Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board

Protocol for the Management Of Uterine Hyperstimulation

Specialty:	Maternity
Approval Body	Labour Ward Forum
Approval Date:	15th November 2018
Date for Review:	15th November 2021

Management of Uterine Hyperstimulation

Definition:

Hyperstimulation is defined as **either**:

- > 5 contractions in ten minutes over a 30 minute period
  OR
- Contractions lasting more than 2 minutes in duration
  OR
- Contractions of normal duration occurring within 60 seconds of each other.

The tocograph trace may only pick up frequency of contractions accurately in thin women - remember it can also pick up increases in intra-abdominal pressure due to maternal position change and maternal breathing movements. Therefore, the lead professional will need to palpate uterine contractions and record frequency and duration in 10 minutes in order to diagnose hyper -stimulation.

Hyperstimulation may occur with or without fetal heart rate (FHR) changes. Where hyperstimulation occurs naturally, a CTG is also required to ensure early recognition of FHR changes.
If not corrected hyperstimulation, can lead to fetal hypoxia and even uterine rupture (in multips).

Causes:

- Over-stimulation or hyper-sensitivity to oxytocin
- Hyper-sensitivity to Prostaglandins
- Hyper-stimulation of uterus due to build up effect of oxytocin by previously administered prostaglandin
- Spontaneous or syntocinon induced labours, particularly in multiparae, it may be a consequence of fetal malpresentation or malposition or cephalopelivc disproportion.
- Frequent, low amplitude, uterine contractions are observed with abruption of the placenta and may be associated with FHR changes and vaginal bleeding.

In multips: *Watch for signs of impending uterine rupture.*

Management:

National guidelines[4] recommend that:
'In the presence of abnormal FHR patterns and uterine hyper contractility not secondary to oxytocin infusion, tocolysis should be considered.
If the FHR trace is normal, oxytocin may be continued until the woman is experiencing 4 or 5 contractions every 10 minutes. Oxytocin should be reduced if contractions occur more frequently than 5 contractions in 10

minutes. If the FHR trace is classified as abnormal, oxytocin should be stopped and a full assessment of the fetal condition undertaken by an obstetrician before oxytocin is recommenced.'

Tocolysis

1. Terbutaline 250 μg IV or SC OR Salbutamol 100 μg IV or as aerosol inhalation.
2. Gylyceryl trinitrae (GTN) administered as 200μg IV bolus or as 400ug as sublingual spray.

NB: The above drugs are not licensed for use for this indication. NICE recommends informed consent should be obtained and documented.

- ✓ Improvement usually begins within 5 minutes. Side effects are transient maternal tachycardia, flushing of skin and headache and are usually not reported by women.

Table 1 –

Hyperstimulation	General measures	Spontaneous - No drugs	Prostin/Propess	Syntocinon
1. Normal CTG	✓	Observe CTG	Observe CTG	Reduce synto to half rate
2. Suspicious CTG	✓	Consider tocolysis	Remove propess; consider tocolysis	Stop synto
3. Pathological CTG	✓	Carefully assess clinical situation; consider tocolysis or delivery	Remove propess; give tocolysis	Stop synto; consider tocolysis

- ✓ For previous Caesarean section, the threshold for intervention should be lower and a doctor's assessment should be carried out urgently because of the risk of uterine rupture.

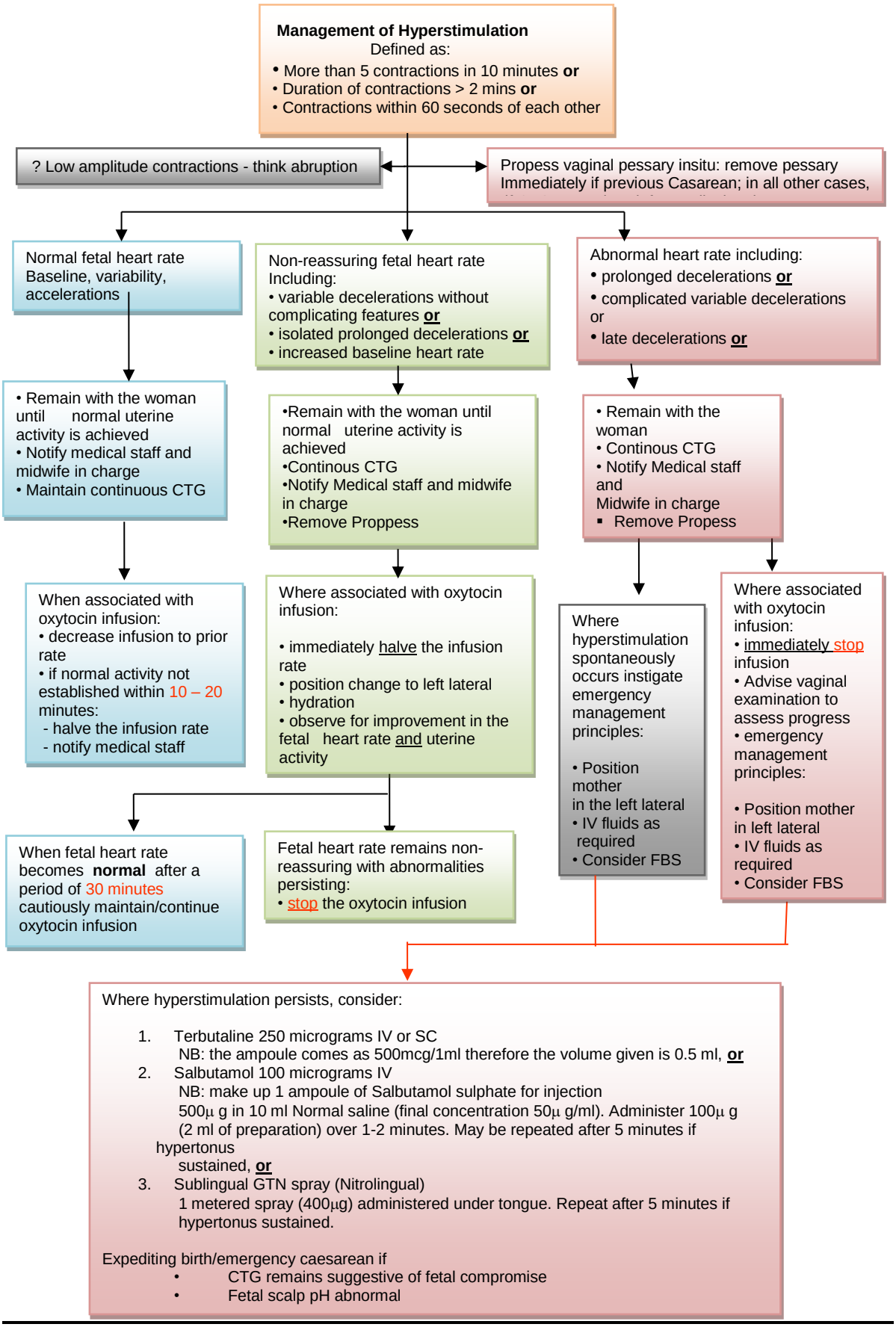
Table 2 – For Previous Caesarean

Hyperstimulation	General measures	Spontaneous - No drugs	Prostin/Propess	Syntocinon
1. Normal CTG	✓	Careful clinical assessment	Remove propess; consider tocolysis	Stop synto
2. Suspicious CTG	✓	Consider tocolysis	Remove propess, tocolysis	Stop synto, consider tocolysis
3. Pathological CTG	✓	As above and consider delivery	As above and consider delivery	Stop synto, tocolysis

References:

1. Fetal Monitoring in Practice 3rd edition (chapter 10) Gibb and Arulkumaran
2. The Royal Australian and New Zealand College of Gynaecologists (RANZCOG), 2006, *Intrapartum Fetal Surveillance, Clinical Guidelines – second edition,* Melbourne, Australia
3. Briggs GG, Wan SR Drug therapy during labor and delivery, part 2"Am J Health Syst Pharm 2006 Jun; 63 (12): 1131–9
4. National Collaborating Centre for Women's and Children's Health. *Intrapartum Care: Care of Healthy Women and Their Babies During Childbirth*. London: RCOG Press; 2007

UTERINE HYPERSTIMULATION


Management of Hyperstimulation
Defined as:
• More than 5 contractions in 10 minutes or
• Duration of contractions > 2 mins or
• Contractions within 60 seconds of each other
? Low amplitude contractions - think abruption
Propess vaginal pessary insitu: remove pessary Immediately if previous Casarean; in all other cases,
Normal fetal heart rate Baseline, variability, accelerations
Non-reassuring fetal heart rate Including:
• variable decelerations without complicating features or
• isolated prolonged decelerations or
• increased baseline heart rate
Abnormal heart rate including:
• prolonged decelerations or
• complicated variable decelerations or
• late decelerations or
• Remain with the woman until normal uterine activity is achieved
• Notify medical staff and midwife in charge
• Maintain continuous CTG
•Remain with the woman until normal uterine activity is achieved
•Continous CTG
•Notify Medical staff and midwife in charge
•Remove Proppess
• Remain with the woman
• Continous CTG
• Notify Medical staff and
Midwife in charge
▪ Remove Propess
When associated with oxytocin infusion:
• decrease infusion to prior rate
• if normal activity not established within 10 – 20 minutes:
- halve the infusion rate
- notify medical staff
Where associated with oxytocin infusion:
• immediately halve the infusion rate
• position change to left lateral
• hydration
• observe for improvement in the fetal heart rate and uterine activity
Where hyperstimulation spontaneously occurs instigate emergency management principles:
• Position mother
in the left lateral
• IV fluids as required
• Consider FBS
Where associated with oxytocin infusion:
• immediately stop infusion
• Advise vaginal examination to assess progress
• emergency management principles:
• Position mother in left lateral
• IV fluids as required
• Consider FBS
When fetal heart rate becomes normal after a period of 30 minutes cautiously maintain/continue oxytocin infusion
Fetal heart rate remains non-reassuring with abnormalities persisting:
• stop the oxytocin infusion
Where hyperstimulation persists, consider:
1. Terbutaline 250 micrograms IV or SC
NB: the ampoule comes as 500mcg/1ml therefore the volume given is 0.5 ml, or
2. Salbutamol 100 micrograms IV
NB: make up 1 ampoule of Salbutamol sulphate for injection
500µ g in 10 ml Normal saline (final concentration 50µ g/ml). Administer 100µ g (2 ml of preparation) over 1-2 minutes. May be repeated after 5 minutes if hypertonus
sustained, or
3. Sublingual GTN spray (Nitrolingual)
1 metered spray (400µg) administered under tongue. Repeat after 5 minutes if hypertonus sustained.
Expediting birth/emergency caesarean if
• CTG remains suggestive of fetal compromise
• Fetal scalp pH abnormal

Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

Title of Guideline:	Protocol for the Management of Uterine Hyperstimulation
Name(s) of Author:	Labour Ward Forum
Chair of Group or Committee approving submission:	Labour Ward Forum
Brief outline giving reasons for document being submitted for ratification	To update current policy which has expired
Details of persons included in consultation process:	Consultant Obstetricians / Midwifery Staff
Name of Pharmacist (mandatory if drugs involved):	N/A
Issue / Version No:	4
Please list any policies/guidelines this document will supercede:	Protocol for the Management of Uterine Hyperstimulation – Dated June 2017
Date approved by Group:	15th November 2018
Next Review / Guideline Expiry:	15th November 2021
Please indicate key words you wish to be linked to document	Uterine, hyperstimulation
File Name: Used to locate where file is stores on hard drive	Z:\npt_fs2\Maternity Incidents Stats Etc\Policies\Ratified - Obs