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Cord Prolapse:
Guidelines For Prevention and Management

Introduction and Aim

Umbilical cord prolapse occurs in 1/200-300 deliveries with a perinatal mortality rate of 9%. In 25% of cases it may occur prior to hospital admission. Once the cord prolapse is diagnosed it needs to be treated as an obstetric emergency. It is imperative to expedite the delivery in order to optimise foetal outcome.

Executive Summary

Change	Link
Details of predisposing factory for and prevention of Cord Prolapse	Predisposing factors; Prevention of cord prolapse
Flowchart for the Management of Cord Prolapse	Flowchart for the Management of Umbilical Cord Prolapse
Management of Cord Prolapse in various settings, including in the community.	Management of Cord Prolapse on Delivery Suite; Management of Cord Prolapse in the Community; Management of Cord Prolapse in the Midwifery Led Unit (MLU)

Objectives

To provide clarity to clinicians working within maternity services in providing care for women who experience cord prolapse.

Scope

This procedure applies to all of our staff in all locations including those with honorary contracts.

Equality Health Impact Assessment	*An Equality Health Impact Assessment (EHIA) has not been completed.*
Documents to read alongside this Procedure	*Preterm Labour and PPROM Guideline*
Approved by	*Maternity Professional Forum* *Quality & Safety Meeting, Obstetrics & Gynaecology*

Accountable Executive or Clinical Board Director	*Title of post holder*
Author(s)	*Mirka Slavska, Consultant Obstetrics & Gynaecology*

1.1.1.1.1.1 Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments			
Version Number	**Date of Review Approved**	**Date Published**	**Summary of Amendments**
UHB 2	*January 2008*	*January 2008*	*New document*
3	June 2011	June 2011	
4	April 2014	April 2014	A Holmes E Ferris
5	March 2017	March 2017	M Slavska
6	August 2020		Author: M Slavska Amendments: Prevention of cord prolapse section added References made to other guidelines Recommendations regarding discharge summaries added

1. Table of Contents

Contents

2 Definition

Descent of the umbilical cord through the cervix alongside *(occult)* or past the presenting part *(overt)* in the presence of ruptured membranes. *Cord presentation* is the presence of the umbilical cord between the foetal presenting part and the cervix, with or without intact membranes.

Back to Contents

3 Predisposing factors

- Malpresentation – (Breech 1% & footling breech 15%)
- Prematurity
- Multiple gestation
- Grand multiparity
- Foetal abnormality
- Polyhydramnios
- High presenting part at onset of labour
- Abnormal placentation
- Obstetric manipulations e.g. forceps

Back to Contents

4 Prevention of cord prolapse

Antenatal diagnosis of cord presentation by routine ultrasound examination is not sufficiently sensitive or specific.

In case of malpresentation (transverse, oblique or unstable lie) **consider elective admission after 37+0**. Advise woman to present quickly to delivery suite if contractions, start or membranes rupture.

Initial dmission should be offered in case of preterm, pre-labour rupture of membranes (PPROM) for non-cephalic presentations. Please refer to Preterm Labour and PPROM Guideline for further management.

4.1 Artificial Rupture of Membranes if High Risk of Cord Prolapse

If the presenting part is noted to be high and/or mobile, an ARM should be avoided. If it becomes necessary to rupture the membranes, senior advice should be sought prior to the ARM. Furthermore, consider performing the

procedure in theatre with staff in place for immediate progression to caesarean section.

ARM should not be undertaken when the cord is palpated underneath the presenting part.

Back to Contents

5 Diagnosis of Cord Prolapse

Diagnosis is commonly made during a vaginal examination or may be suggested by an abnormal foetal heart rate pattern on cardiotocograph (CTG). The diagnosis should be suspected if risk factors are present and/or CTG abnormalities (bradycardia, variable decelerations) start soon after spontaneous or artificial rupture of membranes.

5.1 Management if Cord Presentation is Suspected

1. Maintain intact membranes

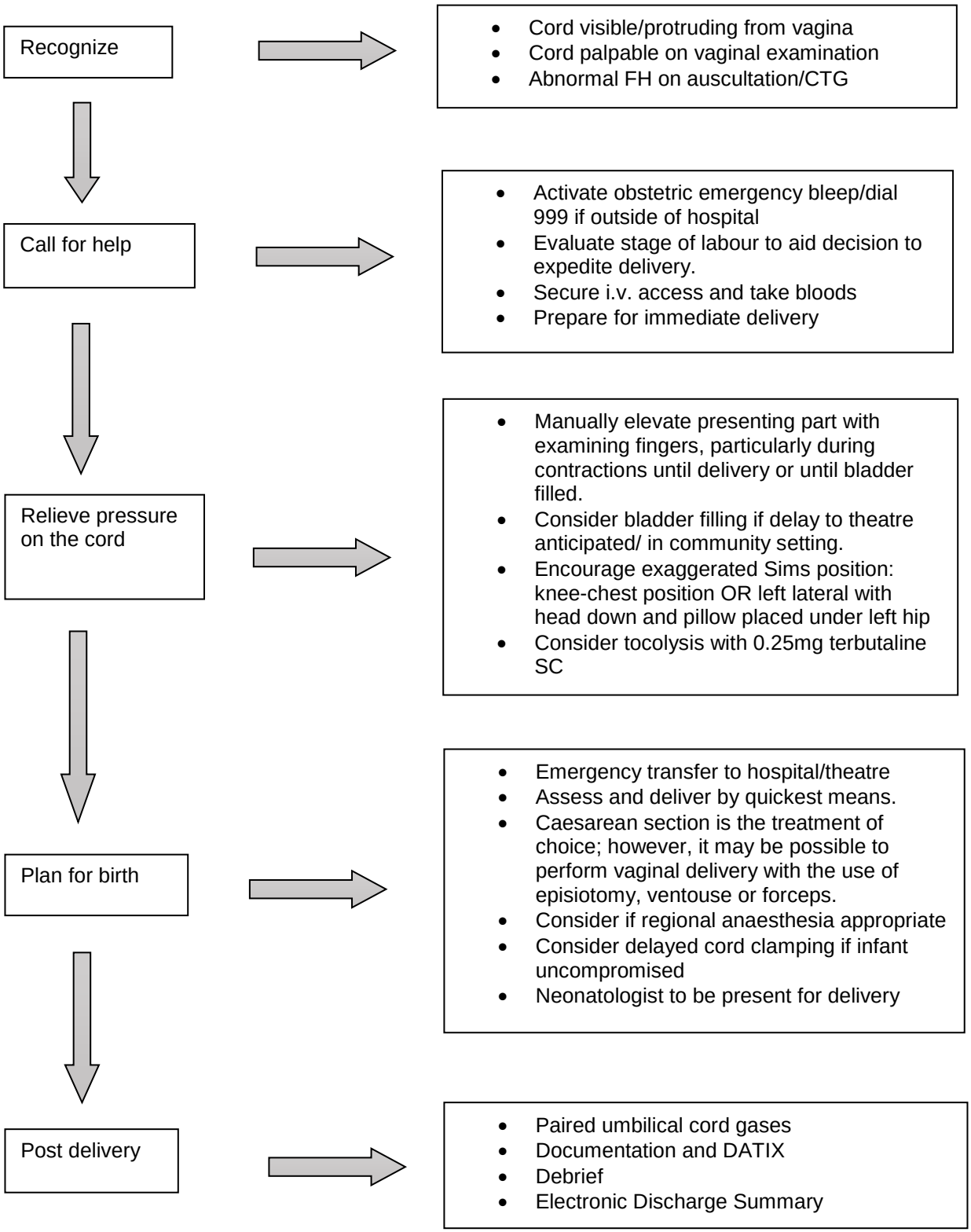
2. Transfer to Delivery Suite for urgent abdominal delivery

3. If the diagnosis is made by an inexperienced midwife or obstetrician the diagnosis should be confirmed by the most senior person available, prior to emergency Caesarean section.

Back to Contents

6 Management of Cord Prolapse

6.1 Flowchart for the Management of Umbilical Cord Prolapse



6.2 Management of Cord Prolapse on Delivery Suite

1. Call for help by pressing the buzzer or asking a relative to do so.

2. Avoid handling the cord as this can provoke vasospasm.

3. Minimise cord compression either by placing the patient in the Trendelenburg (head down) position or the knee-chest position.

4. Explain to the woman and her family, and monitor the fetal heart continuously (CTG).

5. Digital pressure should be employed on the presenting part to elevate it and relieve pressure on the cord. If decision to delivery is likely to be prolonged consider filling up bladder with 500-700 mls of saline to minimize cord compression.

6. Tocolysis can be considered while preparing for caesarean section if there are persistent fetal heart rate abnormalities after attempts to prevent compression mechanically and when the delivery is likely to be delayed.

7. Although the measures described above are potentially useful during preparation for delivery, they must not result in unnecessary delay.

8. Secure i.v access and send off FBC and Group and Save

9. Emergency Caesarean section should be carried out as soon as possible, unless the fetus is dead or unless the cervix is fully dilated and vaginal delivery is deemed possible. A category 1 caesarean section should be performed as soon as is possible without unduly risking maternal safety. Regional anaesthesia may be considered in consultation with an experienced anaesthetist.

10. Verbal consent is satisfactory.

11. Vaginal birth, in most cases operative, can be attempted at full dilatation if it is anticipated that delivery would be achieved quickly and safely.

12. Delayed cord clamping can be considered if the baby is not compromised.

13. Ensure fetal viability before proceeding with emergency caesarean section.

14. A practitioner competent in the resuscitation of the newborn should attend all deliveries with cord prolapse.

15. Paired cord blood samples should be taken for pH and base excess measurement.

Back to Contents

6.3 Management of Cord prolapse at the Threshold of Viability

Expectant management should be discussed when the gestation is at the limits of viability i.e. 22+0 to 24+6 weeks. There is no evidence to support replacement of the cord back into the uterus. Women should be counselled by the obstetric consultant and neonatologist on whether to continue with the pregnancy at such early gestation. Please refer to Preterm Labour and PPROM Guideline.

Back to Contents

6.4 Management of Cord Prolapse in the Community

Perinatal mortality is increased by more than tenfold when cord prolapse occurs outside compared with inside hospital. Delay in transfer to hospital appears to be an important contributing factor.

1. If the woman is at home with a cord prolapse, she should be advised over the telephone to assume the knee-chest face down position while waiting for hospital transfer. During emergency ambulance transfer, the knee-chest is potentially unsafe and the left lateral position should be used.

2. All women with cord prolapse should be advised to be transferred to the nearest consultant led unit for delivery. The presenting part should be elevated during transfer either manually or using bladder filling methods (insert Foley's catheter and fill bladder with 500-700 mls of saline to minimize cord compression. Clamp off catheter to prevent emptying).

3. Postnatal debriefing should be offered to every woman with cord prolapse.

Back to Contents

6.5 Management of Cord Prolapse in the Midwifery Led Unit (MLU)

When a cord prolapse is diagnosed on vaginal examination, pressure on the cord must be relieved if it is still pulsating. Therefore the midwife who is performing the vaginal examination must not remove the examining fingers. The aim is to hold the presenting part off the cord particularly through a

contraction.

1. Maintain position of examining fingers

2. Pull emergency buzzer or ask patient's relative to do so.

3. Assistant will initiate transfer policy liaising with senior Delivery Suite staff at Consultant Led Unit, ensuring urgency of situation is clear.

4. Keep the woman and her family aware of the ongoing circumstances.

5. Woman should be asked to adopt the left lateral position, and the midwife should keep elevating foetal head until the woman is transferred to delivery suite on a bed.

6. If the cord is visible outside the vagina and is still pulsating – avoid handling as this may cause spasm of the cord vessels.

7. If the woman is multiparous and found to be fully dilated and pushing, expedite the delivery and prepare to resuscitate the baby.

Back to Contents

6.6 In all cases of cord prolapse: post event actions

- Document times of events, personnel in attendance and actions taken.
- Communicate with the parents throughout.
- Postnatal debriefing should be offered.
- Complete a clinical incident (DATIX) report.
- When the patient is discharged an electronic discharge summary should be created to reflect the events at the delivery.

Back to Contents

7 Auditable Standards

1. Time from recognition to delivery of in hospital cord prolapse.
2. Staff completion of emergency skills training (PROMPT).

8 References:

Umbilical Cord Prolapse, RCOG green-top guideline No 50, November 2014

Enkin M et al (2000) A guide to effective care in pregnancy and childbirth. 3rd Edition. Oxford University Press

Back to Contents