HUTT maternity
Hutt Valley Maternity Care

HUTT VALLEY DHB

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Cord Prolapse Policy

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

Purpose of the policy

The purpose of this policy is to

- provide safe and effective care for women and their babies when a cord prolapse or presentation is diagnosed in the intrapartum period
- establish a local approach to care, that is evidence based and consistent
- inform good decision making

Scope

- All obstetric staff employed by the Hutt Valley DHB
- All midwifery staff employed by the Hutt Valley DHB
- All Hutt Valley DHB maternity access agreement holders.
- Anaesthetic staff
- Neonatal staff

Abbreviations used in this document

ARM Artificial rupture of membranes
C/S Caesarean Section
ROM Rupture of membranes
SROM Spontaneous rupture of membranes

Definitions

Cord Presentation

It is the presence of the umbilical cord between the foetal presenting part and cervix with or without rupture of membranes
RCOG, 2008.p1

Cord Prolapse

It is the descent of the umbilical cord through the cervix alongside (occult) or past the presenting part (overt) with ruptured membranes
RCOG, 2008.p1

Complications

Maternal

Operative delivery and anaesthesia
Haemorrhage
Sepsis
Post-traumatic stress

Foetal
Hypoxia
Death

Risk Assessment

Women with known antenatal risk factors should have a well-documented care plan. Practitioners should refer to the Referral Guidelines

Risk factors for Cord Prolapse

General
High presenting part
Polyhydramnios
Prematurity
Cord presentation on ultrasound
Malpresentation (e.g. breech, transverse lie)
Birth weight < 2500g
Multiparity

Procedure related
Artificial Rupture of Membranes
External Cephalic Version
Internal Podalic Version
Application of foetal scalp electrode
Rotational instrumental delivery

Prevention of Cord Prolapse

Cord prolapse often cannot be avoided. However early diagnosis and treatment are essential. It is recommended that

- care providers auscultate the foetal heart for 60 seconds following spontaneous rupture of membranes/ artificial rupture of membranes
- artificial rupture of membranes should be avoided if the presenting part is mobile
- If spontaneous rupture of membranes occurs and risk factors are present together with foetal heart abnormalities then perform a vaginal examination to exclude cord prolapse.
  (RCOG, 2008)

Diagnosis

Cord presentation can be diagnosed by ultrasound scan or on vaginal examination through the foetal membranes.
Cord prolapse can be diagnosed on vaginal assessment when cord or pulsation can be felt or an actual visualisation of cord.

Management

1. Remain with woman and call for help immediately. Dial 777 and state that **this is "CODE 2 EMERGENCY: place of occurrence and room number"**
2. Woman assumes the knee chest position or Trendelenburg
3. Relieve pressure from the presenting part off the cord
   - Care provider internally pushes against the presenting part to keep it off the cord. This must be maintained until the care provider is ready to deliver the

baby. i.e. **The care provider's fingers remain insitu until they are told otherwise**
    - Bladder filling procedure should be considered if there is any delay in transfer to theatre (Appendix 3)
4. Maternal administration of oxygen via a non-rebreather face mask at 8L per minute
5. Continuous monitoring of the foetal heart
6. Assess for delivery

Assessment to deliver the quickest way

This is dependent on the stage of labour and the presence or not of foetal death.

If there are no foetal heart tones and no pulsation from the cord it is recommended that foetal demise is confirmed by an ultrasound. Driscoll et al (1987) found that foetal heart movements could still be visualised in the presence of no cord pulsation or inaudible heart sounds.

If the baby is confirmed dead then labour progresses normally.

If the baby is alive:

- Decision of delivery method to be made by clinical judgement either operative vaginal delivery or caesarean section **Category 1** i.e. Life threatening condition.
- If the cervix is fully dilated and there is less than 1/5 head palpable abdominally and without foetal compromise may have assisted birth
- If cervix is not fully dilated with/without foetal compromise Category 1 C/S (RANZCOG, 2009)
- Method of anaesthesia is decided between the anaesthetist and the obstetrician
- It is essential to release the clamp on the indwelling catheter (if bladder filling procedure has occurred) prior to the delivery of the baby regardless of mode of delivery
- Tocolytics may also be administered at the discretion of the obstetrician
- Paediatric RMO to be present at the birth of the baby
- Cord blood arterial and venous sent for pH and lactate
- Documentation
- Communication to parents

Case review

A case review may be arranged following a cord prolapse. The purpose of the forum is to review what happened during the emergency and to act as a learning experience for all involved. Questions that should be asked include:

- What did we do well?
- What do we need to improve on?
- What further education do we need?
- Recommendations

Communication with the parents

It is imperative that the LMC or a designated practitioner involved with the birth discusses the birth and answers any questions that the mother/parents may have.

The act of taking time to discuss events with the parents is suggested to be an effective risk management tool.

Documentation

All details of care should be clearly documented
During the emergency one person should be allocated to document.
The cord presentation/prolapse management sheet may be useful (See appendix 2).

References

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Draycott, T., Winter, C., Crofts, J. & Barnfield, S. (Eds.)(2008.) PROMPT. Practical Obstetric Multiprofessional Training Course Manual. United Kingdom: North Bristol NHS Trust

Driscoll J.A., Saden, O., Van Gelderen, C.J. & Holloway, G.A. (1987) Cord Prolapse, Can we save more babies? *British Journal of Obstets and Gynae* 94, 594 – 595

Lindsay, P. (2004) Presentation and prolapse of the umbilical cord, In Henderson, C. & MacDonald, S. eds. Mayes Midwifery 13th ed. Edinburgh: Balliere Tindall.

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Royal College of Obstetricians and Gynaecologists (2008) Umbilical cord prolapse. Green top Guideline No.52 London RCOG

Referral Guidelines

See the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) MOH, 2012.

Informed Consent

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).

Appendix 1

Cord Presentation/Prolapse Management Sheet

ACTION	TIME ACTIONED	ACTIONED BY
Diagnosis		
emergency call made to operator (777) **state an obstetric emergency, delivery suite and room** no.		
Emergency staff arrive		
▪ Obstetric registrar		
▪ Obstetric consultant		
▪ Paediatric RMO		
▪ Anaesthetic registrar		
▪ Core midwives		
Documentation (clinical notes)		
Cord prolapse management sheet commenced		
Woman in knee chest position/Trelendenburg		
Pressure relieved off cord Manually/ bladder filling procedure		
Oxygen administered to mother via non-rebreather mask		
Pre-op drugs administered • Ranitidine IV • Metoclopromide • Sodium citrate		
Tocolytics administered		
Transfer to theatre		
Catheter clamp released		
Baby delivered		
Resuscitation commenced		
Cord arterial and venous gas taken and sent		

Appendix 2

Bladder filling procedure for cord prolapse

Aim:
To relieve pressure on the foetal cord

Action:
Bladder filling is a method of relieving pressure on the umbilical cord. It does this by elevating the presenting part of the baby for an extended period of time. It may also inhibit uterine contractions
Consideration should be given to performing this procedure when there is a delay in performing a caesarean section.

Method

1. Place the woman in the Trendelenberg position
2. Insert size 16 gauge Foley's catheter into the bladder usual process
3. Connect a sterile bag of 0.9% sodium chloride to a administration set that is connected to the catheter
4. Fill the bladder with 500- 700 ml sterile saline
5. Spigot/clamp catheter
6. It is essential to empty bladder again before any method of delivery is attempted

(Draycott, T., Winter, C., Crofts, J. & Barnfield, 2008)