A Clinical Guideline for the Management of Oxytocin Infusion for Induction or Augmentation of Labour Following Amniotomy or Spontaneous Rupture of Membranes

For Use in:	Delivery suite
By:	Midwives and obstetricians
For:	Intra partum care
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Compliance links: *(is there any NICE related to guidance)*	NICE CG70, NICE CG190
If Yes - does the strategy/policy deviate from the recommendations of NICE? **If so why?**	FIGO guidelines for CTG interpretation are used at NNUH, rather than NICE guidelines

Trust Guideline for the Management of Oxytocin Infusion for Induction or Augmentation of Labour Following Amniotomy or Spontaneous Rupture of Membranes

Introduction

Oxytocin is a peptide hormone, which is stored and released from the posterior pituitary in a pulsatile fashion. Oxytocin stimulates both the frequency and force of contractions in the uterus at term. Synthetic oxytocin, syntocinon, maintains some of these properties. Oxytocin should always be given intravenously via a controlled infusion device. Because of its antidiuretic properties, oxytocin should be given in a minimum volume of fluid to avoid excessive fluid retention.

There is no consensus on oxytocin dosing and infusion rates. The RCOG published two appropriate infusion regimens. NNUH uses 30i.u. of oxytocin in 500mls normal saline, this is so that the infusion can easily be converted to a post-partum oxytocin infusion if indicated.

Women should be informed that the use of oxytocin following spontaneous or artificial rupture of the membranes will generally bring forward the time of birth but will not influence the mode of delivery or other outcomes. Women should be informed that oxytocin may increase the pain from contractions and appropriate pain relief should be offered.

Before starting oxytocin

Do not commence oxytocin within six hours of administration of vaginal prostaglandins. In women with intact membranes, amniotomy should be performed prior to starting an infusion of oxytocin. Before starting oxytocin ensure the CTG is normal.

When delay in the established first stage of labour is confirmed in nulliparous women, advice should be sought from the obstetric registrar and the use of oxytocin considered.

Slow labour progress due to inadequate uterine activity in a spontaneous labour is unusual in multiparous patients. An obstetrician of ST3 grade or equivalent should make a full assessment, including abdominal palpation and vaginal examination, and discuss the case with the most senior resident obstetrician before making a decision about the use of oxytocin in multiparous women with confirmed delay in the first stage of labour.

Caution should also be exercised in the use of oxytocin in patients who have had a previous caesarean section**.** Please follow the Vaginal Birth after Caesarean Section (VBAC) [895.8] guidelines when managing these patients.

Document an individual management plan when commencing oxytocin, including the timing of the next clinical assessment.

Setting up the infusion

1. Follow the prescription on the drug chart.
2. Prime an appropriate giving set with 30 units of oxytocin added to 500mL of 0.9% sodium chloride, label and mix well.
3. Commence the infusion at 1 mL/hour and increase the dose every 30 minutes (as shown below) until 4-5 contractions in 10 minutes are achieved.
4. Each increment in dose should be checked by two midwives, documented on the CTG trace and in the medical records.
5. The oxytocin dose is titrated against the mother's individual response.

Dose schedule

Time after starting (minutes)	Oxytocin dose (milli-units per minute)	Volume infused (mL per hour)
0	1	1
30	2	2
60	4	4
90	8	8
120	12	12
150	16	16
180	20	20
210	24	24
240	28	28
270	32	32

Starting oxytocin in the second stage of labour

In nullips, if after clinical assessment by an obstetric registrar the contractions are deemed inadequate in the second stage of labour, oxytocin can be commenced at 4mls per hour. This dose is then increased at intervals of 30 minutes according to the above schedule. Consideration of analgesia such as epidural should be made at the time of starting oxytocin.

The commencement of oxytocin in the second stage in multips is controversial; the opinion of the senior resident obstetrician is required in these circumstances.

If there is uterine hyper contractility, (> 5 contractions in 10 minutes) even after oxytocin has been discontinued, consider 0.25 mg terbutaline subcutaneously.

Medical assistance must also be sought if there are inadequate contractions **despite optimal use of oxytocin** or abnormal labour progress.

Monitoring of response to oxytocin

The fetus should be monitored by continuous CTG when oxytocin is administered and interpreted according to trust guidelines: Fetal monitoring [840.16].

If the FHR trace is classified as pathological according to FIGO guidelines oxytocin should be stopped and the registrar should undertake a full assessment of fetal condition before oxytocin infusion is recommenced.

When oxytocin infusion should be stopped or reduced

- If contractions occur more frequently than 5 contractions in 10 minutes
- If at any time contractions are excessive or the uterus fails to relax between contractions
- If the CTG is pathological
- If a decision for Caesarean section has been made

The time of discontinuation / reduction in oxytocin infusion should be documented in the intrapartum notes and on the partogram.

Post-natal oxytocin

The use of active management of third stage is recommended in all women who have required oxytocin during labour. A post-natal oxytocin infusion should be considered in all patients with additional risk factors for post-partum heamorrhage. This can be achieved by increasing the rate of infusion to 166mls per hour (10iu/hour) on the infusion pump. See Major Obstetric Haemorrhage [852.14] guideline for further information including a list of risk factors.

Auditing and Monitoring Compliance

The Maternity Services are committed to the philosophy of clinical audit, as part of its Clinical Governance programme. The standards contained in this clinical guideline will be subject to continuous audit, with multidisciplinary review of the audit results at one of the monthly departmental Clinical Governance meetings. The results will also be summarised and a list of recommendations formed into an action plan, with a commitment to re-audit within three years, resources permitting.

Distribution list/ dissemination method

This guideline has been ratified by the O&G clinical guideline committee and has been disseminated via the hospital intranet to all members of obstetric staff.

References:

1. National Institute for Health and Care Excellence (2008) *Inducing Labour* (Clinical Guideline 70) Available at: https://www.nice.org.uk/guidance/cg70 [Accessed 14th February 2019]
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4. Ayres-de-Campos D, Spong CY, Chandraharan E, FIGO Intrapartum Fetal Monitoring Expert Consensus Panel. FIGO consensus guidelines on intrapartum fetal monitoring: Cardiotocography. International Journal of Gynecology & Obstetrics. 2015 Oct;131(1):13-24.