External cephalic version

Reducing the CS rate
The role of the anaesthetist

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External cephalic version

- A bit about breech presentation
- A bit about ECV
- What are the options?
- What should we be doing?
- Are we doing it?

With thanks to:
- Richard George
- Angus Rivers
- Natasha Singh
Breech presentation

- 3-4% of pregnancies
- Maternal age, nulliparity, uterine abnormality, multiple pregnancies, prematurity, low birth weight
- Frank, complete, footling, kneeling
- Vaginal breech delivery:
  - umbilical cord prolapse / compression, head entrapment
  - Term Breech Trial 2000:
    - 5.0% risk of peri- / neonatal mortality / morbidity vs 1.6% for planned CS
    - no difference in maternal mortality / morbidity

Hannah et al, Lancet 2000
Caesarean section for breech

- Problems of CS in general
- De-skilling of obstetricians
Turning a breech baby

• Plenty of ‘alternative’ methods, e.g.:
  • Positional
  • Moxibustion / aromatherapy / hypnosis
  • “place earphones just above your pubic bone and play music for the baby… babies can hear well and may move towards the sound”
  • “shine a flashlight at the top of your belly and then slowly moving it down to where you want the baby's head to be… the baby may move towards the light”


• External cephalic version

  http://www.maternal-instincts.com.au
External cephalic version

- Overall success rates 30-50%
- VD rates up to 80% if successful; overall NNT ~3
- Generally considered safe:
  - transient abnormal FH pattern 5 – 6%
  - persistant pathological FH pattern 0.4%
  - vaginal bleeding 0.5%
  - placental abruption 0.1%
  - emergency caesarean section 0.4%
  - perinatal mortality 0.1 – 0.2%
- Advised by NICE, RCOG, ACOG

Collaris & Oei, Acta Obstet Gynecol Scand 2004
Hofmeyr & Kulier, Cochrane Database Syst Rev 2012
de Hundt et al, Obstet Gynecol 2014
Breech presentation

• Commonly leads to CS
• Reduced by ECV, therefore:
  i) increase the use of ECV
      • maternity units
      • mothers
  ii) increase the success rate of ECV
      • parity; uterine tone / tocolysis; liquor volume; fetal position & engagement; gestation; skill of operator
Breech presentation

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    • regional anaesthesia
Regional anaesthesia for ECV

• RA increases success rates of ECV:
  • x 1.5 – 2
  • from 31-58% (control) to 44-87% (RA)
  • NNT ~5

  Lavoie & Guay, Can J Anesth 2010
  Sultan & Carvalho, IJOA 2011
  Goetzinger et al, Obstet Gynecol 2011

• Mean saving of $276 per ECV done under RA
  Carvalho et al, Anesth Analg 2011

• Regional *anaesthesia* better than *analgesia*

• How; when; what if it fails?
Breech presentation

- Commonly leads to CS
- Reduced by ECV, therefore
  i) increase the use of ECV
  ii) increase the success rate of ECV (…with RA)

- Are we doing this?
  - telephone survey of all hospitals in England, 2013
  - only 3/164 (0.02%) units offer RA

- Possible reasons:
  - lack of awareness / local evidence
  - resistance to change
  - lack of resources / impetus; difficult to set up

George & Yentis, IJOA 2014
Breech presentation

• Commonly leads to CS
• Reduced by ECV, therefore
  i) increase the use of ECV
  ii) increase the success rate of ECV
• What’s needed now:
  • informed discussion within units
  • look at what the mothers want
Selling ECV to mothers?

- Fear of pain a major reason for refusal
  
  Rosman et al, Midwifery 2013
  Vlemmix et al, J Psychosom Obstet Gynaecol 2013

- ? Better pain relief
  
  George et al, Anaesthesia 2013
  Munoz et al, IJOA 2014

- ? Better understanding of mothers’ preferences
  
  Rivers et al, Anaesthesia 2014
  ongoing research
Selling ECV to mothers?

Diagnosed breech (3-4%)

Accept ECV (50-70%)

- No RA or remifentanil
  - Success (30-50%)
    - Labour*
    - Elective CS
    - ECV with RA or remifentanil
    - Breech labour**
  - Failure

- Remifentanil
  - Success (30-50%)
    - Labour*
    - Elective CS
    - ECV with RA
    - Breech labour**
  - Failure

- Regional anaesthesia
  - Success (50-80%)
    - Labour*
    - Elective CS
  - Failure

Decline ECV

- Elective CS
  - Breech labour**

Unsuitable for ECV

- Elective CS
  - Breech labour**
Conclusions

• What we know:
  • breech is common and commonly leads to CS
  • ECV reduces it but not all women are offered ECV
  • RA increases success rates but is rarely used
  • remifentanil seems to help pain but not success rates
  • why mothers do and don’t choose ECV is complex

• What we need to do:
  • have proper discussions in our units
  • find out more about mothers’ preferences
  • be involved

Thank you