

Registered Nurse Initiated Activities Decision Support Tool No. 8A: Obstetrical Emergencies – Cord Prolapse

Decision support tools are evidenced-based documents used to guide the assessment, diagnosis and treatment of client-specific clinical problems. When practice support tools are used to direct practice, they are used in conjunction with clinical judgment, available evidence, and following discussion with colleagues. Nurses also consider client needs and preferences when using decision support tools to make clinical decisions.

The Nurses (Registered) and Nurse Practitioners Regulation:	Regulation: (6)(1)(h.1) authorizes registered nurses to “manage labour in an institutional setting if the primary maternal care provider is absent.”
Indications:	When RNs are managing labour of a woman who experiences a prolapse of the umbilical cord
Related Resources, Policies, and Standards:	Neonatal Resuscitation Program
Definitions and Abbreviations:	<p>Overt (Frank) Umbilical Cord Prolapse– Following ROM visualizing the cord through the introitus or palpation in vagina</p> <p>Occult (Hidden, Not Visible) Umbilical Cord Prolapse– Occurs anytime during labour; suspected with bradycardia with variable decelerations during contractions seen on EFM</p>

Assessment

- Cord prolapse occurs when the cord lies below or adjacent to the presenting part of the fetus. Cord prolapse may be overt or occult.
- Overt cord prolapse can be diagnosed either by seeing the cord presenting from the vagina, or unexpectedly palpated during a vaginal exam.
- Occult cord prolapsed can occur anytime during labour; it can be suspected with bradycardia, prolonged decelerations, and/or variable decelerations with EFM. Abnormal FHR pattern following ROM may be the first indication of cord prolapse.
- Occult cord prolapse cannot be diagnosed definitively until the time of cesarean section or unless the umbilical cord is seen in front of presenting part during an ultrasound.

Nursing Diagnosis

- Potential of injury (fetus) related to interruption of blood flow due to prolapsed cord

Special Considerations and Precautions

- Pressure of the presenting part on the cord may restrict umbilical cord blood flow resulting in acute fetal heart rate changes, which, if persistent hypoxia leads to asphyxia
- Artificial rupture of membranes (AROM) should be avoided in the following circumstances:
 - Unknown or noncephalic presentation
 - Unengaged presenting part
 - Cord presentation

NOTE: The FHR should be auscultated immediately before and after AROM and after SROM.

It is helpful to be aware of the following risk factors associated with prolapsed cord:

General:

- Unengaged presenting part
- Malpresentation, unstable lie (transverse, oblique)
- Hydramnios
- Prematurity
- LBW < 2.5 Kg
- Grand multiparity (5 or greater)
- Fetal Congenital Anomalies
- Breech Presentation
- Second Twin
- Low lying placenta (or other abnormal placentation)

Procedure Related:

- AROM
- Vaginal manipulation of fetus with ROM
- Scalp electrode application
- IUPC insertion
- Attempted external cephalic version
- Decompression amniocentesis for hydramnios
- Expected management of preterm prelabour ROM (SOGC, 2007, RCOG, 2008)

Interventions

First RN:

1. If cord prolapse is suspected, perform a vaginal examination to determine
 - Cervical length/effacement/dilatation
 - Station of presenting part
 - If the cord is palpated, determine if pulsations are present (without unnecessary manipulation of the cord)
2. If cord prolapse is confirmed (cord palpated), call for assistance, stay with the woman
 - Position the woman head down with hips elevated (in knee-chest, modified Sims, or Trendelenburg)
 - Keep gloved hand in vagina (or insert gloved hand into vagina if not already performing digital vaginal exam) and exert upward pressure on the fetal presenting part to stop compression of the cord
 - Keep hand in position until delivery or orders received from PCP
3. Ask 2nd RN or designate to notify the PCP and necessary team members
4. If you can see cord protruding from the vagina
 - Do not attempt to replace cord above the presenting part (touching the cord may cause vasospasm)
 - Wrap cord loosely in sterile towel saturated with warm, sterile normal saline
5. Continue to effectively communicate with the woman and her support person(s)
6. If there will be a delay in arranging for immediate delivery by C/S
 - Ask 2nd RN to initiate EFM
 - Continue to keep the woman in head-down position with your gloved hand elevating the presenting part until delivery or otherwise ordered

7. If transport is required, consult with PCP regarding:
 - Filling bladder with 500 – 700 mL normal saline to elevate fetal head from pelvic brim (drain prior to C/S)
 - Tocolysis
(SOGC, 2009; Lowdermilk & Perry, 2012)

2nd RN or designate:

1. Notify the PCP and necessary team members (Obstetrician, Pediatrician, Anesthesia, OR staff and other health team members)
2. Assist to position woman head down with hips elevated
 - Knee chest (on all fours with head low down on pillows and buttocks elevated)
 - Modified Sims position (lateral) with hips elevated as high as possible with pillows
 - Trendelenburg
3. Auscultate FHR and initiate EFM if immediate cesarean section is not possible
4. Administer O₂ by mask at 8–10 L/min (Simpson & James, 2005)
5. Initiate IV
6. Draw blood for CBC and group and screen if not already done
7. Prepare for vaginal (or assisted) birth if cervix is fully dilated (with head visible **or** station +2), or prepare for immediate C/S
8. Be prepared to perform neonatal resuscitation
9. Collect cord gases at delivery

Intended Outcomes

- Removing pressure from the presenting part on the umbilical cord may improve fetal perfusion
- Immediate delivery of the baby will enable resuscitation

Education

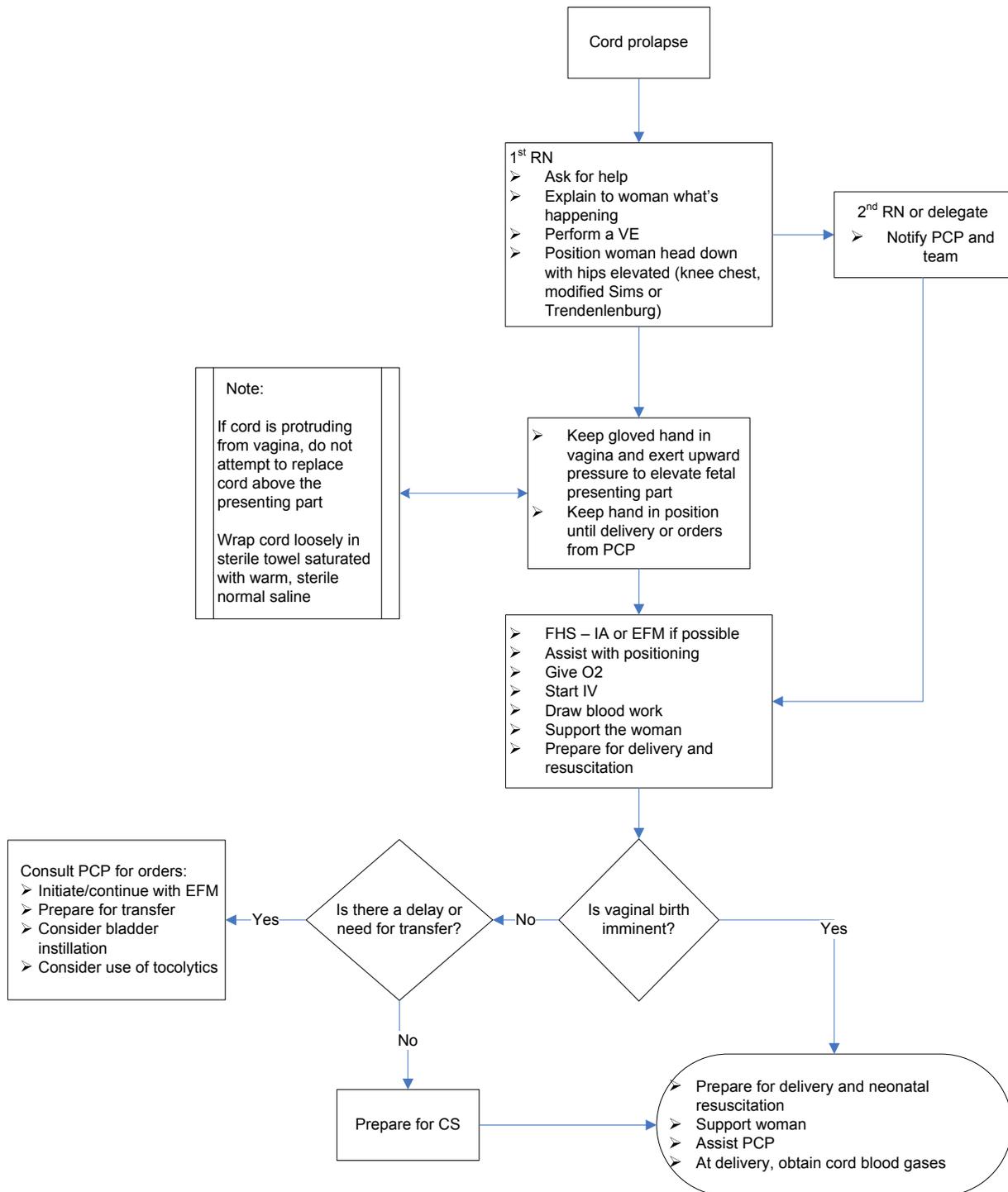
- Provide information about the urgency of the situation, and probable need for caesarean section
- Provide support to the woman and her support person(s) regarding cord prolapse, plan of treatment, implications and explain the treatment modalities as these are being applied
- Offer postpartum debriefing to the woman and her support person(s)

Documentation

1. FHS characteristics
 - Time of cord prolapse, time of notification to PCP
 - Note presence of cord pulsation
 - FHR characteristics
 - Vaginal exam findings
2. Interventions
 - Time, sequence and outcomes of interventions-re: maternal positioning, pressure relief from gloved hand, IV, O₂
 - Delivery method
 - Time of arrival of PCP, other personnel
3. Responses
 - Newborn condition (NRP required, APGAR Score)
 - Cord blood gas results
 - Maternal condition – physical, psychological

Decision Support Tool:

Suspected Cord Prolapse



References

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