Epidural Top-Up for Caesarean Section

Fizzy Mix vs Ropivacaine: A Retrospective Audit at North Bristol NHS Trust

Kangni Chen, Andrew Moore

Obstetric Anaesthetists' Association

NHS North Bristol NHS Trust

Background

- Labour epidural → CS conversion occurs in ~22–26% of emergency LSCS
- Optimal epidural top-up agent remains unclear
- "Fizzy mix" traditionally used
- NBT guidelines recommend **ropivacaine**

Aim Compare practice and outcomes of epidural top-up agents at NBT

Methods

- Retrospective audit
- NBT, Aug 2024 – Aug 2025
- Data source: BadgerNet + anaesthetic charts
- Inclusion: Epidural top-up for emergency LSCS

Aug 2024 → **Aug 2025**

Outcomes:

- LA used
- LSCS category
- Supplemental analgesia
- Conversion to GA

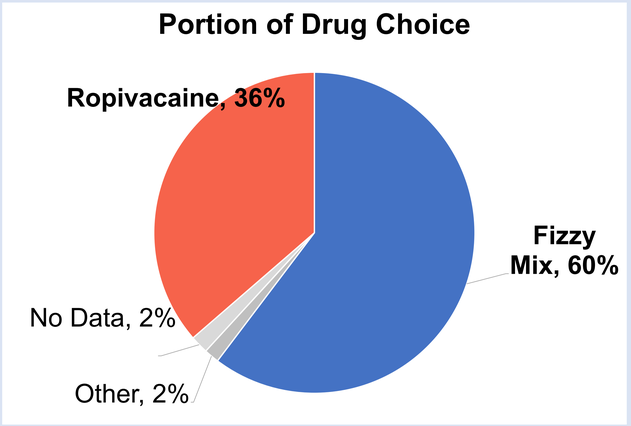

Fig 1 Local anaesthetics use for epidural top up for LSCS

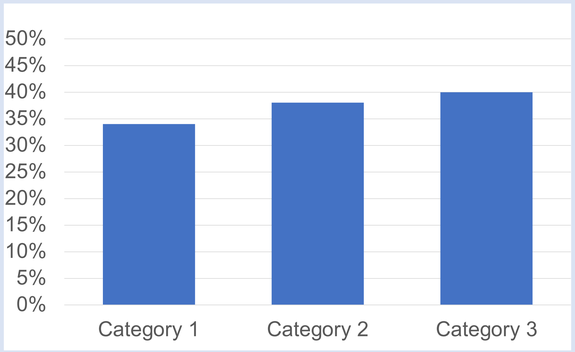

Fig 2 Ropivacaine use by urgency

Less supplemental analgesia with ropivacaine (Fig 3, Fig 4)

- Overall: **8% vs 12%**
- Category 1: **5% vs 11%**

Results

Activity Overview

- **2,454 LSCS total**
  - 1,112 elective
  - 1,342 emergency
- **330 epidural top-ups**

Local Anaesthetic Use (Fig 1)

- Fizzy mix: **60%**
- Ropivacaine: **36%**
- Other/unknown: **4%**

Use by Urgency (Fig 2)

- Category 3: **40% ropivacaine**
- Category 1: **34% ropivacaine**

Conversion to GA:

- Fizzy mix: **4.5%**
- Ropivacaine: **4.2%**

Low and comparable

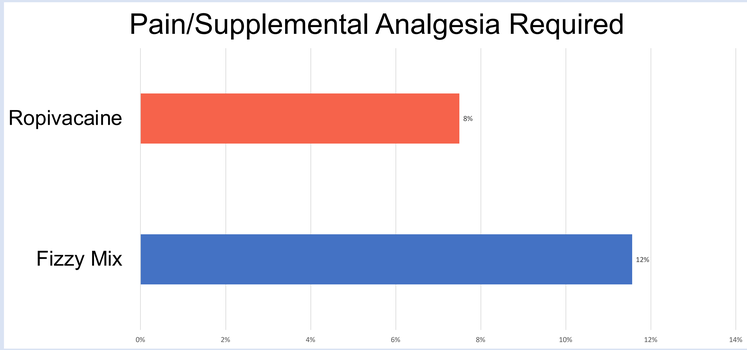

Fig 3 Supplemental analgesia required for all LSCS

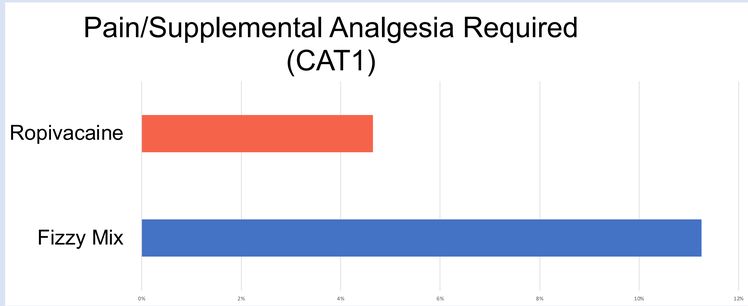

Fig 4 Supplemental analgesia required for Cat 1 LSCS

Discussion

- Ropivacaine shows **trend toward better block reliability**
- Remains **underused**, especially in urgent cases
- No increase in GA conversion → reassuring safety

Ropivacaine is a safe and effective alternative to fizzy mix for epidural top-up, including in Category 1 LSCS.
Findings support its use as the default agent at NBT

Reference:
1. Hillyard S, Bate T. Extending epidural analgesia for emergency Caesarean section: a meta-analysis. *Br J Anaesth* 2011;107:668–79