

PAEDIATRIC PAIN; AN AUDIT INTO THE EFFICACY OF LOCAL ANAESTHETIC WOUND CATHETERS

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Introduction

- Case Matched historical control study
- Comparison of opiate use and pain scores post operatively following Mitrofanoff and ACE procedures – all vertical incision T9/10 to L1
- Patients with small bowel resection NBM for several days necessitating IV analgesia
- Local Anaesthetic Catheter (LAC) group vs Control group

Mean Fentanyl use mcg/kg/hr	Day 1	Day 2	Day 3	Day 4	Day 5	Total
LAC	0.63	0.44	0.20	0.16	0.05	0.29
Control	0.89	0.75	0.83	0.20	0	0.55

Mean Morphine use mcg/kg/hr	Day 1	Day 2	Day 3	Day 4	Day 5	Total
LAC	26.28	19.73	9.87	6	1.90	12.76
Control	23.89	20.22	14.15	5.75	2.02	13.20

Method

- Prospective collection of data for LAC group over 12 months
- Data collected included; age, location of catheters, duration of infusion, PCA/NCA type and use, and pain scores
- Patients matched to historical cases pre wound catheters; matched for age, surgery and type of opiate in PCA/NCA
- 23 patients data collected in LAC group
- 21 Successfully matched from historical controls – matches as close to opiate used and age as possible
- 2 sets of historical notes unavailable leaving 19 successful matches

Discussion

- None of the numbers comparing the groups achieved statistical significance
- Very small numbers in the audit
- Pain scores were worse in LAC group, unclear why this is the case given that on average spent less days on PCA and had less opiate
- A few patients in LAC group had higher pain scores which may have deviated the results (one had documented chronic pain)
- However patients under 7 who tend to have lower pain scores did on average have better pain scores compared to the control group
- Other studies have shown reduced opiate consumption in line with our audit
- Anecdotal reports from surgeons, ward staff and pain team suggest patient benefit from catheters
- Difficult to power study significantly or match study perfectly given small numbers of cases to achieve significance
- However reduction in opiate use and days using PCA appears positive.

Pain Score Mean >4	Day 1	Day 2	Day 3	Day 4	Day 5	Total
LAC =/<7yrs	0.71	1.29	0.14	0.00	0.00	0.44
Control =/<7yrs	0.43	1.43	1.14	1.43	0.00	0.89
LAC >7yrs	1.50	4.57	3.07	2.62	0.54	2.49
Control >7yrs	0.25	2.67	1.08	1.08	0.08	1.03

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