage of women with postnatal follow-up documented.

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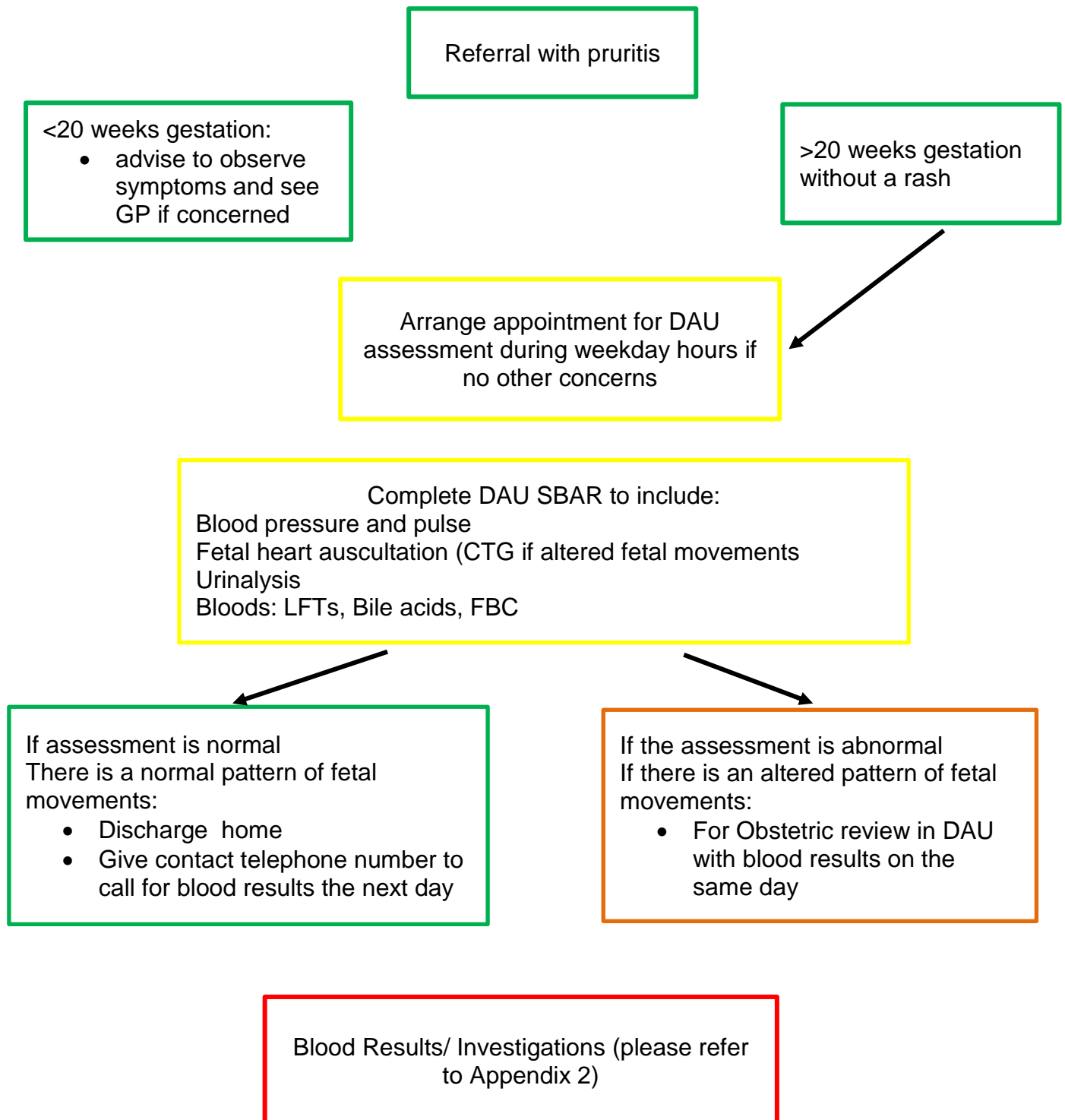
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## APPENDIX 1

### DAU ADMISSION: FLOWCHART FOR PRURITIS/SUSPECTED INTRAHEPATIC CHOLESTASIS OF PREGNANCY



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## APPENDIX 2: INVESTIGATIONS FLOWCHART

