Guideline

Cord Prolapse

1. Purpose

This document outlines the guideline details for the prevention, diagnosis and management of cord prolapse at the Women's.

Where processes differ between campuses, those that refer to the Sandringham campus are differentiated by *pink italic* text or have the heading **Sandringham campus.**

2. Definitions

Cord Prolapse: the umbilical cord lies in front of or beside the presenting part in the presence of ruptured membranes.

Cord presentation: the presence of the umbilical cord between the presenting part of the fetus and the cervix.

In both conditions a loop of the cord is below the presenting part. The difference is in the condition of the membranes; if intact it is cord presentation and if ruptured it is cord prolapse.

3. Responsibilities

Obstetric and midwifery staff are responsible for identifying and responding to this emergency situation.

4. Guideline

4.1 *Incidence*

The incidence of cord prolapse/ presentation is said to occur in 0.1 - 0.6% of births[1]. The predisposition to cord prolapse is higher in a breech presentation and with multiple gestations.

4.2 *Risk factors*

- High / ill fitting presenting part
- High parity
- Prematurity
- Multiple pregnancy
- Polyhydramnios
- Malpresentations
- Obstetric manipulation.

4.3 *Prevention*

- Identification/ awareness of risk factors
- Artificial rupture of membranes (ARM) should not be done when the station is high.

If ARM is essential to manage a difficult obstetric situation and the head is not engaged and high consider a controlled ARM by senior medical staff in theatre. The same procedure should take place in the situation of polyhydramnios.

Consider need to identify a cord presentation on ultrasound.

4.4 *Clinical recognition*

Diagnosis of cord prolapse is made by visual inspection or by palpation during vaginal examination where the umbilical cord is felt below or beside the presenting part.

Cord prolapse should be suspected with an abnormal fetal heart rate pattern (bradycardia, severe variable decelerations) occurring soon after spontaneous or artificial rupture of membranes.

Note: In the presence of predisposing risk factors a vaginal examination should always be performed after the membranes rupture spontaneously or if a fetal bradycardia occurs after rupture of membranes.

4.5 *Management*

- **Summon urgent medical assistance** (Pink Alert or Code Green may be initiated depending on clinical situation)
- ***Women's at Sandringham call an obstetric emergency***
- **Initiate immediate assessment of clinical circumstances**; gestation, presentation, cervical dilatation, fetal wellbeing. Immediate delivery is necessary when the fetus is viable
- **Place the woman in either knee to chest position** (refer below to: figure 1)

Figure 1. Knee to chest position

or alternatively an exaggerated Sims' position (left lateral supported with 2 pillows).

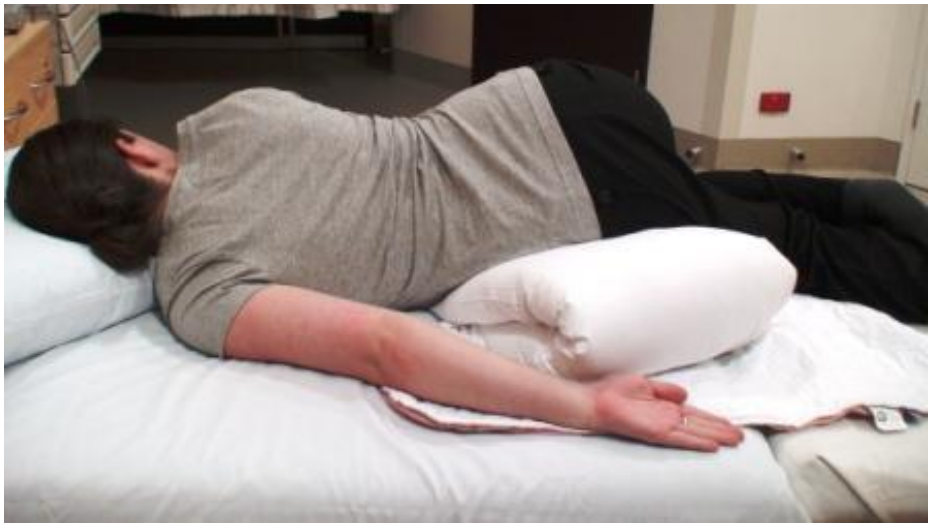

Figure 2. Exaggerated Sims' position

- **prevent cord compression:** the presenting part is pushed out of the pelvis upward by fingers in the vagina. This is to continue until delivery is undertaken. Note if the cord is pulsating

- In certain circumstances (i.e. when there is likely to be a long delay before delivery), urinary bladder may be filled with fluid to elevate the presenting part off the compressed cord
- Avoid over-handling of umbilical cord as it can cause vasospasm
- Administer oxygen to the woman via a mask (oxygenation pre c/section)
- Discontinue oxytocics if present
- Provide reassurance and explanation to the woman/ family
- Continue efforts to hold the presenting part off the cord.
- Delivery must be expedited to reduce morbidity and mortality to the fetus:
    - undertake immediate LUSCS if vaginal birth not imminent
    - undertake assisted vaginal birth (if conditions are suitable, e.g. fully dilated, presenting part at spines or below).
- Deep Trendelenburg position may also be useful to add gravity to other efforts to elevate the fetus off the cord
- Monitor and document fetal heart rate
- Consider tocolysis with terbutaline if there is a delay in caesarean section. Labour: Acute Tocolysis - Management of Hypertonus
- Paired umbilical cord blood samples to be collected following delivery/birth. Labour: paired umbilical cord blood sampling
- ***Post birth***
    - Documentation of birth and outcome (contemporaneous and factual)
    - Debrief of: family (by senior medical staff), medical and midwifery staff involved in the birth.

5. Evaluation, monitoring and reporting of compliance to this guideline

Compliance to this guideline will be monitored, evaluated and reported through reported clinical incidents through VHIMS.

6. References (evidence, best practice, professional codes, websites, etc.)

1. Green-top Guideline No. 50. Royal College of Obstetricians and Gynaecologists. www.rcog.org.uk. April 2014.

7. Legislation related to this guideline

Not applicable.

8. Appendices

Not applicable.