9 COMPLICATIONS OF THE POSTNATAL PERIOD

9.1 Postpartum Haemorrhage (PPH)

9.1.3 PROPHYLACTIC AND THERAPEUTIC OXYTOCIN ADMINISTRATION AND INFUSION REGIMENS

Keywords: PPH, postpartum haemorrhage, therapeutic oxytocin, prophylactic oxytocin, oxytocin infusion

AIM

- To achieve and maintain contraction of the uterus, in women at risk of a postpartum haemorrhage (PPH).

HIGH RISK PATIENTS¹

<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>APPROXIMATE ODDS RATIO FOR PPH (99% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspected or proven placental abruption</td>
<td>13 (7.61 – 12.9)</td>
</tr>
<tr>
<td>Known placenta praevia</td>
<td>12 (7.17 -23)</td>
</tr>
<tr>
<td>Multiple pregnancy</td>
<td>5 (3.0-6.6)</td>
</tr>
<tr>
<td>Pre eclampsia / gestational Hypertension</td>
<td>4</td>
</tr>
<tr>
<td>Previous PPH</td>
<td>3</td>
</tr>
<tr>
<td>Asian Ethnicity</td>
<td>2 (1.18-2.12)</td>
</tr>
<tr>
<td>Obesity (BMI &gt; 35)</td>
<td>2 (1.24-2.17)</td>
</tr>
<tr>
<td>Anaemia (&lt; 9g/L)</td>
<td>2 (1.63 -3.15)</td>
</tr>
<tr>
<td>Birth by emergency Caesarean Section</td>
<td>4 (3.28-3.95)</td>
</tr>
<tr>
<td>Birth by elective Caesarean Section</td>
<td>2 (2.18-2.80)</td>
</tr>
<tr>
<td>Induction of labour</td>
<td>2 (1.67-2.96)</td>
</tr>
<tr>
<td>Retained placenta</td>
<td>5 (3.36-7.87)</td>
</tr>
<tr>
<td>Mediolateral episiotomy</td>
<td>5</td>
</tr>
<tr>
<td>Operative vaginal birth</td>
<td>2 (1.56-2.07)</td>
</tr>
<tr>
<td>Prolonged labour (&gt; 12 hours)</td>
<td>2</td>
</tr>
<tr>
<td>Big baby (&gt;4kg)</td>
<td>2 (1.38-2.60)</td>
</tr>
<tr>
<td>Pyrexia in labour</td>
<td>2</td>
</tr>
<tr>
<td>Age (&gt; 40 years, not multiparous)</td>
<td>1.4 (1.16-1.74)</td>
</tr>
</tbody>
</table>
INDICATION

For a woman at risk of postpartum haemorrhage of blood loss greater than 500ml from the genital tract following a vaginal birth or a Caesarean Section due to uterine atony.

REGIMEN

- A number of different therapeutic and prophylactic oxytocin dose regimens exist for PPH.
- There is no evidence on the correct dose of oxytocin to use postpartum.
- To reduce error, a standard dilution should always be used. Hence, based on current practice at KEMH, the following dilution is recommended:

STANDARD DILUTION OF OXYTOCIN

30 INTERNATIONAL UNITS OF OXYTOCIN IN 500ML OF HARTMANN’S OR NORMAL SALINE SOLUTION ADMINISTERED INTRAVENOUSLY.

Note: Oxytocin should always be administered through a regulated infusion pump.

PROPHYLACTIC AND THERAPEUTIC THERAPY

30 International Units of Oxytocin in 500mL of Hartmann’s or Normal Saline solution administered intravenously.

Note: Oxytocin should always be administered through a regulated infusion pump.
FOLLOWING THE BIRTH OF THE BABY / BABIES:

1. Administer either:
   - 5 international units of Oxytocin (Syntocinon®) by slow intravenous injection for women who have had a Caesarean section
   OR
   - 5 international units Oxytocin and 0.5mg Ergometrine (Syntometrine) by intramuscular injection for women who have had a vaginal birth and who do not have any pre-existing hypertension or cardiac condition.
   OR
   - 10 international units Oxytocin (Syntocinon) by intramuscular injection for women who have had a vaginal birth and who have pre-existing hypertension.

   **Note:** Women with hypertension or a cardiac condition should not receive Ergometrine for the management of their third stage.

AND in the situation of prophylaxis for women at high risk of PPH

2. Commence the Oxytocin infusion (made up as above) at 125mL per hour via a regulated infusion pump. This rate may be increased to 250 mL / hour in the setting of ongoing PPH.

3. Maintain this infusion rate for:
   - 4 hours for women who have had a Caesarean Section.
   - 2 hours for women who have had a vaginal birth.

4. After the recommended time has elapsed, cease the Oxytocin infusion and continue to monitor the blood loss.

5. Once the Oxytocin infusion has been ceased the IV cannula should remain in situ for 24 hours and/or while an epidural is in-situ.

6. If, upon cessation of the infusion, blood loss becomes heavy, contact the Medical Officer.

The Oxytocin infusion is in addition to the oxytocin (Syntocinon) or Oxytocin and Ergometrine (Syntometrine) administered to the woman for the active management of her third stage of labour. Clinical Guideline, Section B, 5.10.1: Active Management of the Third Stage Following a Vaginal Birth
INDICATIONS

For a woman with a postpartum blood loss greater than 500mL from the genital tract following a vaginal birth or a Caesarean Section due to uterine atony.

<table>
<thead>
<tr>
<th>Starting dose</th>
<th>Decrease</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commence the Oxytocin infusion (made up as above) at a rate of 240mL per hour. If the uterus does not contract promptly, the rate may need to be increased, or further therapeutic measures instituted by the Medical Officer.</td>
<td>Decrease the infusion rate by 40mL per hour provided the uterus remains contracted and the blood loss remains minimal.</td>
<td>Every 30 minutes until a maintenance infusion rate of 40mL per hour is reached.</td>
</tr>
</tbody>
</table>

- If, after 30 minutes at the maintenance infusion rate of 40mL per hour, the uterus remains well contracted and blood loss is not heavy the oxytocin infusion may be ceased.
- Once the oxytocin infusion has been ceased the IV cannula should remain in situ for 24 hours or while an epidural is in-situ.
- Contact the Medical Officer if, upon cessation of the infusion, blood loss becomes heavy.
- The oxytocin infusion is in addition to the Oxytocin (Syntocinon) or Oxytocin and Ergometrine (Syntometrine) administered to the woman for the active management of the third stage of labour Clinical Guideline, Section B, 5.10.1: Active Management of the Third Stage Following a Vaginal Birth

REFERENCES /STANDARDS


National Standards – 1- Care provided by the clinical workforce is guided by current best practice
4- Medication Safety

Legislation - Nil
Related Policies - Nil
Other related documents – Clinical Guideline Section B: 5.10.1: Active Management of the Third Stage Following a Vaginal Birth

RESPONSIBILITY

Policy Sponsor: HOD OBSTETRICS
Initial Endorsement: January 2004
Last Reviewed: October 2014
Last Amended: October 2017

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