



An Evaluation of Morphine Use in Obstetrics during a National Shortage of Diamorphine: A Re-Audit Highlighting Changes in Practice over Time

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Abstract:

Introduction: Since the national shortage of diamorphine began in late 2018, preservative-free morphine has been used as an alternative adjunct to local anaesthetics in intrathecal blockade in obstetrics. An initial departmental audit following this enforced change to morphine established a statistically significant increased risk of PONV and reduced patient satisfaction compared with previous diamorphine use. A statistically significant link between intrathecal morphine and reduced post-operative or morph use was also found. These findings correlate with the different pharmacodynamic profiles of the two drugs. The aim of our re-audit was to evaluate the way in which morphine use changed over time, following our initial audit feedback and with increased familiarity, within our department.

Methods: All obstetric anaesthetic interventions at the Lister Hospital are routinely recorded electronically on the Xentec Epidural Audit System. Data is collected on completion of the procedure and during a post-procedure follow-up 1-3 days later. Data points collected immediately post-procedure include choice of intrathecal opioid and adequacy of block intra-operatively. On follow-up data collected includes overall patient satisfaction, side-effects experienced (including severe PONV and pruritus) and post-operative oramorph requirement. Parturient undergoing intrathecal blockade with morphine (n=104) between 13/07/18 and 20/09/18 had been previously audited. This data set represented the initial use of intrathecal morphine as an alternative to diamorphine: Morphine

Results: Statistical analysis was carried out using Chi-Squared tests and results deemed significant if $p < 0.05$. There was a statistically significant increase in overall patient satisfaction and regional adequacy in the Morphine 2 group versus Morphine 1, with p values of 0.0006 and 0.0051 respectively. However, no statistically significant change was seen in incidence of severe PONV and pruritus or in post-operative or morph requirements between the two groups.



Conclusions: The results above show an overall improvement in patient satisfaction and intra-operative adequacy of intrathecal blockade with morphine use over time. This most likely represents an increased familiarity with intrathecal morphine use as well as changes in practice following presentation of the initial audit results. Practitioners have reported modifications in terms of morphine dosing and/or addition of a second intrathecal adjunct, fentanyl.

Biography:

Dr Hana Damirji is an anaesthetics and intensive care trainee currently working at the Lister Hospital in Stevenage, UK. She completed her medical training in London, graduating from University College London in 2015 with distinction and also obtaining first class honors in Neuroscience iBSc. Previous publications include the initiation of a debriefing session for intensive care trainees, which NHS Improvement listed as one of the top 10 quality improvement measures of 2017.

Publication of speakers:

1. Gamasy, Mohamed. (2018). Urine screening for a sample of Egyptian school students: two centers experience. *International Journal of Family & Community Medicine*. 2. 10.15406/ijfcm.2018.02.00031.
2. Gamasy, Mohamed. (2017). Motivation is an Adjuvant Therapy for Pediatric Patients with Minimal Change Disease. *Journal of General Practice*. 05. 10.4172/2329-9126.1000338.

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