Oxytocin (Syntocinon®) Induction and Augmentation of Labour

Clinical Practice Guideline (CPG)

1. Background

Labour is induced or augmented using intravenous oxytocin (Syntocinon®) infusion. The use of oxytocins is expected to expedite birth where clinically indicated.

1.1 Precautions

- If the cervix is unfavourable (Bishop score <6) induction with vaginal prostaglandins should be considered (refer Induction of Labour (IOL) with Prostaglandin E₂ (PGE₂) Vaginal Gel (Prostin®) CPG)
- Oxytocin (Syntocinon®) to induce labour in women with history of previous caesarean should be discussed with the lead obstetrician prior to use
- Oxytocin (Syntocinon®) should not be used within 6 hours of prostaglandin PGE₂ (Prostin®) vaginal gel (refer Induction of Labour (IOL) with Prostaglandin E₂ (PGE₂) Vaginal Gel (Prostin®) CPG)
- Oxytocin (Syntocinon®) should not be used with dinoprostone PGE₂ (Cervidil®) pessary insitu or within 30 minutes of its removal (refer Induction of Labour (IOL) with Dinoprostone (PGE₂) Continuous Release Vaginal Pessary (Cervidil®) CPG)
- Oxytocin (Syntocinon®) to augment labour in a multigravida should be discussed with the lead obstetrician prior to use
- Physiological management of third stage is contraindicated in women receiving oxytocin during labour

Good Practice Note:

- Health Services should develop guidelines for booking induction of labour
- Health Services should provide women with written information about induction of labour
2. Limitations to Oxytocin Use

2.1 Contraindications

Never proceed to IOL in women with the following:

- Malpresentation: transverse or oblique lie, footling breech, brow presentation
- Previous classical uterine incision
- Cord presentation
- Any other contraindication to labour or vaginal birth
- Spontaneous labour
- Abnormal cardiotocograph (CTG) or known fetal compromise
- Placenta praevia or vasa praevia
- Active genital herpes
- Persisting maternal fever

3. Procedure

3.1 Assessment

- Document baseline maternal vital signs record
  - Maternal blood pressure
  - Pulse rate
  - Uterine activity over a ten minute period (palpated)
  - Vaginal loss
- Perform abdominal palpation to confirm fetal lie and presentation – document findings
- A normal cardiotocograph (CTG) must be recorded prior to the use of oxytocin
- Vaginal examination and Bishop Score to reassess indication and method of induction
- Explain the anticipated outcome, benefits and risks of induction of labour with oxytocin to the woman and obtain verbal consent

3.2 Equipment

- Volumetric pump IV tubing, Y extension set, IV pole and tapes
- 10 units of oxytocin (Syntocinon®) for both multigravid and primigravid
- 1000 mL flask of Compound Sodium Lactate (Hartmann's Solution) or Normal Saline
- CTG
3.3 Preparing and administering oxytocin infusion

- Add 10 units of oxytocin (Syntocinon®) to a 1000 mL flask of Compound Sodium Lactate (Hartmann’s solution) or Normal Saline. Label flask and sign entries on the Intravenous Infusion Chart.
- Commence the oxytocin (Syntocinon®) infusion at 2 milliunits/min (12 mL/hr) via volumetric infusion pump.
- Increase the rate every 30 minutes (per increment schedule below) aiming for 4 contractions in 10 minutes lasting 40 – 90 seconds each.
- Once 4 contractions in 10 minutes are achieved maintain the infusion rate.
- Titrate the infusion rate as may be required to maintain 4 contractions in 10 minutes lasting 40-90 seconds each.
- Once the maximum has been reached and a further increase in the infusion rate is required it must be discussed with the midwife in charge and medical staff.

<table>
<thead>
<tr>
<th>mls/hr</th>
<th>milliunits /min</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>30 minutes</td>
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<tr>
<td>36</td>
<td>6</td>
<td>60 minutes</td>
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<tr>
<td>48</td>
<td>8</td>
<td>90 minutes</td>
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<tr>
<td>72</td>
<td>12</td>
<td>120 minutes</td>
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<tr>
<td>96</td>
<td>16</td>
<td>150 minutes</td>
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<td>210 minutes</td>
</tr>
<tr>
<td>168</td>
<td>28</td>
<td>240 minutes</td>
</tr>
<tr>
<td>192</td>
<td>32</td>
<td>270 minutes</td>
</tr>
</tbody>
</table>

Important considerations

- Once labour is established in a multigravida, consider slowly reducing the infusion rate, at 30 minute or greater intervals, being careful to maintain 4 contractions in 10 minutes.
- An additional IV side line is unnecessary unless it is indicated for an epidural or additional hydration.
- The oxytocin (Syntocinon®) infusion should not normally be stopped during procedures, i.e., insertion of an epidural.
3.4 Observations post commencement of oxytocin (Syntocinon®)

- Continuous cardiotocograph (CTG) is indicated with commencement of oxytocin (Syntocinon®) infusion
- Uterine contractions should be assessed carefully for a 10 minute period at 30 minute intervals. Contraction frequency and duration should be reconciled with uterine activity recorded on the CTG
- Strength of contraction is a subjective assessment requiring manual palpation (by midwife or doctor) correlated with how the woman perceives her contractions
- Support and pain relief options should be offered to women accordingly
- Record the units of oxytocin (Syntocinon®) in the flask (ie 10 units)
- Record the rate of infusion in mLs/hr (ie 12) at the beginning of each set of observations
- Enter the rate of infusion in mLs/hr at the end of each set of observations

For example:

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  12
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     24
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4. Complications

- Uterine hyperstimulation (refer CPG for Management of Uterine Hyperstimulation (Tachysystole))
- Ruptured uterus - especially in multigravida and women with a previous caesarean
- Water intoxication with high dose regimen or prolonged periods of use

To reduce the likelihood of water intoxication from high dose prolonged oxytocin (Syntocinon®) regimen, where a second flask of oxytocin (Syntocinon®) is required, senior obstetric staff should consider doubling the units in the flask and halving the infusion mLs rate.