Worcestershire Acute Hospitals NHS Trust

Cord Prolapse

(Management of)

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

This guideline aims to give staff clear evidence-based guidance on the risk factors and action to be taken in the event of a prolapsed cord.

This guideline is for use by the following staff groups:

All staff working in an antenatal/intrapartum maternity area.

Lead Clinician(s)

Helen Tipper	Professional Development Midwife
Daisy Bradley	Audit, Guideline and Patient Experience Midwife
Laura Veal	Consultant Obstetrician – Clinical Director
Approved by *Maternity Governance Meeting* on:	19th January 2024
Review Date: This is the most current document and should be used until a revised version is in place	19th January 2027

Key amendments to this guideline

Date	Amendment	Approved by:
19/01/2024	Guideline Review and PROMPT updates	MGM

Definition of Cord Prolapse: Descent of umbilical cord through cervix alongside (occult) or past presenting part (overt) in the presence of ruptured membranes.

- The incidence of cord prolapse is reported to be 0.14 - 0.62%. Midwives and medical staff must therefore familiarise themselves with the risk factors and the drills to be followed in the event of umbilical cord prolapse.
- 50% of cases are preceded by obstetric intervention (i.e. ARM, ECV and Manual Rotation).
- In hospital settings, mortality is largely secondary to prematurity and congenital malformations.
- Cord prolapse is also associated with birth asphyxia which is predominantly caused by cord compression and umbilical arterial vasospasm and can result in long term morbidity because of hypoxic ischaemic encephalopathy.

Risk factors for Cord Prolapse
General risk factors

- Pre-term
- Low birth weight
- Abnormal Presentation
- Congenital abnormalities
- Multiple Pregnancy
- High Parity
- polyhydramnios
- High presenting part on V.E
- Low lying placenta, other abnormal placentation

Procedure related risk factors

- Artificial rupture of membranes
- Vaginal manipulation of fetus with ruptured membranes
- External cephalic version (during procedure)
- Internal podalic version
- Stabilising induction of labour

Suspicion of cord prolapse

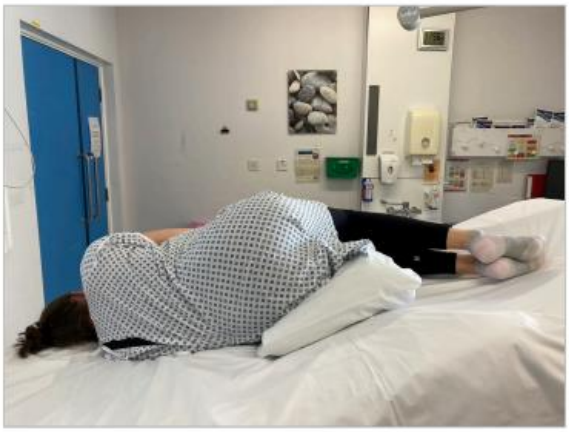
- Suspect cord prolapse where there is abnormal foetal heart rate pattern (e.g. Bradycardia, variable decelerations) particularly if such changes occur soon after membrane rupture, spontaneously or with amniotomy.
- Perform speculum and/or digital vaginal examination (even at preterm gestation)
- Do not perform ultrasound examination to predict increased probability of cord prolapse.

Actions

- If a patient presents with a prolapsed cord, the appropriate medical staff will be called by dialling 2222 and declaring an obstetric and neonatal emergency. These include the obstetric consultant, registrar and SHO, anaesthetist and neonatal doctors.
    - If in Community – Call 999 for immediate transfer to the Consultant Unit.
    - The aim is to try and avoid compression of the cord by the presenting part, especially during contractions.

General principles of reducing Cord compression

- Turn off Oxytocin (if being used)
- Consider use of tocolytics if hyperstimulation present (e.g. Terbutaline).
- Raise the maternal pelvis via maternal positioning e.g. by placing pillows under hip on left side or in a knee chest position (as illustrated below).
- Minimal handling of loops of cord lying outside vagina. Manual replacement of prolapsed cord above presenting part is **not** recommended.
- Protect with a dry pad **only** if appropriate.



Left side with bed tilted head-down and pillows under hip
(could be a folded pillow if you only have one pillow)

Knee-chest position

During the VE, assess:

- Presenting part
- Dilatation of the cervix
- Fetal heart

Attempt to prevent cord compression, when there is a delay in delivery, by:
Manual elevation of presenting part:

- Insert gloved hand or 2 fingers into vagina and apply pressure to presenting part pushing it upwards.
- Variation is to remove hand from vagina once presenting part is above brim and apply suprapubic pressure upwards.
- Be aware that excessive displacement of presenting part may result in more cord prolapsing.

Bladder filling to elevate the presenting part:

Key Points:

- The saline should not be direct from the fridge but should be at room temperature.

- When transferring to hospital or into theatre place the empty bag of fluid on the maternal abdomen to serve as a reminder to the team that the bladder requires emptying

Five key steps for easy and effective maternal bladder filling:

1. **Prepare equipment*** – Connect 500 mL bag of sterile 0.9% sodium chloride to an intravenous infusion (IV) giving set and prime the giving set by running fluid through the full length of the tubing. Close the flow clamp once the fluid is fully run through.
   ***Important to check that the end of the Luer connector of the IV giving set fits well inside the foley catheter so the bladder can be effectively filled without undue leakage.**

2. Insert Foley catheter into the urinary bladder – N.B. depending on urgency, *consider* allowing bladder to empty before attaching IV giving set and running in sterile 0.9% sodium chloride.*
   ***Currently, there is no robust evidence to support emptying versus not emptying the bladder first. However, whilst emptying prior to filling the bladder may be considered, it should not lead to delay in transferring the woman and/or expediting birth.**

3. Firmly connect IV giving set into foley catheter (which is attached to the 500 mL bag of saline) and squeeze the bag to instil 500 mL of sterile saline into the bladder as quickly as possible. Close the flow clamp once 500mL fluid has been instilled.

4. Leave the IV giving set and empty bag of fluid (or near empty bag) attached to the catheter for transfer to hospital/labour ward.
   (This will help remind staff to empty her bladder when the woman arrives in hospital/theatre).

5. **Empty maternal bladder prior to attempting any method of birth -** detach giving set to allow fluid to drain from the bladder, then either remove the catheter if aiming for vaginal birth, or attach a catheter bag if planning for caesarean birth.

Delivery

- **If the cervix is fully dilated** every effort should be made to deliver the baby as quickly as possible by Forceps delivery or Ventouse delivery (in the community if delivery is imminent proceed with normal delivery. whilst awaiting assistance)

- **If the delivery is not imminent** for any reason, the midwife should maintain pressure on the presenting part to reduce pressure on the cord and give 0.25milligrams terbutaline S/C if contracting, followed by immediate transfer to obstetric theatre. Auscultate the fetal heart. Commence CTG whilst awaiting delivery by caesarean section.

    - Category 1 caesarean- if cord prolapse is associated with suspicious or pathological fetal heart rate pattern.

    - Category 2 caesarean- if FHR pattern normal.

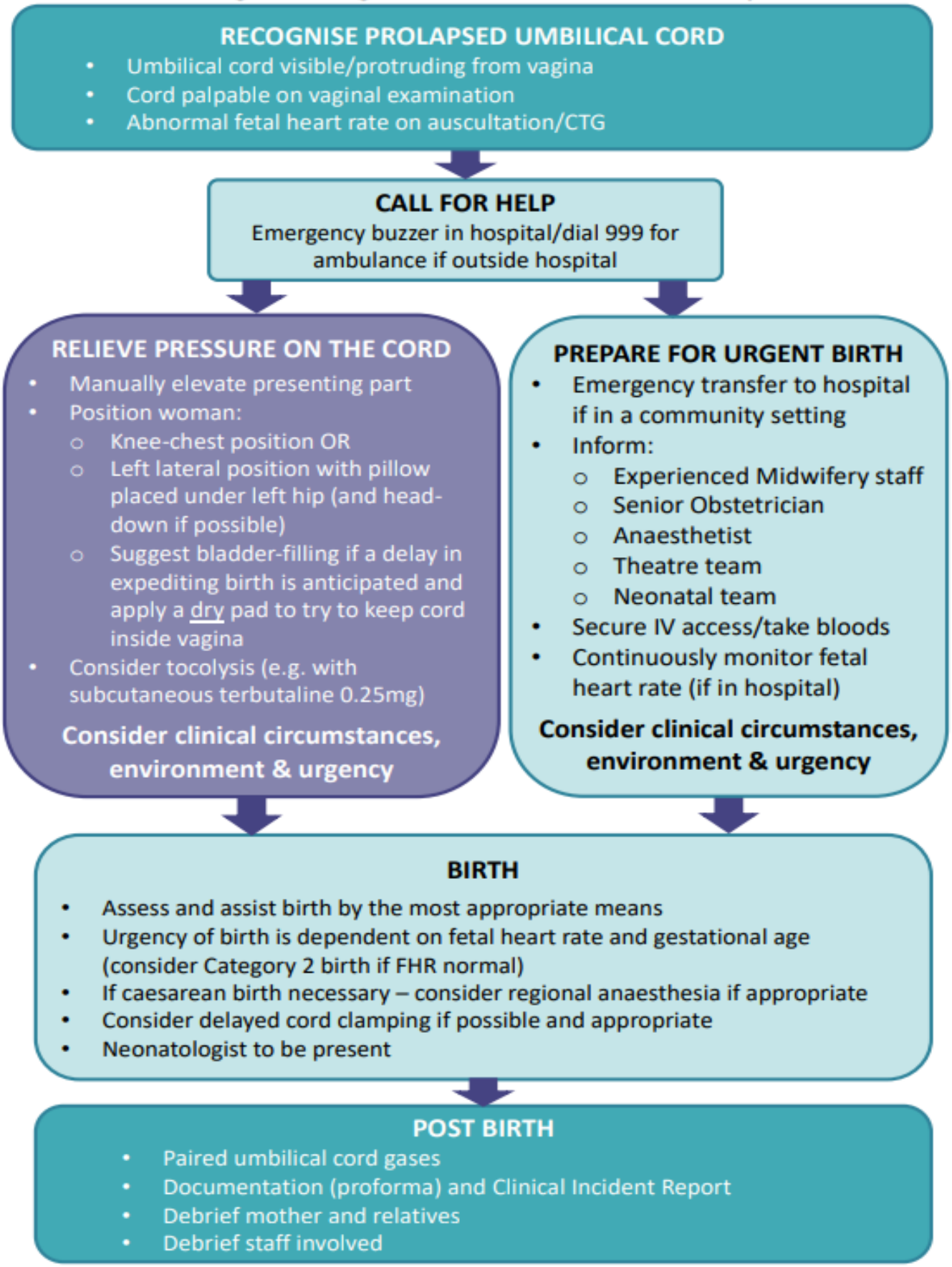
- In some circumstances (e.g. Internal podalic version for a second twin) breech extraction may be performed.
- Cord blood samples for pH and base excess measurement should be taken.
- The Obstetric and Anaesthetic teams need to review whole clinical picture to decide on the most appropriate method of analgesia.

NB: Even if no pulsation of the cord is felt emergency measures should still be carried out as pulsation may return if the pressure on the cord is relieved.

Following delivery:

- Document all events and timings and ensure any CTG traces are stored as per Maternity Records Policy.
- Debrief patient, partner and staff.
- Complete Clinical Incident form (Datix Web).

Management Algorithm for Umbilical Cord Prolapse



Monitoring

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the Policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
	Datix Incidents	ADHOC	ADHOC	Governance Team	QSRM	ADHOC

Contribution List

This key document has been circulated to the following individuals for consultation;

Designation
All Maternity Staff – Newsletter and Guidelines Forum

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Maternity Quality Governance Meeting Maternity Guidelines Forum Meeting