

Evaluating the introduction of intrathecal morphine for caesarean section

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Introduction

Due to the ongoing national supply issues with diamorphine, and given the demonstrated safety profile of using central neuraxial morphine in the obstetric population[1], our department replaced diamorphine with preservative-free morphine (100mcg, plus 15mcg Fentanyl) for procedures in labour theatre.

After the switch to morphine was established, we evaluated whether this change had impacted on our obstetric patients, particularly with respect to analgesia requirements and occurrence of side effects.

Methods

We identified all patients who had any procedure in obstetric theatre during June 2019 (when diamorphine was in use) and all those in June 2020, after morphine had been introduced.

We recorded the type and dose of opioid used. We then went on to look at whether the patients had experienced any intraoperative pain. We also inspected the drug chart for the time to first dose of opioid, as well as the total opioid dose required in the first 48 hours post surgery. Finally, we noted whether the patients experienced any side effects (nausea and/or vomiting, pruritis or respiratory compromise).

Results

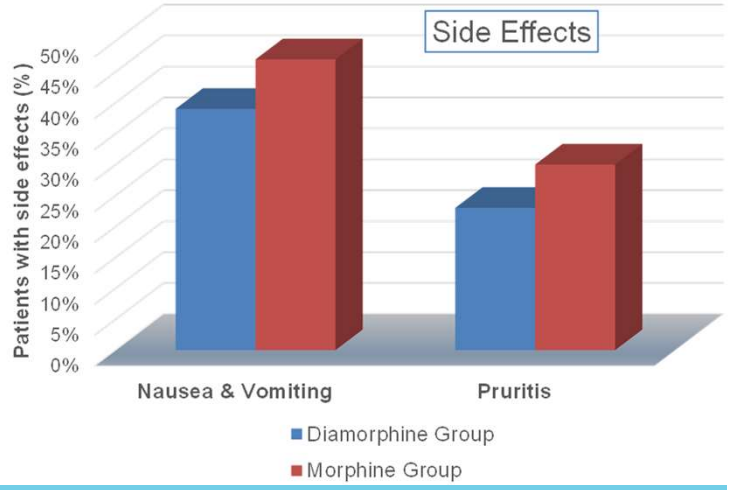
87 Patients had spinal for Caesarean Section using Diamorphine or Morphine/Fentanyl :

	Morphine Group n=43	Diamorphine Group n=44	Odds Ratio
Pain during procedure	6 (14%)	5 (11%)	1.2649
Opioid free for 48 hours post op	10 (23%)	9 (20%)	1.1785
Median Total opioid dose in 48 hours	60mg	60mg	-

Our results did not suggest a significant reduction in efficacy of the intrathecal morphine/fentanyl mix when compared with diamorphine, achieving similar observed rates of reported Intraoperative pain and post operative opioid requirements.

While the proportions of patients reporting symptoms were higher in the morphine group, any differences were moderate and did not approach significance.

There were no episodes of respiratory compromise in the morphine group and no safety concerns about morphine have been identified in our results



Discussion

Our evaluation shows that intrathecal morphine seems to be an adequate substitution for diamorphine (in obstetrics). Patients had similar intraoperative and post-operative analgesia requirements and the frequency of side effects were not significantly different.

Further evaluation of central neuraxial morphine use, particularly with larger numbers in a multi-centre analysis, would be very useful to provide more robust data. It would also be interesting to directly assess the patients' pain scores, plus focus on whether the patient experience is affected by choice of central neuraxial opioid.

Our results also remind us that troublesome side effects (most commonly nausea, vomiting and pruritis) are prevalent regardless of which intrathecal opioid is used and so appropriate rescue treatment should be made available routinely.

References

1.Crowgey TR, Dominguez JE, Peterson-Layne C, et al. A retrospective assessment of the incidence of respiratory depression after neuraxial morphine administration for postcesarean delivery analgesia. Anesth Analg. 2013;117:1368-70.