East Lancashire Hospitals NHS Trust

DIVISIONAL DOCUMENT

Delete as appropriate	Clinical Guideline
DOCUMENT TITLE:	Induction of labour – Artificial Rupture of Membranes and/or use of Oxytocin
DOCUMENT NUMBER:	G 69 v1.1
DOCUMENT REPLACES Which Version	G69 v1
LEAD EXECUTIVE DIRECTOR DGM	Divisional Director – Family Care Division
AUTHOR(S): Note should not include names	Consultant Obstetrician and lead Midwife

TARGET AUDIENCE:	All Maternity Staff
DOCUMENT PURPOSE:	To describe the management of induction of labour using artificial rupture of membranes and/or the use of oxytocin
To be read in conjunction with (identify which internal documents)	ELHT IC24 Aseptic Non Touch Technique Policy Maternity Services G3 - Care of women in labour Maternity Services G11: Abnormal Labour Maternity Services G15: Major obstetric haemorrhage Maternity Services G16: Major obstetric emergency Maternity Services G21: Caesarean section Maternity Services G42: Vaginal birth after Caesarean Section
SUPPORTING REFERENCES	NICE CG190 Intrapartum Care

CONSULTATION		
	Committee/Group	Date
Consultation	Obstetric Consultants and Midwives	March 2016
Approval Committee	Womens Health Guideline Management Group	April 2016
Ratification date at Womens Newborn Quality Safety Board	Jan 2017	
NEXT REVIEW DATE:	Jan 2020	
AMENDMENTS:	Previous induction of labour guidance has been separated into 2 guidelines – Induction of labour with propess/prostin continues as G9 Additional guidance contained re planned admissions for ARM Documentation of frequency of contractions amended to 1:10 Amendments to Oxytocin regime.	

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69.1 Introduction

Induction of labour (IOL) is the initiation of uterine contractions prior to the onset of spontaneous labour, leading to cervical effacement and dilatation and delivery of the baby. IOL is a significant intervention in a pregnancy. Risks, benefits and alternatives should always be discussed with the woman.

69.2 Artificial rupture of membranes (ARM)

Women may be booked for ARM as a planned admission and as the first line method of induction of labour, or may be transferred for ARM from the induction suite following prostaglandin.

Women who are found to be suitable for IOL in the community setting or ANC should be booked for a planned admission via the Induction suite. On the day of admission the women should be advised to ring the IOL suite to confirm bed availability, and then will be asked to either attend the IOL suite to await transfer, or to attend CBS directly, at a specified time if they have capacity.

Women who attend the induction suite to await transfer should be admitted as an inpatient, have baseline maternal observations and an assessment of fetal wellbeing, depending on the clinical indication for induction of labour. Women with fetal concerns should have an FCTG.

- ARM should be performed as near to 9.00 am as possible (unless very urgent)
- ARM may be carried out by a Midwife or an Obstetrician suitably trained and skilled in doing vaginal examinations for women in various stages of labour
- Avoid ARM if the cervix is unfavourable
- A FCTG should be performed prior to the ARM, if the FCTG is pathological, the ARM should be deferred and discussed with the consultant.
- Abdominal palpation to ensure presenting part (head or breech) is engaged or securely sited in the pelvic brim
- Bladder emptied by spontaneous voiding prior to procedure
- Aseptic procedure: vulval toilet
- Dorsal position with left lateral tilt
- Vaginal examination and Bishop's score, excluding any evidence of low-lying placenta or umbilical cord.
- Membranes over presenting part ruptured using Amnihook
- Check presentation unchanged, cord not palpable, position and station of presenting part
- Check FCTG
- Record findings, including state of liquor

69.2.1 Cord prolapse

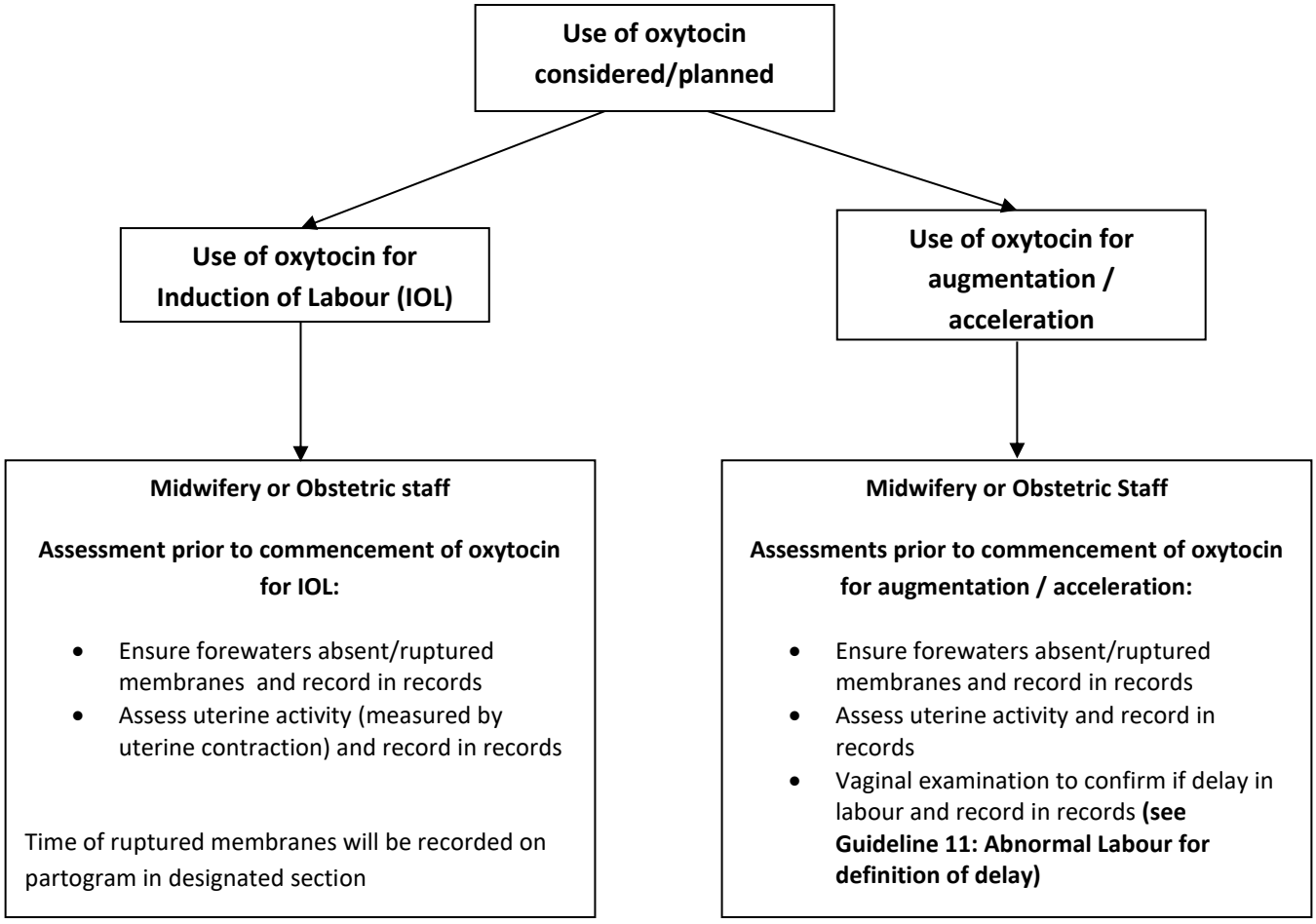
To reduce the likelihood of cord prolapse, which may occur at the time of amniotomy, the following precautions should be taken:

- Before induction, engagement of the presenting part should be assessed.
- Obstetricians and midwives should palpate for umbilical cord presentation during the preliminary vaginal examination and avoid dislodging the baby's head.
- Amniotomy should be avoided if the baby's head is high or consideration of performing a controlled ARM in theatre.

(For management of cord prolapse, see **ELHT Maternity Services Clinical Guideline 16: Major obstetric emergency**)

69.3 Use of Oxytocin

69.3.1 Assessment prior to commencement of oxytocin / syntocinon



69.3.2 Oxytocin dose schedule (including increments)

- Oxytocin is never used to induce labour without prior rupture of the membranes confirmed by vaginal assessment.
- The oxytocin drip rate must be increased as below until contractions on assessment are occurring 4 - 5 in 10 minutes, with a rest period of at least one minute between contractions.
- Once in established labour, contracting as above, the infusion rate can usually be decreased by 50%.

Table 1: Oxytocin infusion regime

10 Units in 500 ml 0.9% saline

Time (min frequency of interval)	Oxytocin dose: (milliunits per minute)	Volume infused (ml/hr)
0	2	6
30	4	12
60	8	24
90	12	36
120	16	48
150	20	60
180	24	72
210	28	84
240	32	96

This regime is suitable for both induction of labour, acceleration of labour and the correction of incoordinate uterine action: augmentation of labour. Make sure the cannula is well-sited in the vein, and the oxytocin well mixed with the fluid. Fix tubing in place in the pump before connection to the cannula (see **ELHT Aseptic Non Touch Technique Policy IC24**). Deliver oxytocin mixture under pump control only. Document each change of dose on the paper or electronic partogram. As oxytocin is an antidiuretic, record the urine output, and seek medical review if not passed urine in four hours.

69.3.3 When oxytocin should be stopped during labour

- If hyperstimulation occurs
- If (severe) fetal distress (with or without hyperstimulation) occurs. If urgent delivery by caesarean section is needed
- If cord prolapse occurs
- Any other situation where augmentation of contractions is no longer required e.g. on commencement of caesarean section
- Oxytocin will be stopped following labour and by virtue of this it is not necessary to document that it was stopped.

Oxytocin **should not** be used within 6 hours of insertion of PGE^2 gel or 30 minutes of controlled release PGs (Propess™).

Oxytocin must be used with caution after ARM in grand multiparous patients (Para 4 or more).

Women who have delivered vaginally before should not have their labour accelerated with oxytocin if progress slows after reaching 5cm dilatation, unless assessed and authorised by a registrar or senior obstetrician on call (ST6 or above). The same applies for women who have had a previous caesarean section (see

ELHT Maternity Services Clinical Guideline 3 - Care of women in labour and **ELHT Maternity Services Clinical Guideline 42: Vaginal birth after Caesarean Section**).

69.3.4 Individual management plan

An individual management plan must be documented in the notes when decision is made to start oxytocin infusion.

69.3.5 Minimum monitoring arrangements for mother and fetus while oxytocin in progress

Mother: Whilst oxytocin is in progress, monitor observations as identified below. It is necessary to monitor the frequency and strength of contractions, being vigilant to recognise hyperstimulation.

1st Stage of labour

As a minimum

- 4 hourly temperature and blood pressure
- Hourly pulse.
- Half hourly documentation of frequency of contractions
- Frequency of emptying the bladder
- Vaginal examination 4 hourly or where there is a concern about progress or in a response to woman's wishes.

2nd Stage of Labour

As a minimum

- Hourly blood pressure and pulse
- Continued 4 hourly temperature
- Vaginal examination offered hourly in the active stage , or in response to a woman's wishes
- Half hourly documentation of the frequency of contractions
- Frequency of emptying the bladder

In women with a history of a previous caesarean section, a maternal tachycardia maybe a first sign of (incipient) uterine rupture. If uterine rupture is suspected during induced labour, the baby should be delivered by emergency Caesarean section (refer to **ELHT Maternity Services Clinical Guideline 21: Caesarean section**; see also **ELHT Maternity Services Clinical Guideline 15: Major obstetric haemorrhage**).

Fetus: If not already in progress, continuous CTG is required once oxytocin has been commenced. CTG commencement or continuation will be documented in the intrapartum records & CTG tracing will be available.

69.4 Prevention and Management of complications of IOL

Hyperstimulation

The response of the myometrium to prostaglandins and oxytocin can be unpredictable. A sustained titanic contraction occurs in about 1 in 500 cases. Fetal distress may follow.
Signs of hyperstimulation are:

- Too frequent contractions i.e. more than one in three minutes
- Elevation of baseline tone, i.e. resting pressure between contractions increased
- Coupling of contractions
- Prolonged contractions

Treatment of hyperstimulation with resultant fetal distress:

- reduce/stop oxytocin as appropriate
- give 5 l/min oxygen by face mask
- make sure patient is lying on her side
- consider using tocolytic:
    - 1st line: 250ug terbutaline s.c.
    - GTN spray, 2 puffs sublingually
    - Oral nifedipine, 10 mg repeated after 20 minutes if necessary.

69.5 Pain relief and IOL

Explain:

- That induced labour is likely to be more painful than spontaneous labour
- Different pain relief options in different settings.
- Provide support and pain relief if appropriate for the woman and her pain, as required
- Encourage women to use their own coping strategies.
- Labouring in water is recommended for women with low risk pregnancies and labour, this includes low risk women induced for post-maturity. Women are not allowed in the pool with syntocinon.