OXYTOCIN FOR INDUCTION OR AUGMENTATION OF LABOUR

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM:

- Induction or augmentation of labour using oxytocin

2. PATIENT

- Woman requiring induction or augmentation of labour with oxytocin

3. STAFF

- Medical and midwifery staff
- Student midwives

4. EQUIPMENT

- Infusion pump
- Giving set for infusion pump
- 16-gauge intravenous (IV) cannula and insertion kit
- Cardiotocograph monitor (CTG)

5. CLINICAL PRACTICE

Induction of Labour

- Ensure a delay of six hours following administration of vaginal prostaglandins before commencing oxytocin infusion
- Admit to delivery suite and perform midwifery admission, as outlined in midwifery assessment and/or admission LOP
- Notify delivery suite obstetric medical team of need for medical admission and prescribing of oxytocin
- Insert 16-gauge IV cannula
- Collect and send blood depending on woman's clinical situation
- Perform abdominal palpation - determine position, presentation, and engagement of presenting part
- Perform ultrasound to confirm presentation
- Perform CTG for baseline
- Perform vaginal examination and artificial rupture of membranes where appropriate (as per artificial rupture of membranes LOP)
- Prepare oxytocin infusion with 10 IU oxytocin in 500mLs normal saline and label. Check oxytocin, normal saline, and label with another midwife/medical officer.
- Commence oxytocin via IV infusion pump as advised in Table 1 below
- Commence fluid balance chart
- Increase rate of oxytocin every thirty (30) minutes
- Titrate the increase of oxytocin against the frequency of uterine contractions, aiming for a maximum of 3-4 contractions every 10 minutes
- Cease titration at a maximum of 32 milliunits(mU) per minute
- Recommend continuous electronic fetal monitoring during labour
- Consider administration of uterine tocolytic (terbutaline) in case of uterine hyperstimulation associated with fetal heart rate abnormalities[2,3] In cases of suspected uterine hyperstimulation with an abnormal fetal heart rate pattern secondary to oxytocin infusion, decrease or discontinue infusion [1,2,3]
- Recommence oxytocin infusion if ceased for <30 minutes at half previous rate. If >30 minutes recommence at initial starting dose[3]

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Augmentation of Labour

- Consult with and refer to delivery suite obstetric medical team for admission and discussion about augmentation of labour.
- Discuss with consultant obstetrician for the below:
  - woman ≥ 7cm dilated (if not nulliparous)
  - parous woman
  - previous caesarean section
  - breech presentation
  - multiple pregnancy

  Use of oxytocin may be considered to initiate labour in a fully counselled woman in the last three situations. If this is going to be used, it is to be commenced in the morning, preferably before 10:00 hours during weekdays only. Consider oxytocin cessation once labour established and cervix is ≥6. After 12 hours of oxytocin, birth should be imminent

- Follow clinical practice for induction of labour, as above

Standard Dilution and regime as below:

Table 1

Time after starting infusion in minutes	Oxytocin Dose (milliunits/min)	Volume infused (mL/hr)
		DILUTION: *10 International Units (IU) oxytocin in 500mLs Normal Saline*
0	1	3
30	2	6
60	4	12
90	8	24
120	12	36
150	16	48
180	20	60
210	24	72
240	28	84
270	32	96

6. DOCUMENTATION

- Medical record

7. EDUCATIONAL NOTES

- In women with intact membranes amniotomy should be performed where feasible prior to commencement of an infusion of oxytocin. An exception to this may be in the case of fetal death in utero[1, 3]
- Induced labour has an impact on the birth experience of women. It may be more painful than spontaneous labour, and epidural analgesia and assisted delivery are more likely to be required[2]
- Adequate contractions are most likely to be established at 8-12 milliunits per minute of oxytocin
- Consider cessation of oxytocin in induced labour once the woman has reached 6cm dilation in the situation of previous caesarean section and/or breech presentation [4]

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- High doses of oxytocin or prolonged periods of infusion of oxytocin in electrolyte-free fluids may interfere with vasopressin receptors leading to water intoxication. It is a rare but recognised complication. Care must be exercised with the solution, the concentration, and the total volume given[3]
- A fluid balance chart must be accurately maintained for women receiving this infusion. Careful review of fluid status needs to be undertaken after 2 litres of solution have been administered[2,3]
- Syntocinon should be stored in the fridge[3]

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- First stage labour – recognition of normal progress and management of delay
- Second stage labour – recognition of normal progress and management of delay
- Artificial rupture of membranes
- Induction of labour policy and procedure
- Fetal heart rate Monitoring – Maternity – MoH GL2018_025
- Terbutaline (Bricanyl) – subcutaneous injection for Uterine Hypertonus or Acute Fetal Distress
- Ultrasound at 36 weeks gestation for presentation

9. RISK RATING

- High

10. NATIONAL STANDARD

- Standard 5- Comprehensive care

11. REFERENCES

1. NSW Health PD2011_075 Maternity – Oxytocin for the induction of Labour at or Beyond Term (2011)
2. National Institute for Health and Care Excellence *Induction of labour* (NICE guideline CG70) - available online, last updated 09 January 2017 https://www.rcog.org.uk/en/guidelines-research-services/guidelines/induction-of-labour/
3. Government of South Australia, Department of Health and Wellbeing. Perinatal Practice Guidelines (CG187). *Oxytocin augmentation and induction of labour infusion*. 2018
4. Saccone G, Ciardulli A, Baxter J, Quiñones J, Diven L, Pinar B, Maruotti G, Martinelli P, Berghella V. Discontinuing Oxytocin Infusion in the Active Phase of Labor, Obstetrics & Gynecology: November 2017 - Volume 130 - Issue 5 - p 1090-1096 doi: 10.1097/AOG.0000000000002325

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