

Use of Intrathecal Morphine for Elective Caesarean Section: A Clinical Audit-*Optimising post-operative analgesia in obstetric anaesthesia*

Dr Fahad Salim | Dr Eleanor Lewis | Swansea Bay University Health Board

INTRODUCTION & BACKGROUND

Caesarean sections at SBUHB performed under spinal anaesthesia
Standard spinal: 0.5% heavy bupivacaine 2.5–2.6 ml + intrathecal morphine 100 mcg + fentanyl 20 mcg
Intrathecal morphine peaks at 60–90 min(HL-6hours) — must be combined with fentanyl for intraoperative analgesia
Optimal IT morphine dose remains debated — balance analgesia against nausea, pruritus and respiratory depression

STANDARD ANALGESIC PROTOCOL

Spinal bupivacaine: 0.5% heavy, 2.5–2.6 ml

IT morphine: 100 mcg

IT fentanyl: 20 mcg

Elective **Regular:** Oral paracetamol + oral ibuprofen

PRN opioid: Oral morphine 10 mg 2-hrly / tramadol 50 mg 6-hrly

PRN antiemetic: Ondansetron 4–8 mg 6-hrly

AUDIT AIMS & DATA COLLECTION

Aims:

Evaluate post-operative opioid consumption within 24 hours of elective Caesarean section

Assess incidence of opioid-related side effects (nausea, vomiting, respiratory depression)

Benchmark practice against PROSPECT 2022 and NICE 2021 guidelines

Methods:

Prospective audit — 50 females undergoing elective Caesarean section

All procedures uncomplicated; all received 100 mcg morphine + 20 mcg fentanyl intrathecally

Post-operative pain scores, opioid use and antiemetic requirements recorded at 24 hours

Respiratory status monitored throughout the post-operative period

50

Patients Audited

76%

Required Post-op
Opioid

24%

No Additional
Opioid

32%

Required
Antiemetic

0

Respiratory
Depression

KEY RESULTS

12 / 50 (24%) patients required NO post-operative opioid

38 / 50 (76%) required 1 dose of opioid (oramorph or tramadol)

26 / 50 (52%) required MORE THAN 3 doses within 24 hours

16 / 50 (32%) required at least one antiemetic dose

15 / 16 antiemetic recipients were in the opioid group

0 / 50 (0%) incidence of respiratory depression

EVIDENCE BASE

Meta-analysis — Gehling & Tryba (2009):

Compared IT morphine <0.3 mg vs >0.3 mg. At doses <0.3 mg, respiratory depression was no greater than with systemic opioid analgesia. *Gehling M, Tryba M. Anaesthesia 2009;64:643–51*

Meta-analysis — Sultan et al. (2016):

Low-dose IT morphine (50–100 mcg) vs higher dose (>100–250 mcg). Higher doses prolonged time to first analgesia but significantly increased nausea, vomiting and pruritus. *Sultan P et al. Anesth Analg 2016;123:154–64*

NICE 2021:

Intrathecal diamorphine 300–400 mcg recommended. Where morphine is used as an alternative, NICE suggests 100–150 mcg Morphine. *Br J Anaesth 2021;127:501–505*

Implication for SBUHB:

Current dose of 100 mcg morphine is at the lower end of NICE recommendations.

Evidence supports cautious optimisation.

Recommendations:

Consider increasing IT morphine to 150 mcg, in line with NICE 2021 and available RCT evidence, to improve post-operative analgesia

Discuss proposed protocol change with senior anaesthetic staff and institutional ethics committee prior to implementation

Conduct re-audit after any protocol change to assess analgesic efficacy and side-effect profile