COMPLICATIONS OF PREGNANCY

ABNORMALITIES OF LIE/PRESENTATION

EXTERNAL CEPHALIC VERSION

Keywords: External cephalic version, ECV, breech, turning a breech, non-cephalic presentation

BACKGROUND INFORMATION

Performing an external cephalic version (ECV) has been shown to reduce the rate of non-cephalic presentations at term thereby reducing the number of caesarean sections for breech birth at term.[1, 2] Additionally, there is currently insufficient evidence on the effect of other techniques, such as maternal positioning and moxibustion, for breech version.[3] Spontaneous version rates for nulliparous women are approximately 8% after 36 weeks gestation, and only 5% after an unsuccessful ECV. If a successful ECV is done, spontaneous reversion will occur in 5% of cases.

Risk for complications following ECV include abnormal cardiotocograph (CTG) patterns which may be uncomplicated and transient or pathological[4], bleeding which may be asymptomatic (e.g. fetomaternal transfusion, abruption)[4, 5], cord complications[4, 5], ruptured membranes[5], and fetal mortality[4].

A recent large multi-centre randomised study found that ECV initiated at 34-35 weeks gestation compared with 37 weeks or more increases the probability of cephalic presentation at birth, however it does not reduce the rate of caesarean section, and it may increase the risk rate for preterm birth.[6]

KEY POINTS

1. ECV should be offered from 36 weeks gestation for nulliparous women and 37 weeks for multiparous women with uncomplicated breech presentations and no contra-indications to the procedure.[7] ECV is not appropriate if a caesarean is indicated for other reasons.[8]
2. The success rates for ECV are approximately 40% in nulliparous women and 60% in multipara.[8]
3. Spontaneous reversion to breech presentation after successful ECV occurs in less than 5% of women.[7]
4. ECV has low complications rates with approximately 0.5% requiring caesarean section.[8, 9]
5. Women who have a successful ECV have a higher risk of requiring a caesarean section in labour compared to other women.[10]
6. Tocolysis used to relax uterine muscles increases the success rate of a ECV.[2, 7]
7. Women who are Rhesus negative will require a blood group and anti-body screen (Kleihauer) after the ECV is performed, and Anti-D administered.

CONTRA-INDICATIONS TO PERFORMING AN ECV

ABSOLUTE CONTRA-INDICATIONS

- Where caesarean section (CS) is indicated[7, 8] e.g. placenta praevia[6], previous classical CS[6]
- Abnormal cardiotocography (CTG)[7]; fetal heart rate abnormalities[6]

- Ruptured membranes[6, 7]f
- Contracted pelvis
- Fetal death
- Placental abruption[6]

RELATIVE CONTRA-INDICATIONS

- Small-for-gestational-age fetus with abnormal Doppler parameters[7]; Fetal hypoxia[8]
- Pre-eclampsia with proteinuria[7]; or Antepartum haemorrhage[8] in the last week[7]
- Major fetal anomalies[7, 8]; Unstable lie[7]; Multiple pregnancy[7, 8]
- A restrictive nuchal cord[8], Hyper-extended head[6, 8]
- Major uterine anomaly[6-8]; Scarred uterus[7, 8]
- Oligohydramnios[6, 8] or hydramnios[6]

PRIOR TO THE PROCEDURE

1. Ensure the woman has received counselling about risks, benefits, and outcomes associated with performing an ECV. The MR 295.75: Consent form for ECV must be signed before commencing the procedure.
2. Check there are no contra-indications to performing an ECV.
3. A formal ultrasound assessment for fetal presentation, placental location, amniotic fluid volume and assessment for fetal or uterine anomalies must be performed 24 hours prior to the procedure.
4. Perform a cardiotocography (CTG) for 20 minutes (or less if a reactive trace is obtained in a shorter time) prior to the procedure.
5. Complete a portable ultrasound prior to commencing preparation for the procedure to ensure the fetus is still in the breech presentation.
6. Perform baseline maternal observations of pulse, respirations, and blood pressure (BP). Then monitor the maternal pulse, BP, and fetal heart rate (FHR) every 10 minutes after tocolysis is given until the ECV commences.
7. Arrange written orders for oral Ranitidine 150mg and subcutaneous Terbutaline 0.25mg (250mcg).
8. Ensure the Obstetrician or Medical Officer performing the procedure will be available to perform the procedure in 30 minutes time before administering the prescribed anti-emetic and tocolytic.
9. Commence the ECV 30 minutes after tocolysis, or when the maternal pulse is >100bpm.

PROCEDURE

1. Ensure the woman has emptied her bladder.
2. Position the woman in a recumbent position (a wedge placed under her buttocks).

3. Lubricate the maternal abdomen using mineral oil, ultrasonic gel, or talcum powder. This decreases friction which may reduce maternal discomfort.
4. Place your hands between the fetal breech and the maternal symphysis pubis.
5. Dislodge the breech from the maternal pelvis.
6. After the breech is dislodged, guide the fetal head in a forward or backward roll toward the maternal pelvis while simultaneously guiding the breech towards the fundus.
7. If the forward roll is unsuccessful an alternative approach, the backward flip can be attempted.
8. Abandon the procedure if:
    - attempts at a forward roll or a backward flip are unsuccessful
    - more than 5 minutes of uterine pressure is required
    - there is maternal intolerance to the procedure
    - there is evidence of an abnormal FHR using sonography.

POST PROCEDURE

Regardless of whether the ECV is successful or not:

1. Monitor the FHR by CTG for 40 minutes. A reactive non stress test must be achieved prior to discharge.
2. Monitor and record the maternal pulse, BP, and vaginal loss 15 minutely for 30 minutes.
3. Obtain a blood group and antibody screen sample for a Kleihauer test and arrange prophylactic Anti-D administration if the maternal blood group is Rhesus negative.
4. Women may be discharged home after 1 hour provided:
    - The maternal observations are normal
    - The CTG is reactive
    - The obstetric team is satisfied with the fetal and maternal condition.
5. Instruct the woman to phone or return to the hospital if any of the following occur:
    - Vaginal bleeding
    - Rupture of membranes
    - Commencement of labour
    - Change in pattern or decreased fetal movements
    - Abnormal abdominal pain.
6. Ensure an antenatal clinic appointment is made for obstetric medical review in 1 week to assess for spontaneous reversion.

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REFERENCES / STANDARDS

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National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice
Legislation -
Related Policies - OD 0324/11 Consent to Treatment Policy for the Western Australian Health System 2011

Other related documents –

- KEMH Clinical Guidelines, O&M, Complications of Pregnancy: Abnormalities of Lie/ Presentation:
  - Breech Presentation
  - ECV- MFAU – Quick Reference Guide (QRG)
  - Breech: Planned Vaginal Birth & Breech: Vaginal Birth QRG
- MR 295.75: Consent form for ECV

RESPONSIBILITY	
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