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# Management of Pre-Term Labour

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Speciality: Maternity  
Approval body: Labour Ward Forum  
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# PRE-TERM LABOUR

## Introduction

Pre term labour is defined as the onset of established labour after the age of fetal viability and before 37 completed weeks gestation. Diagnosis is made by the onset of regular uterine contractions associated with progressive cervical effacement and dilatation. Pre term labour complicates 5-10% of all pregnancies and is responsible for up to 70% of all neonatal deaths in normally formed babies.

The prevention of preterm delivery is not always indicated. In most cases, labour between 34-37 weeks gestation will be allowed to continue. Babies born prior to 34 weeks experience most mortality and morbidity, therefore efforts should be made to postpone delivery by tocolysis, for 24-48hours for steroid administration, where there are no fetal/maternal contra-indications.

**It is important to consider the possibility of placenta abruption (concealed Antepartum haemorrhage), especially when associated with backache/loose stools. Ultrasound is not helpful in early diagnosis. A high level of clinical awareness is vital.**

## INFORMATION AND SUPPORT

It is essential to consider the information and support provided for a woman and her family when planning care. Provide both oral and written information and explain to the woman about the care she will be offered. The Neonatal and Paediatric team should be involved in care planning and, where possible, provide the parents an opportunity to speak to them.

Information should be evidenced based and include the risks for the baby, including the possibility the baby may not survive a pre term birth and the possible long term outcomes. When a woman is in advanced pre term labour information should be provided where possible however a neonatologist may need to meet with the parents after the birth as soon as this can be arranged

## DIAGNOSIS OF ESTABLISHED PRE TERM LABOUR

Many women may experience false labour.

Where preterm labour is suspected, information for the woman should include

- The clinical assessment and diagnostic tests that will be offered.
- How the clinical assessment and diagnostic tests are carried out.
- The benefits, risks and possible consequences of assessments and diagnostic tests
- The consequences of false positives and false negative tests taking into account gestational age.

Diagnosis of pre term labour will be made following;

- Cervical assessment to obtain evidence of dilatation and effacement
- Monitoring of uterine activity for regular strong contractions
- Assessment of descent of presenting part, (Preterm labour may be relatively 'silent')
- Findings of a vaginal examination (In the absence of PPRM) or speculum examination if history of PPRM.
- Completion of a diagnostic test to determine likelihood of birth within next 48 hours.

A diagnosis of established preterm labour will be confirmed where there is progressive cervical effacement and dilation from 4cm with regular contractions.

## **MANAGEMENT**

### **CORTICOSTEROIDS**

For women between 23+<sup>0</sup> and 23+<sup>6</sup> weeks of pregnancy who are in suspected or established preterm labour, are having a planned preterm birth or have PROM, discuss with the women( and family members) the use of maternal corticosteroids in the context of her individual circumstances.

Consider maternal corticosteroids for women between 24+<sup>0</sup> and 25+<sup>6</sup> weeks of pregnancy who are in suspected or established labour, history of PPROM having a planned preterm birth.

Offer maternal corticosteroids to women between 26+<sup>0</sup> and 33+<sup>6</sup> weeks of pregnancy who are in suspected, diagnosed or established preterm labour, are having a planned preterm birth or have P-PROM.

Consider maternal corticosteroids for women between 34+<sup>0</sup> and 35+<sup>6</sup> weeks of pregnancy who are in suspected, diagnosed or established preterm labour, are having a planned preterm birth or have P-PROM.

When offering or considering maternal corticosteroids, discuss with the woman how corticosteroids may help and the potential risks associated with them. Do not routinely offer repeat courses of maternal corticosteroids but take into account: -

- Interval since the end of last course.
- Gestational age.
- The likelihood of delivery within 48 hours. (Nice 2015)

**The recommended corticosteroid medication and prescription is Betamethasone 12mg 2 administrations 24 hrs apart .**

### **TOCOLYSIS:**

#### **Indication:**

Pre-term labour between 24 and 34 weeks, of unproven cause, when the risk of delivery outweighs that of continuing the pregnancy. Only indicated if there is a need to give steroids. It is reasonable NOT to use tocolytic drugs as there is **no** clear evidence that they improve outcome. However, tocolytics should be considered if the few days gained would be put to good use – such as completing a course of corticosteroids, or in utero transfer.

#### **Absolute Contraindications:**

Maternal: cardiac shock, aortic stenosis, Sever pre-eclampsia  
Fetal: severe IUGR, fetal compromise  
Obstetric: intra-uterine infection, abruption

#### **Relative Contraindications**

Maternal: Cardiac failure, diabetes mellitus, abnormal liver function, previous hypotensive reaction  
Obstetric: Premature pre-labour rupture of the membranes, cervical dilatation >4cm

## **Choice of drug:**

Consider Nifedipine for tocolysis for women between 24+<sup>0</sup> and 25+<sup>6</sup> weeks of pregnancy who have intact membranes and are in suspected preterm labour.

Offer nifedipine for tocolysis to women between 26+<sup>0</sup> and 33+<sup>6</sup> weeks of pregnancy who have intact membranes and are in suspected or diagnosed preterm labour.

If nifedipine is contraindicated offer oxytocin receptor antagonists for tocolysis (Atosoban).

## **FIRST LINE TREATMENT:**

**NIFEDIPINE:** calcium channel blocker. Advantage of oral use low cost. Not licensed but widely used

### **DOSAGE:**

- Preload: 500ml Normal Saline IV over 20-30 min prior to giving Nifedipine
- Nifedipine:
  - First dose 10mg orally
  - Further 10mg every 15 minutes for the first hour, until contractions stopped
  - 60-160mg/day of slow release Nifedipine depending on uterine activity for 48hrs
- Omit further Nifedipine if:
  - Significant maternal hypotensive reaction to any dose
    - Reduction in MAP > 20 mmHg (and/or systolic < 100mmHg)
    - Causing severe maternal symptoms
    - Causing adverse CTG changes/ meconium liquor
  - No evidence of cervical dilatation

Side Effects: Transient hypotension, flushing, palpitations, headache

## **SECOND LINE TREATMENT:**

**ATOSIBAN:** licensed in UK,

### **DOSAGE**

1. Initial bolus of 6.75mg over 1 minute
2. infusion of 18mg/h for 3 hours
3. 6mg/h for up to 45 hours

Duration of treatment should **not exceed** 48 hours and the total dose given during a full course should **not exceed** 330mg of Atosiban

Maintenance tocolysis is NOT recommended for routine practice

In view of lack of evidence for any substantial benefit for the baby from tocolysis, and the possibility of hazard for the mother, the available evidence should be discussed with women and their partners and their preference taken into account in determining the care.

## **THIRD LINE TREATMENT**

**INDOMETACIN:** unlicensed,

In certain cases, indometacin can also be used, where there are contra-indications to the previous drugs, but only in the second trimester as there is a risk of premature closure of the ductus arteriosus in the third trimester. This must be a consultant decision.

### **DOSAGE**

**100mg PR repeated 12-24 h later**

### Magnesium Sulphate for Neuroprotection

Offer intravenous magnesium sulphate for neuroprotection of the baby to women between 24+<sup>0</sup> and 29+<sup>6</sup> weeks of pregnancy who are in established preterm labour or having a planned preterm birth within 24 hours. Please refer to the policy

Magnesium Sulphate for Neuroprotection of the fetus in women at risk of preterm birth on WISDOM: -

[http://howis.wales.nhs.uk/sites3/Documents/790/Magnesium%20Sulphate\\_Administration%20of%20for%20Neuroprotection%20of%20the%20Fetus\\_ABMU%20Maternity%20Guideline%202015.pdf](http://howis.wales.nhs.uk/sites3/Documents/790/Magnesium%20Sulphate_Administration%20of%20for%20Neuroprotection%20of%20the%20Fetus_ABMU%20Maternity%20Guideline%202015.pdf).

### **For POW**

Women presenting in suspected or established labour to POW between 24+<sup>0</sup> and 31+<sup>6</sup> weeks gestation or a multiple pregnancy of 34 weeks or less should be cared for in a hospital where level 3 Neonatal Intensive care is available. This assessment should be based on safety of mother and baby requiring possible transfer. However, delivery during transfer needs to be avoided, and therefore a careful assessment of the stage and progress of labour will have to be made before the transfer.

### **Management of women thought to be in preterm labour**

Women need to be informed of the risks of premature delivery to their baby and this is the responsibility of the paediatrician.

### **In utero transfers**

Prior to any in-utero transfer being accepted from other obstetric units the woman must have a positive pre-term predictor test i.e. actim partus or fetal fibronectin. In addition the in-utero transfer form must be completed clearly indicating acceptance of transfer by all appropriate professionals.

### Antibiotics during labour

Pre term birth following spontaneous labour is a risk factor for early onset neonatal infection.

Consider intrapartum antibiotic prophylaxis using intravenous benzylpenicillin to prevent early-onset neonatal infection for women in preterm labour if there is prelabour rupture of membranes of any duration.

Consider intrapartum antibiotic prophylaxis using intravenous benzylpenicillin to prevent early-onset neonatal infection for women in preterm labour if there is suspected or confirmed intrapartum rupture of membranes lasting more than 18 hours.

Once commenced, treatment should be given regularly until delivery. If a woman is known or has a suspected penicillin allergy – provided that she has not had a severe allergy to penicillin, a Cephalosporin should be used. If there is any evidence of severe allergy to penicillin, Vancomycin should be used.

### **FETAL MONITORING**

Discuss with women in suspected, diagnosed or established preterm labour (and family):

- The purpose of fetal monitoring and what it involves

- The clinical decisions it informs at different gestational ages.
- If appropriate the option not to monitor the fetal heart rate at the margins of viability.

Involve a senior obstetrician in discussions about whether and how to monitor the fetal heart rate for women who are between 23+<sup>0</sup> and 25+<sup>6</sup> weeks pregnant. Explain the different fetal monitoring options to the woman, being aware that there is limited evidence about the usefulness of specific features to suggest hypoxia or acidosis in preterm babies. A normal cardiotocograph trace is reassuring and indicates that the baby is coping well with labour, but an abnormal trace does not necessarily indicate that fetal hypoxia or acidosis is present. Explain to the woman that there is an absence of evidence that using cardiotocography improves the outcomes for preterm labour for the woman or the baby compared with intermittent auscultation.

**DO NOT USE FETAL SCALP ELECTRODE ON A PREGNANCY BELOW 34+<sup>0</sup> WEEKS GESTATION. DO NOT CARRY OUT FETAL BLOOD SAMPLING IF THE WOMAN IS THE THAN 34+<sup>0</sup> WEEKS PREGNANT.**

A management plan needs to be agreed and documented .

### **Mode of birth**

Discuss the general benefits and risks of caesarean section and vaginal birth with women in suspected, diagnosed or established preterm labour and women with P-PROM in the NICE guideline on caesarean section.

Consider caesarean section for women presenting in suspected, diagnosed or established preterm labour between 26+<sup>0</sup> and 36+<sup>6</sup> weeks of pregnancy with breech presentation.

### **Terms used in this guideline**

#### Symptoms of preterm labour.

A woman has presented before 37+<sup>0</sup> weeks of pregnancy reporting symptoms that might be indicative of preterm labour (such as abdominal pain), but no clinical assessment (including speculum or digital vaginal examination) has taken place.

#### Suspected preterm labour.

A woman is in suspected preterm labour if she has reported symptoms of preterm labour and has had a clinical assessment (including a speculum or digital vaginal examination) that confirms the possibility of preterm labour but rules out established labour.

#### Diagnosed preterm labour

A woman is in diagnosed preterm labour if she is in suspected preterm labour and has had a positive diagnostic test for preterm labour.

#### Established preterm labour

A woman is in established preterm labour if she has progressive cervical dilation from 4cm with regular contractions.

#### Reference

RCOG green top guideline Tocolytics October 2002

NICE Pre term Labour and Birth Nov 2015

Maternity Network Wales Parent Information - **You are now between 22weeks to 22weeks + 6 days in your pregnancy** June 2015 on WISDOM

## Maternity Services

### Checklist for Clinical Guidelines being Submitted for Approval

|  |   |
|--|---|
| Title of Guideline:  | Management of Pre-Term Labour   |
| Name(s) of Author:   | N/A   |
| Chair of Group or Committee approving submission:                          | Labour Ward Forum   |
| Brief outline giving reasons for document being submitted for ratification | Update required relating to Actim Partus  |
| Details of persons included in consultation process:                       | Consultant Obstetrician, Midwives   |
| Name of Pharmacist (mandatory if drugs involved):                          | N/A   |
| Issue / Version No:  | 3   |
| Please list any policies/guidelines this document will supercede:          | <ul style="list-style-type: none"> <li>• Management of Pre-Term Labour</li> </ul> |
| Date approved by Group:  | 15 <sup>th</sup> November 2018  |
| Next Review / Guideline Expiry:  | 15 <sup>th</sup> November 2021  |
| Please indicate key words you wish to be linked to document                | Preterm, actim, partus  |
| File Name: Used to locate where file is stores on hard drive               | Z:\npt_fs2\Maternity Incidents Stats Etc\Policies\Ratified - Obs                  |