External Cephalic Version (ECV)

Related Documents and Resources:

1. B-00-12-12070 - Intrapartum Electronic Fetal Monitoring (EFM) in the Maternity Centre
2. B-00-12-10038 - Caesarean Section, Urgent and Emergency: Patient Preparation

Skill Level: Specialized

- Perinatal RN in Maternity Centre
- Obstetrician skilled in procedure

Need to Know

External Cephalic Version (ECV) refers to a procedure in which the fetus is rotated from the breech to the cephalic presentation by manipulation through the maternal abdomen. Using ultrasound guidance, the Obstetrician manipulates the presenting fetal part out of the pelvis and guides the fetal head into the pelvis. ECV should be offered to patients at 37 to 38 weeks gestation who have no contraindications to the procedure.

Selection Criteria:

Inclusion:

- Gestational age of 37 to 38 weeks with a confirmed breech presentation
- ECV may be performed on patients with mild hypertension, gestational diabetes, and a history of a previous C/Section at the discretion of the Obstetrician.

Exclusion:

- Multiple pregnancy
- Severe maternal disease including severe hypertension, cardiac disease, insulin dependent diabetes, pre eclampsia, etc
- Third trimester bleeding
- Placenta previa
- Evidence of uteroplacental insufficiency – suspected intrauterine growth restriction or oligohydramnios
- Congenital abnormalities
- Significant uterine malformation
- Classical C/Section scar
- Atypical/abnormal Non- Stress test (NST)
- Vertex presentation
- Hyperextension of the fetal head
- Ruptured membranes
- Known Rh isoimmunization

Relative Contraindications:

- Macrosomia (over 4kg)
- More than 1 previous C/Section
- Excessive maternal obesity

- SGA with abnormal Doppler parameters

Version during Labour:
ECV appears to be a safe option for patients who present with breech presentation in labour, who have intact membranes and no contraindications.

Risks:
- Vaginal bleeding
- Placental abruption
- Cord prolapse
- Rupture of membranes within 48 hours
- Fetal heart rate changes e.g. variable decelerations, prolonged decelerations

PRACTICE GUIDELINE

Equipment & Supplies:
1. Electronic fetal monitor
2. Portable ultrasound
3. Nitroglycerin sublingual spray
4. Automatic blood pressure machine
5. IV tray and intravenous infusion set
6. Normal Saline 1000 mL
7. Oxygen mask, O_2 flow meter

Procedures/Assessment/Interventions:
Pre-procedure Requisites:
- Verify that the patient has had nothing by mouth (NPO) for 8 hours before the procedure
- Verify the patient and support person understand the purpose, risks, benefits and limitations of an ECV.
- Complete the initial patient assessment, including vital signs
- Perform Leopold's maneuvers and apply external fetal monitor.
- Obtain a normal NST before ECV in order to assess fetal well-being. Notify the obstetrician if the NST is atypical/abnormal.
- Have patient empty bladder
- Ensure patient is wedged to left to minimize aortocaval compression
- Initiate IV as per Obstetrician order
- Labs as per Obstetrician order
- **Physician**: obtains informed consent:
    - Why the procedure is being performed
    - Discomfort related to procedure
    - Possible need for Nitroglycerin spray
    - Possible need for IV
    - Success/failure rates
    - Risk that fetus will revert back to breech
    - Management plans if procedure is successful/unsuccessful

- If unsuccessful make patient aware that vaginal breech delivery is not an option at SPH but a scheduled C/S will be arranged. If patient wishes to attempt a vaginal breech delivery a referral can be made to an Obstetrician at BCWH who performs vaginal breech deliveries.
- Physician performs ultrasound prior to procedure to confirm breech presentation, adequate amniotic fluid, absence of gross fetal abnormalities and placental location.

During ECV Procedure:

- Discontinue external fetal monitoring at the start of the procedure
- Provide emotional support to the patient
- Sublingual Nitroglycerin Spray(check expiry date) should be available at the bedside
- Auscultate fetal heart rate every 1 to 2 minutes. Interrupt or stop procedure if decelerations occur
- Vital signs: BP, heart rate and respirations every 15 minutes and PRN
- Discontinue ECV if patient complains of severe pain or requests procedure to be discontinued
- If ECV is unsuccessful after 5 minutes of attempts, stop and allow the patient to rest on her side for 2 to 3 minutes before restarting. Check maternal and fetal status before any further attempts. A maximum of 3 to 4 attempts dependent on ongoing fetal/maternal tolerance.

Post Procedure:

- Maintain continuous electronic fetal monitoring for minimum 60 minutes post procedure whether procedure was successful or not. It is common for fetal heart rate (FHR) tracing to be atypical for initial 20 to 40 minutes post procedure. These changes may reflect the fetal response to a transient period of stress caused by decreased uteroplacental blood flow during the procedure.
- Keep patient NPO until a normal FHR pattern is obtained
- **There is a small risk of bleeding during the procedure that could cause the blood of the mother and fetus to mix. If the mother is Rh negative and the fetus is Rh positive, maternal blood sensitization may cause problems in the present and future pregnancies. Prophylactic administration of RhoGAM to the patient after the procedure greatly reduces the risk of this complication.**

If Emergency Arises: e.g. decelerations, bleeding

- Call for help
- Prepare for emergency C/Section and notify OR. Determine whether Code Pink or emergency C/S
  - Notify CNL/CN, NICU
- UC to admit patient as acute and prepare C/S documentation package
- Call for stat labs (CBC, Group and Screen) if not already done
- Initiate IV if not already in situ
- Administer sodium citrate 30 mL PO (as per B-00-12-10038)
- Physician to obtain consent

Patient& Family Education:

Successful ECV and normal NST: discharge the patient home with discharge instructions.
Instruct patient to return immediately if any of the following occurs:

- Bleeding from vagina
- Contractions or abdominal pain
- Decreased fetal movement. Ensure patient has FM Count sheet
- Rupture of membranes

Ensure the patient has the Maternity Centre contact numbers.

Documentation:

- Maternity Centre Fetal Assessment Record (if ECV in Fetal Monitoring Clinic)
- BC Triage and Assessment Record
- Interdisciplinary Progress notes
- MAR
- Fluid balance

References:

British Columbia Women's Hospital External Cephalic Version: Admission and Care WW.04.06 Apr. 16, 2012. Accessed May 2013 http://bcchcms.medworxx.com
External Cephalic Version (Maternal Newborn). Mosby's Nursing Skills (2012). St. Louis, MO. Elsevier. Retrieved May 8 2013 from www.mosbysnursingskills.com

Persons/Groups Consulted:

MSQC
Perinatal Directions Committee

Developed By:

Maternity Centre SPH

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