UMBILICAL CORD PROLAPSE

Keywords: cord prolapse, obstetric emergencies, cord prolapse obstetric ward, cord presentation, intrapartum fetal emergency

Obstetric Ward
- < 23 weeks
- 23-25 weeks
- ≥ 25 weeks

Labour and Birth Suite
Management of Cord Prolapse
QRG - Cord Prolapse >23 weeks

AIM
- To guide management of umbilical cord prolapse that has been identified on the Obstetric Ward or on the Labour and Birth Suite.
- Note: Care is individualised to the gestation (<23 weeks; 23-25 weeks; or ≥25 weeks gestation).

BACKGROUND INFORMATION

Umbilical cord prolapse occurs in 0.2 - 0.4% of births. Obstetric interventions, such as amniotomy, induction of labour, external cephalic version and the insertion of an intrauterine pressure transducer are associated with up to 47% of umbilical cord prolapses. Risk factors connected to umbilical cord prolapse include malpresentation/malposition, low birth weight, multiple gestation, multiparity, polyhydramnios, prematurity, contracted pelvis or pelvic tumours, and an abnormally long umbilical cord.

Perinatal mortality and morbidity has fallen significantly as a result of advances in management of prolapsed cord and neonatal intensive care support. A shorter delivery interval time after diagnosis of cord prolapse is associated with lowered perinatal mortality. Other factors such as the degree of cord compression, the length of the umbilical cord prolapsed, and the location of the woman when the event occurs can influence the outcome.

DEFINITIONS
- Umbilical cord presentation: the umbilical cord lies in front of the presenting part, the membranes are intact.
- Umbilical cord prolapse: the cord lies in front of the presenting part and the membranes are ruptured.
- Occult umbilical cord presentation/prolapse: the cord lies trapped beside the presenting part, rather than below it.
CORD PROLAPSE ON THE OBSTETRIC WARD

KEY POINTS
1. All women who are high risk for cord prolapse should immediately have a speculum examination and / or digital vaginal examination following spontaneous rupture of membranes.6
2. Management of cord prolapse depends on parental/medical consultation which includes fetal gestation and viability.
3. If no cord pulsation or fetal heart is heard, presence or absence of fetal heart beat should be obtained by Ultrasound Scan.

MANAGEMENT
Management for cord prolapse on the ward varies according to gestation and fetal viability.
Further management of cord prolapse is available below in: Cord Prolapse on Labour and Birth Suite.

LESS THAN 23 WEEKS GESTATION
• Inform the obstetric team.
• Unless a previous management plan has been confirmed by the obstetric team transfer the woman to the Labour and Birth Suite for ongoing care.
• An emergency medical code is not required in this situation.

23 WEEKS TO 25 WEEKS GESTATION
• Dial 55; call a Code Blue – Medical. This allows medical and midwifery staff to assess the situation on the ward and make a management decision in consultation with the parents.
• The Senior Obstetric doctor will then make a decision regarding the mode of delivery.
• If the decision is made for a Caesarean Section delivery, then dial 55, call a Code Blue – Caesarean Section.

EQUAL TO OR MORE THAN 25 WEEKS GESTATION
• Dial 55; call a Code Blue – Caesarean Section. This informs the anaesthetic, obstetric, paediatric, and Labour and Birth Suite staff to go immediately to theatre rather than the ward.
• Prepare and take the woman to theatre.6
• Verbal consent is appropriate in this situation.6

CORD PROLAPSE ON LABOUR AND BIRTH SUITE

KEY POINTS
1. The Registrar should be informed of all women presenting in labour at high-risk for umbilical cord prolapse.
2. Manual elevation of the fetal presenting part decompresses cord occlusion.4, 6
3. Reduce potential umbilical cord spasm by minimal handling of the cord,6 and prevention of the cord becoming cold or drying.7
4. If delay in delivery is expected catheterisation of the bladder should be performed. 500mL of Sodium Chloride 0.9% is infused into the bladder and the catheter is clamped. This elevates the presenting part6 and may reduce contractions.4
5. Expectant management should be considered in cases with associated risks of fetal prematurity.4
6. Delay in delivery time interval may increase the risk of perinatal morbidity and mortality.4 The measures described on the following pages, whilst potentially useful, should not result in unnecessary delay.6
# Management of Cord Prolapse

## Procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
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</table>
| 1 | **Call for assistance**<sup>6</sup>  
Press the emergency assist bell.  
Dial 55, call a **CODE BLUE MEDICAL** as required  
If the fetus is potentially viable, call a **Code Blue – Caesarean Section**.  
The type of code depends on the gestation. |
| 2 | **Note the time** |
| 3 | **Position the woman**  
Place the woman into the exaggerated Sims position.<sup>6</sup> |
| 4 | **Cord Management**  
**4.1 Cord protrusion from the vagina:**  
• If able, replace the cord back into the vagina  
• If the cord cannot be replaced into the vagina with minimal handling, apply warmed soaked normal saline gauze over it.  
**4.2 If the cord remains in the vagina:**  
• Apply digital pressure to the presenting part<sup>6</sup>  
• Assess pulsation of the cord  
• Assess vaginal dilatation, presentation and station of the presenting part.  
**4.3 If the cervix is fully dilated:**  
• Consider operative delivery  
**4.4 If delivery is not imminent and the fetus is potentially viable i.e. gestation equal to or more than 25 weeks gestation:**  
• Prepare the woman for emergency |

## Additional Information

Management for cord prolapse is as follows:

**Less than 23 weeks gestation:**  
• The gestation is below viability – do NOT call an emergency code.  
• Notify the obstetrical medical team of the cord prolapse.  
**23 to 25 weeks gestation:**  
• Dial 55, **CODE BLUE MEDICAL** should be called.  
• A decision is made by senior medical staff if a caesarean section is to be performed.<sup>6</sup>  
**Equal to/more than 25 weeks gestation:**  
• Dial 55, **CODE BLUE - CAESAREAN SECTION** should be called.

The woman lies on her left side in a semi-prone position, with her right knee and thigh drawn up: her left arm lies along her back while the hips and buttocks are elevated on a wedge or pillow. This relieves pressure on the umbilical cord.<sup>5</sup>

Over handling of the umbilical cord risks continued cord compression and vasospasm.<sup>4, 6</sup>  
Reduction of temperature and cooling can cause spasm of the cord.<sup>4</sup>

Elevation of the presenting part decreases decompression of the cord.<sup>4</sup>  
Provides information on fetal well-being.  
Information allows medical staff to make a decision regarding mode of delivery.

Prepare equipment for assisted delivery if the birth is anticipated to be managed quickly and safely, taking care to avoid impinging the cord where possible.<sup>6</sup>  
Assisted vaginal delivery should not be attempted if the presenting part is not engaged or the cervix is not fully dilated.<sup>4</sup>  
Reassess cervical dilatation prior to...
<table>
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<tr>
<th>PROCEDURE</th>
<th>ADDITIONAL INFORMATION</th>
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<tbody>
<tr>
<td>caesarean section and transport to theatre.</td>
<td>commencing a caesarean section as the woman may be suitable for an assisted delivery, particularly in the multiparous woman.¹</td>
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<tr>
<td>For gestation between 23-25 weeks prepare the woman for theatre until medical decision is made</td>
<td>Caesarean section may be done for women between 23-25 weeks gestation depending on the clinical situation with consultation between the parents and senior medical staff.</td>
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<tr>
<td>5 Fetal Heart Rate Monitoring</td>
<td>Continuous fetal heart rate monitoring should be initiated to allow constant assessment of fetal well-being.</td>
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<td>Auscultate the fetal heart rate as soon as possible.</td>
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<td>An ultrasound should be done immediately if:</td>
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<tr>
<td>• No cord pulsation can be felt</td>
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<tr>
<td>• Fetal heart rate cannot be found on auscultation.</td>
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<tr>
<td>6 Intravenous therapy (IVT)</td>
<td>Ceasing oxytocin may decrease contractions which cause pressure on the cord.⁵</td>
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<tr>
<td>• Cease Syntocinon infusion immediately</td>
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<td>• Insert intravenous cannula – commence Compound Sodium Lactate Solution intravenously.</td>
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<tr>
<td>7 Administering Terbutaline</td>
<td>Tocolysis may be advocated to inhibit uterine activity.⁶ Contractions can exacerbate cord compression.¹</td>
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<td>Consider administration of Terbutaline 250 micrograms subcutaneously for women in established labour.</td>
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<tr>
<td>8 Urinary catheterisation</td>
<td>A full bladder can inhibit uterine activity and reduce compression on the cord by raising the presenting part.¹</td>
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<td>Consider catheterisation of the bladder if delay to theatre is expected:</td>
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<tr>
<td>• Attach a standard infusion set to a 16 g indwelling catheter</td>
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<td>• Instil a Sodium Chloride 0.9% infusion into the catheter until the distended bladder is visible above the symphysis pubis</td>
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<tr>
<td>• Clamp the catheter and attach to a drainage bag</td>
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<tr>
<td>• Remove the clamp and allow urine to drain when the time is appropriate in theatre</td>
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<tr>
<td>9 Documentation</td>
<td>The infusion clamp should be removed and the bladder emptied just before entering the peritoneal cavity during caesarean section.⁴</td>
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<td>Detailed notes of the incident should be documented in the medical record.</td>
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<td>10 Support and Debriefing</td>
<td>Follow up discussion after the birth by medical and midwifery staff is essential to reduce adverse psychological outcomes.⁵</td>
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<td>Explanation of the management should be given to the woman and support people during the incident as appropriate.</td>
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MANAGEMENT ALGORITHM FOR CORD PROLAPSE >23 WEEKS GESTATION

1. **NOTE THE TIME**

2. **CALL FOR ASSISTANCE**
   - DIAL 55 - ask for appropriate CODE BLUE - CAESAREAN OR MEDICAL as required

3. **POSITION THE WOMEN IN THE EXAGGERATED SIM’S POSITION**

4. **PERFORM A VAGINAL EXAMINATION**
   - Replace the cord in the vagina
   - Apply digital pressure to elevate the presenting part
   - Assess the cervical dilatation

   If the woman is fully dilated consider operative delivery

5. **MONITOR THE FETAL HEART**

   - Turn off Syntocinon

   - Consider Terbutaline 250 MICROGRAMS subcutaneous

6. **PREPARE FOR THEATRE**

7. **CATHETERISATION**
   - Consider filling the bladder with 500 mL of Normal Saline 0.9% if delay to theatre is expected

8. **TRANSFER THE WOMAN TO THEATRE**
REFERENCES (STANDARDS)


National Standards – 1- Care provided by the clinical workforce is guided by current best practice
9- Recognising and Responding to Clinical Deterioration in Acute Health Care

Legislation – Nil
Related Policies - Nil
Other related documents –

RESPONSIBILITY

Policy Sponsor Nursing & Midwifery Director OGCCU
Initial Endorsement July 2003
Last Reviewed December 2014
Last Amended Review date December 2017

Do not keep printed versions of guidelines as currency of information cannot be guaranteed.
Access the current version from the WNHS website.