EXTERNAL CEPHALIC VERSION (ECV)

BACKGROUND

Performing an ECV has been shown to decrease the rate of non-cephalic presentations in labour and the number of caesarean sections for breech at term.[1]

3-4% of singleton term pregnancies are associated with breech presentation. Spontaneous version rates for nulliparous women are approximately 8% after 36 weeks gestation, and 5% after an unsuccessful ECV.[2]

The success rates for ECV are approximately 40% in nulliparous women and 60% in multiparous.[3] Following a successful ECV, spontaneous reversion will occur in < 5% of cases.[2]

SAFETY AND COMPLICATIONS

ECV has a low complication rate. Approximately 1:200 attempts will require an emergency caesarean section for a serious adverse outcome such as placental abruption, cord prolapse or acute fetal compromise.

Potential complications of ECV include: non-reassuring cardiotocography (CTG) and fetal bradycardia (usually transient), and rarely, placental abruption, uterine rupture and feto-maternal haemorrhage.

Risks associated with ECV[2,4]

- Transient fetal distress 5.7%
- Abnormal CTG 0.37%
- Vaginal bleeding 0.47%
- Abruption 0.12%
- Emergency caesarean section 0.43%

The standard pre-operative preparations for caesarean section are not necessary for women undergoing ECV given the low complication rate.

ECV SHOULD BE OFFERED FROM 36 WEEKS IN NULLIPAROUS WOMEN AND FROM 37 WEEKS IN MULTIPAROUS WOMEN

A 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 for preterm birth.[5]

USE OF TOCOLYSIS

The use of tocolysis increases the success rate of ECV.[3] This has been proven with terbutaline and salbutamol.[6] Nifedipine has also been used in this setting, and is generally better tolerated than salbutamol.[7] Terbutaline and Nifedipine are available to use in this context. See Appendix I.

CONTRA-INDICATIONS TO ECV

ABSOLUTE CONTRAINDICATIONS

- Where caesarean delivery is required (eg. placental praevia, previous classical caesarean section)
- Abnormal CTG
- Major uterine anomaly
- Ruptured membranes
- Multiple pregnancy (except for birth of second twin)

RELATIVE CONTRAINDICATIONS (WHERE ECV MIGHT BE MORE COMPLICATED)

- Small-for-gestational-age fetus with normal Doppler parameters[2]
- Pre-eclampsia
- Oligohydramnios
- Major fetal anomalies
- Previous caesarean section or uterine surgery
- Antepartum haemorrhage within the last 7 days (individualised management)

POLICY

ON ADMISSION

- Ensure informed verbal consent obtained
- Ensure no contra-indications to the procedure
- Abdominal palpation
- Review blood group

MATERNAL/FETAL OBSERVATIONS

- Record maternal pulse, blood pressure, temperature and respiratory rate
- Perform CTG, ensuring criteria for normal CTG are met. Document using CTG sticker (please refer to: Fetal Heart Monitoring Guideline GLM0010)

SENIOR MEDICAL REVIEW

- Perform USS to confirm: presentation, AFI and placental location
- Consider tocolysis

FOLLOWING THE PROCEDURE

- Confirm fetal lie and presentation with USS
- Anti-D 625 units for all Rhesus negative women
- Perform CTG. Document using CTG sticker (please refer to: Fetal Heart Monitoring Guideline GLM0010). Discharge home when CTG is normal
- Core midwife to inform woman and LMC of outcome and ongoing management plan

IF ECV IS UNSUCCESSFUL

1. Offer repeat attempt a week later
2. Discuss mode of birth: planned vaginal versus elective caesarean section
   (please refer to CWH Breech Birth guideline: Breech Birth Guideline GLM0048)

REFERENCES

1. Grootscholten K, Kok M, Oei G, et al. External Cephalic Version-Related Risks A Meta-analysis. Obstetrics and Gynecology. 2008; 112(5):1143-51.
2. Royal College of Obstetricians and Gynaecologists. External cephalic version and reducing the incidence of breech presentation. Green-top Guideline No 20a. 2006. Reviewed 2010.
3. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Management of term breech presentation. College Statement C-Obs 11. 2009.
4. Mohamed Ismail NA, Ibrahim M, Mohd Naim N, Mahdy ZA, Jamil Ma, Mohd Razi ZR. Nifedipine versus terbutaline for tocolysis in external cephalic version. Int J Gynaecol Obstet 2008 Sep; 102(3): 263-6
5. Hofmeyr GJ. Interventions to help external cephalic version for breech presentation at term. Cochrane Database Systematic Review. 2004;(1):CD000184.
6. Collaris RJ, Oei SG. External cephalic version: a safe procedure? A systematic review of version-related risks. Acta Obstet Gynecol Scand 2004 Jun; 83(6): 511-8.
7. Tsataris V, Papatsonis D, Goffinet F, Dekker G, Carbonne B. Tocolysis with nifedipine or beta-adrenergic agonists: a meta-analysis. Obstet Gynecol 2001 May; 97(5 Pt 2): 840-7

APPENDIX 1: TOCOLYSIS FOR EXTERNAL CEPHALIC VERSION

The following regimes can be administered 20-30 minutes prior to ECV.

Maternal pulse and blood pressure need to be monitored with all 3 regimes.

CONTRA-INDICATIONS TO TOCOLYSIS

- Severe cardiac disease (especially cardiac tachyarrthymias)
- Significant haemorrhage
- Hypotension (due to vasodilator effect and tachycardia)

Note: 50% of women develop palpitations with IV use (recommend subcutaneous regime as first line).

FIRST LINE THERAPY

Terbutaline 250 micrograms subcutaneous (0.5 mL of 500 microgram/mL vial)

ALTERNATIVE OPTIONS

Terbutaline 250 microgram IV over 5 minute (0.5 mL of 500 microgram vial diluted in 5 mL 0.9% sodium chloride)

Nifedipine either 10 mg[11] or 20 mg[12] oral can be used.

Canterbury District Health Board
Te Poari Hauora ō Waitaha
CHRISTCHURCH WOMEN'S HOSPITAL
MATERNITY SERVICE

SURNAME ..... NHI .....
FIRST NAME..... DOB .....
ADDRESS .....
..... POSTCODE .....
(or affix patient label)

External Cephalic Version (ECV) Referral

Woman's telephone: Home (.....) ..... Mobile: .....

EDD by LMP ……. /……. /……. ☐ Certain by USS (earliest) @ ……./ 40: ……./……./……..	Gravida:	Parity:	Blood group:

SUITABILITY FOR PAPER TRIAGE ☐ Yes ☐ No

☐ Healthy woman ≥36 weeks (Nulliparous)

☐ BMI less than 35

TO ACCOMPANY ALL REFERRALS

☐ Growth USS to confirm breech

Maternity Booking Form

☐ Accompanies referral ☐ Already submitted

LMC DETAILS

LMC name: .....

Contact details: ……

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Contra-indications to ECV Referral – see ECV Guideline

Absolute

☐ Caesaren delivery is required
☐ Major uterine anomaly
☐ Ruptured membranes
☐ Multiple pregnancy
☐ Abnormal CTG

For antenatal clinic review

Relative

☐ Small for gestational-age fetus
☐ Pre-eclampsia
☐ Oligohydramnios
☐ Major fetal anomalies
☐ Previous C/Section or uterine surgery
☐ Antepartum haemorrhage within last 7 days

For obstetric review

Other information: .....

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Referred by: ..... Signature: .....

CWH USE ONLY

☐ ECV booked

Date: ……../……../…….. Time: 1300hrs

☐ LMC informed of ECV date

☐ LMC to inform woman

PAPER CLINIC

Meets criteria: ☐ Yes ☐ No *If no, fax form to MOPD, 85301 as obstetric review required*

MW signature: .....

Date: ……../……./……..

Suitable for paper triage: ☐ **Yes – FAX to MOPD (03) 364 4301**

EXTERNAL CEPHALIC VERSION REFERRAL

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