Taking a turn for the better: remifentanil analgesia for external cephalic version

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Why this matters

- External cephalic version (ECV) is frequently limited by maternal pain, reducing success and acceptability[1].
- A recent systematic review found that remifentanil significantly improves analgesia and may increase ECV success rates[2].
- We describe the first use of remifentanil for ECV in our institution.

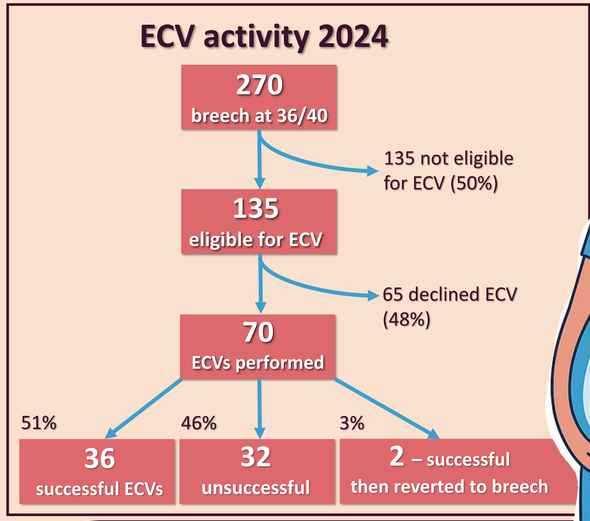
Aim

- Implement a remifentanil for ECV service to improve maternal analgesia and success rate.

Methods

- Audit of January 2024 - January 2025 ECV activity and success rates.
- Questionnaire of experience sent to 32 women who had ECVs August - Dec 2025.
- Development of a local protocol:
  - Standardised infusion: 0.1 mcg/kg/min
  - Use of theatre TCI pump to ensure protocol clarity and avoid PCA misinterpretation.
- Approval obtained through local maternity governance processes.

ECV activity 2024



Barriers to change

- Implementation of remifentanil for ECV has not progressed beyond pilot phase due to lack of joint regional pharmacy formulary committee approval.
- Key barriers identified:
  - Limited local comparative evidence versus current standard care, with no evidence demonstrating reduction in caesarean section rates.
  - Absence of national guideline endorsement and limited adoption across other centres.
  - Safety concerns from obstetric stakeholders regarding potential impact on maternal and foetal risk.

Case report timeline

Patient
- 36 year old
- 4 previous SVDs
- High BMI
- Wished to avoid LSCS

First ECV
- Unsuccessful, abandoned due to pain
- Analgesia with entonox
- **Pain 8/10** "Unbearable"

Intervention
- Remifentanil infusion
- 0.1 mcg/kg/min
- 17 minutes
- 200 mcg total

Second ECV
- Tolerated well
- Cooperative throughout
- No hypoventilation or desaturation
- Mild pruritis
- **Pain 3/10**

Outcome
- Still unsuccessful (engaged breech presentation)
- Category 4 LSCS
- High satisfaction with 2nd ECV

Patient perspective

First ECV was "the worst pain of my life"

"Going through all that pain for the ECV to fail was so disheartening and I swore I would never ever do it again"

"The 2nd ECV 2 days later with the remifentanil was zero pain and made the fact it failed less disappointing."

Discussion and future plans

- A reported 43% improvement in ECV success rates could translate to 15 additional successful ECVs annually within our institution, with potential reduction in elective LSCS demand (+/-5 theatre lists pa).
- During the audit period, 65/137 (48%) women declined ECV, fear of pain and negative perceptions are contributing factors[3].
- We believe that improved analgesia with remifentanil may enhance both procedural tolerance and uptake of ECV, with potential benefits for patient experience and service efficiency.

- Future plans:
  - Prospective evaluation of women's experience of ECV, including pain and outcomes.
  - Improve data capture, given low response rates in prior retrospective audit - 3/32 (9.3%).
  - Increase awareness of pain associated with ECV among clinicians.
  - Explore wider practice through a multicentre or national survey of ECV analgesia strategies.

References

[1]Rijnders M, Offerhaus P, van Dommelen P, Wiegers T, Buitendijk S.Prevalence, outcome, and women's experiences of external cephalic version in a low-risk population. Birth 2010;37:124–33.

[2]Lomas S, Minton Z, Daniels JP. Systematic review of the effectiveness of remifentanil in term breech pregnancies undergoing external cephalic version. International Journal of Obstetric Anesthesia. 2023 May;54:103649. doi: 10.1016/j.ijoa.2023.103649. PMID: 36989876.

[3]Impey LWM, Murphy DJ, Griffiths M, Penna LK on behalf of the Royal College of Obstetricians and Gynaecologists. External Cephalic Version and Reducing the Incidence of Term Breech Presentation. BJOG 2017; 124: e178–e192.