Service Evaluation of current Trends in Rescue Analgesia During Lower Segment Caesarean Sections Under Neuroaxial Anesthesia

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Introduction

Rising number of operative deliveries in the UK will naturally see the rise in the number of central neuroaxial blocks (CNB) and although CNB's are gold standard for these cases they are not without complications and litigation (1, 2, 3).

Inadequate neuroaxial anaesthesia can see a parturient requiring a general anaesthetic which in itself carries risk both physiologically and psychologically. 1:50 spinals and 1:20 epidurals for Lower segment cesarean section (LSCS) will be inadequate and require intervention placing this as common-very common occurrence (4, 5).

Break through pain during LSCS is under represented in data but figures are shown for failure to achieve a pain free operation to be dependent on the type of CNB but can be be from 6-24% .

We evaluated our current practice in supporting the parturient through breakthrough pain at LSCS, comparing our 'intravenous remifentanil infusion' (IVRI-primary as single agent or secondary as multi-agent) vs Non IVRI rates.

Study Objectives

- To assess for the unwarranted variation in rescue pain relief under CNB during LSCS at the Norfolk and Norwich University hospital
- To examine contributary factors to complications secondary to rescue analgesia
- To explore the parturient experience of rescue pain relief following the delivery.

Method

Stake Holders:

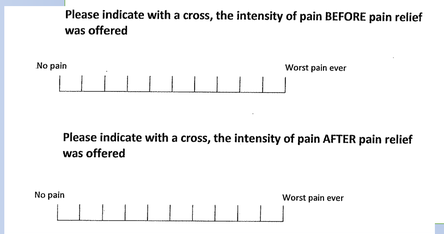
- Obstetric anaesthetists (including AiT's moving through the department)
- Obstetricians
- Midwives
- Patients

2 Part Questionnaires

- Anaesthetist involved in the case
- Recovery staff

Scan me for the full questionnaire: Management of intraoperative pain during LSCS"

Maternal visual analogue scales:



Assessment of complications with rescue analgesia:

Lowest SpO_2 recorded:

Oxygen supplemented: Yes / No

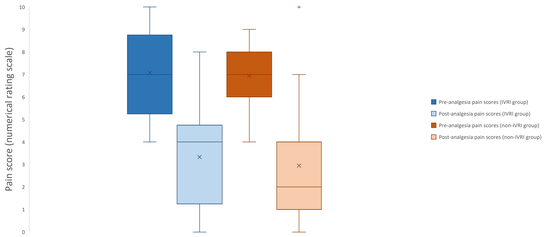
CO2 monitored: Yes / No

Conversion to GA: Yes / No

Baby returned to Mother: Yes / No

Data Analysis

Graph 1: Box-and-whisker plot comparing pre- and post-analgesia pain score in IVRI and non-IVRI groups. IVRI shows similar efficacy to more traditional agents.



Graph 2: Pie chart showing speed of analgesia onset for the IVRI group

Graph 3: Pie chart showing speed of analgesia onset for the non-IVRI group

During 16/09/22- 12/12/22, 180 LSCS's were performed at NNUH. Of these there were 14 documented cases of intraoperative pain (7.8%). To remedy this all parturients were offered a general anaesthesia but all patients fortunately avoided this and instead 29% had a primary form of IVRI for pain relief. Of the 71% of patients who were given alternative forms of pain relief- 50% of these were converted to IVRI in order to give satisfactory and 'quick' relief of symptoms.

Themes

- Large experience of remifentanil intraoperatively at NNUH
- All parturients offered GA – non converted to GA- with high rates of satisfaction and "quick" to "very quick" improvement in pain scores
- Increased maternal satisfaction
- No immediate complications with IVRI group
  - All newborns reunited with mother
  - No oxygen desaturations
- All patients received suitable monitoring with IVRI
- No universal method in giving IVRI (ml/hr, mcg/kg/min, minto model)

Take Away

- To include in consent:
  - Planned level of block (6)
  - Modes of testing
  - Possibility of pain
  - Options of treatment of pain
- All patients with breakthrough pain to be followed up
- Clear documentation of events and actions (including surgical pause)
- A pilot study for 2024 to compare IVRI to non-IVRI

Our Vision
The best care for every patient

References

NHS
Norfolk and Norwich University Hospitals
NHS Foundation Trust