Team Name: Regional Obstetrical Team Team Lead: Regional Director – Acute Care Approved by: Executive Director – Acute & Chief Nursing Officer	Reference Number: CLI.5810.PL.010 Program Area: Obstetrics Policy Section: General
Issue Date: November 14, 2019 Review Date: Revision Date:	Subject: Amnioinfusion

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POLICY SUBJECT:
Amnioinfusion

PURPOSE:
The purpose of this guideline is to aid in the:

- Determination of when an amnioinfusion may be beneficial,
- Safe implementation of an amnioinfusion and
- Monitoring of an amnioinfusion.

BOARD POLICY REFERENCE:
Executive Limitations (EL-01) Global Executive Restraint & Risk Management
Executive Limitations (EL-02) Treatment of Clients

POLICY:
Amnioinfusion is the instillation of fluid into the amniotic cavity. It is used to help reduce the severity of repetitive and/or complicated variable decelerations associated with labour. The goal is to prevent a cesarean section or operative delivery due to severe repetitive and/or complicated variable decelerations of the fetal heart rate.

DEFINITIONS:
Amnioinfusion: An infusion of warmed or room temperature fluid (Ringer's Lactate or normal saline or) into the uterine cavity, generally used to help alleviate repetitive fetal heart rate (FHR) variable decelerations.

Intrauterine Pressure catheter (IUPC): Internal, accurate measurement of the strength, length and timing of maternal contractions.

Nursing Care –

1:1 Nursing care - where one nurse assumes responsibility for all of the care provided to one patient for the duration of their shift or as long as the patient's condition requires one to one care. 1:1 care indicates the patient is requiring more intensive care but does not indicate that the nurse must be in continuous presence of the patient.

Continuous 1:1 Nursing Care – where one nurse assumes responsibility for all of the care provided to one patient for the duration of their shift and is in continuous presence of the patient or as long as the patient's condition requires one to one care. Care of the patient must be assumed by another nurse when the primary nurse goes on break or is required to leave the patient.

Umbilical cord prolapse: The presentation of the umbilical cord below or adjacent to the fetal presenting part.

IMPORTANT POINTS TO CONSIDER:

- If possible, consideration should be given to consultation with an obstetrician or obstetrical care provider.
- Amnioinfusion may be given by gravity or pump at a rate determined by the physician.
- Amnioinfusion is often administered as an initial bolus (usually 250 – 600milliliters (mLs) normal saline or ringers lactate) over 30 - 60 minutes then an hourly rate (usually 100 – 200 mLs/hour). Administration may also be accomplished by a single, or series, of bolus(es) or a continuous infusion without a bolus.
- Rapid administration is to be avoided.
- FHR needs to be continuously monitored as well as resting tone and contraction pattern.
- A Cochrane review found amnioinfusion reduced the rates of cesarean section, FHR decelerations, postpartum endometritis and maternal hospital stays greater than 3 days. Mean cord pH was higher with the amnioinfusion group.
- If the FHR does not improve after 1000 mLs of instilled fluid, consider other options (i.e. operative delivery or cesarean section if warranted) 1:1 nursing is required

Indication for an amnioinfusion:

- Repetitive variable decelerations of the FHR.

Requirements for an amnioinfusion:

- Informed consent from the patient received and documented
- An IUPC in place (Intrauterine Pressure Catheter - CLI.5810.SG.015).

Contraindications to an amnioinfusion:

- Anytime an IUPC is contraindicated (Placenta previa/vasa previa – suspected or confirmed, undiagnosed vaginal bleeding, malpresentation, active vaginal infections such as Herpes Simplex, Hepatitis B/C, HIV or chorioamnionitis – relative contraindication) and/or
- Persistent abnormal FHR in relation to late decelerations or decreased variability.

Complications of an amnioinfusion are rare but may include:

- Infection (fever),
- Chorioamnionitis,
- Amniotic fluid emboli has been reported but not definitively linked to the amnioinfusion and or,
- Polyhydramnios may cause elevated uterine pressure and fetal bradycardia.

Used with caution in chorioamnionitis as it may wash out the bacteriostatic amniotic fluid and cause a greater infection.

PROCEDURE:

1. Obtain physician order, including solution, bolus (if any) and hourly rate (if one). May use room temperature or fluid warmed through a blood warmer. *Please note: Fetal gestational ages of less than 37 weeks should have warmed fluid only. Warmed fluids should not be warmer than normal body temperature (37° Celsius).*
2. Explain the procedure to the patient, including risks and benefits, and obtain consent. Make sure to inform the patient that she will experience an increase in the amount of vaginal fluid loss.
3. Initiation:
   - Initiate continuous external fetal monitor (EFM) if not already being done.
   - Prime the intravenous line (IV) and label line as 'amnioinfusion' with a red medication sticker.
   - If using an IV pump, program the pump according to the orders obtained.
   - Connect IV line to amnioport on the IUPC.
   - Initiate infusion by gravity or on an infusion pump.
4. Monitoring: Assess the patient every 15 minutes for signs of complications related to the amnioinfusion.
   - Observe for vaginal leaking of uterine fluid:
     - Stop the amnioinfusion if vaginal leaking stops or is noticeably less than the infusion rate. Pads may be weighed to ensure an appropriate amount of fluid is being leaked (1 gram is equal to 1 mL of fluid).
     - If more than 250 mLs of fluid (estimated) is retained, stop the infusion until the fluid has been returned.
     - Stop the infusion if frank blood is noted.
     - Maintain patient comfort by changing pads frequently.
   - Observe for increasing baseline uterine pressure:
     - Baseline uterine pressure may increase during the bolus/initial infusion but should not exceed more than 15mmHg above prior baseline. If baseline pressure continues to rise, discontinue the amnioinfusion.
     - Resting baseline pressures should not exceed 40 mmHg. If this occurs, stop the infusion and inform the physician. If the resting baseline pressure decreased once the infusion has stopped, the infusion may be started again, preferably at a lower rate, on the order from a physician.
     - Palpate uterine resting tone at least every 15 minutes
   - Monitor uterine contractions (Montevideo units (MVU), frequency, duration, resting tone),

- Monitor FHR (rate, variability, accelerations, decelerations) and
- Monitor maternal vital signs as per standards.

5. Document in the integrated progress notes:
   - Indication for use,
   - Consent obtained,
   - Time of initiation/discontinuation,
   - Type of fluid used, rate and bolus amount (if any),
   - Resting tone prior to and after initiation,
   - FHR response to amnioinfusion,
   - Amount and colour of vaginal fluid loss and
   - Patient tolerance of the procedure.

EQUIPMENT/SUPPLIES:

- One use, sterile intrauterine pressure catheter
- Appropriate reusable cable/connector
- Electronic fetal monitor
- Securing device (usually found in catheter package)
- Sterile gloves
- Normal saline or ringers lactate
- IV infusion set

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