Tocolysis
Preterm Labour
&
Inhibition of Established Labour

SCOPE (Area): Maternity Unit
SCOPE (Staff): Midwifery and Medical Staff

Preterm Labour

EXPECTED OUTCOME

- To promote positive outcomes for both the mother and baby when threatened or actual preterm labour occurs.

DEFINITIONS

Preterm Labour: labour occurring before 37 weeks gestation

INDICATIONS

- Suppression of threatened or established preterm labour, in the absence of contraindications, where it is desirable to allow the foetus to remain in-utero.

CONTRAINDICATIONS

 Suppressing of labour is generally not indicated for:

- FDIU
- Foetal malformation where only palliative treatment is planned
- Suspected foetal compromise (as determined by ultrasound or CTG)
  - Foetal Distress
  - Severe IUGR
- Placental abruption / APH
- Chorioamnionitis
- Maternal haemorrhage with haemodynamic instability
- Pre-eclampsia

Contraindication to the use of nifedipine:

- Allergy to nifedipine
- Significant maternal cardiac disease
- Hypotension
- Hepatic Dysfunction
- Concurrent use of these medications:
  - IV salbutamol
  - Magnesium Sulphate (Care with infusion, absolutely NO bolus)
  - Transdermal nitrates (GTN)
  - Antihypertensive medications
ISSUES TO CONSIDER

- Monitoring and assessment of woman should be undertaken as outlined in the Threatened Preterm Labour guideline (CPG/T020)

- Side effects from the administration of nifedipine include:
  - Facial flushing → Palpitations
  - Headache → Hypotension (unusual in normotensive patients)
  - Dizziness → Cardiac failure
  - Nausea → Increase in liver enzymes
  - Tachycardia

- Ensure that slow release nifedipine is NOT used.
- The use of nifedipine in pregnancy is ‘off-label’; pregnancy is listed as a contraindication.

ACTIONS

General Care

- IV access
- Consider blood tests for baseline electrolytes, urea and creatinine, and LFTs.
- Continuous CTG monitoring of foetal heart rate until contractions have ceased.
- Cardiovascular examination including auscultation of lung bases every 8 hours for the first 24 hours of therapy.
- Observations
  - ½ hourly pulse and blood pressure for the first four hours (Continue if contractions have not abated), then
  - 2 hourly pulse and blood pressure for 24 hours, then
  - Routine QID observations
- If significant hypotension occurs, treatment should be discontinued. IV rehydration with Normal Saline or Hartmann’s may be considered.

Nifedipine Regime

<table>
<thead>
<tr>
<th>Immediately</th>
<th>*NOT slow release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stat</td>
<td>20mg orally*</td>
</tr>
<tr>
<td>30 mins later</td>
<td>20mg orally*</td>
</tr>
<tr>
<td>30 mins later</td>
<td>20mg orally*</td>
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</tbody>
</table>

Tablets should be chewed then swallowed to enable faster absorption.

<table>
<thead>
<tr>
<th>Maintenance</th>
<th></th>
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<tbody>
<tr>
<td>Commence</td>
<td>20mg orally TDS*</td>
</tr>
<tr>
<td>Then</td>
<td>30 – 60mg orally / day (Slow release nifedipine – Adalat OROS®)</td>
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</tbody>
</table>

If maintenance therapy is required after 72 hours.

Maximum dose → 120mg / day
Inhibition of Established Labour

EXPECTED OUTCOME

- To effectively cease or reduce labour contractions when complications occur in established labour, thus promoting outcomes for both mother and baby.

DEFINITIONS

Hypertonic uterus: hypertonia, excessive tone or tension, of the uterine muscle.

INDICATIONS

- Hypertonic uterus
- To cease or reduce labour contractions when complications occur that necessitate an emergency caesarean. (e.g. Foetal distress)

ISSUES TO CONSIDER

- Hypertonus may occur in:
  - spontaneous normal labour
  - concurrent abruption
  - after use of prostaglandin for induction of labour
  - during oxytocin infusion
  - multigravidas more than primigravidas

- It may cause acute foetal compromise and the mother will often complain of constant lower abdominal pain.

ACTIONS

- Call for immediate assistance.
- If IV oxytocic is in use, cease infusion.
- Change maternal position to lateral recumbent to promote perfusion to placenta and foetus.
- Commence continuous foetal monitoring if not already in-situ
- Administer tocolytic

**Terbutaline (first choice)**

<table>
<thead>
<tr>
<th>Dose</th>
<th>250 micrograms IV or SC</th>
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<tbody>
<tr>
<td>Instructions</td>
<td>May be repeated after 20 minutes, if required.</td>
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</table>

<table>
<thead>
<tr>
<th>Adverse Reactions</th>
<th>Nausea / vomiting</th>
<th>Drowsiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tremor</td>
<td>Nervousness</td>
<td>Headache</td>
</tr>
<tr>
<td>Nervousness</td>
<td>Abdominal pain</td>
<td></td>
</tr>
<tr>
<td>Restlessness</td>
<td>Diarrhoea</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Agitation</td>
<td>Sweating</td>
<td>Urticaria</td>
</tr>
<tr>
<td>Tachycardia</td>
<td>Muscle twitching and cramps</td>
<td>Exanthema</td>
</tr>
<tr>
<td>Palpitations</td>
<td>Ectopic beats</td>
<td>Cardiac arrhythmias</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Contraindications</th>
<th>Maternal cardiac disease</th>
</tr>
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<tr>
<td></td>
<td>Hypersensitivity to sympathomimetic amines or any other ingredient.</td>
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</table>
### Sublingual GTN Spray

<table>
<thead>
<tr>
<th><strong>Dose</strong></th>
<th>400 micrograms, one metered spray administered under the tongue</th>
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</thead>
<tbody>
<tr>
<td><strong>Instructions</strong></td>
<td>→ If response is inadequate, repeat the dose after 5 minutes</td>
</tr>
</tbody>
</table>
| **Adverse Reactions** | → Hypotension with → Methaemoglobinemia → Flushing  
bradycardia → Headache → Rash  
→ Postural hypotension → GI upset |
| **Contraindications** | → Known sensitivity to any of the ingredients in the product (see Composition)  
→ Idiosyncratic reaction to organic nitrates  
→ Acute circulatory failure (shock, circulatory collapse)  
→ Uncorrected hypovolaemia  
→ Pronounced hypotension (systolic blood pressure below 90 mmHg)  
→ Increased intracranial pressure (e.g. head trauma or cerebral haemorrhage)  
→ Severe anaemia  
→ Arterial hypoxaemia.  
→ Cardiogenic shock. |

### RELATED DOCUMENTS

- **Internal**
  - CPG/P055: Preterm Labour

- **External**
  - Nil

### REFERENCES


