

REMIFENTANIL INFUSION AS A BRIDGING TECHNIQUE FOR PLACEMENT OF NEURAXIAL IN A PARTURIENT WITH CHRONIC PAIN

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Introduction

- Neuraxial anesthesia is the gold standard anesthetic option for cesarean delivery (CD).
- Remifentanil can be a useful pharmacologic agent as an adjunct in certain parturients with complex pathologies.
- We report the case of a chronic pain patient for which we utilized remifentanil to place the neuraxial for CD.

Case Description

- 31-year-old G9P2062 at 34 weeks 5 days gestation with a history of bipolar depression, polytrauma including pelvic fractures due to a MVC 2 years prior status post multiple orthopedic procedures, admitted with acute on chronic pain.
- Our patient presented as a transfer for intractable hip and back pain with severe limitation of movements.
- The obstetric team scheduled the patient for primary CD in the setting of increased pelvic pain and immobility secondary to the growing uterus.

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Intraoperative Management

- Upon arrival to the OR, the patient was unable to move to the OR table due to severe pain with any leg movement.
- A remifentanil infusion was started at a rate of 0.05 mcg/kg/min to provide analgesia for bed transfer.
- Patient noted improvement in her baseline pain with infusion, yet she still could not tolerate transfer to the OR table.
- Supplemental oxygen was initiated and incremental boluses of 10 to 30 micrograms of remifentanil were given, resulting in sufficient analgesia for transfer.
- Patient was unable to sit upright, and the remifentanil infusion was increased to 0.1 mcg/kg/min to allow for lateral positioning and placement of a combined spinal epidural. 11.25mg hyperbaric bupivacaine 0.75%, 15mcg fentanyl, and 0.15mg duramorph were given via the spinal needle. The epidural catheter was threaded and left in place.
- Patient noted instant pain relief in her lower extremities and was placed in left uterine displacement position for CD.
- She tolerated the CD well with no complications throughout the case.

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Post Operative Management

- Epidural catheter was left in place for post-op pain control for 48 hours.
- Acute pain medicine service was consulted for assistance with bridging to PO and IV pain medication, and she was started on multimodal pain control.
- PT was also consulted to assist with patient ambulation
- At time of discharge, patient was ambulating, and pain was well controlled with oral medications.

Conclusions

- Remifentanil is a short acting mu opioid receptor agonist that is rapidly metabolized by plasma and tissue esterases.
- Although remifentanil crosses the placenta, it is quickly eliminated in the fetus due to its rapid metabolism.
- Remifentanil has been used as an alternative labor analgesic as a result of these properties (1), and can be adapted in unique circumstances, such as chronic pain, to assist in positioning for neuraxial anesthesia.

References

Volikas, I., Butwick, A., Wilkinson, C., Pleming, A., & Nicholson, G. (2005). Maternal and neonatal side-effects of remifentanil patient-controlled analgesia in labour. *British Journal of Anaesthesia*, 95(4), 504–509. <https://doi.org/10.1093/bja/aei219>