Post-operative caesarean section pain and analgesia following neuraxial anaesthesia

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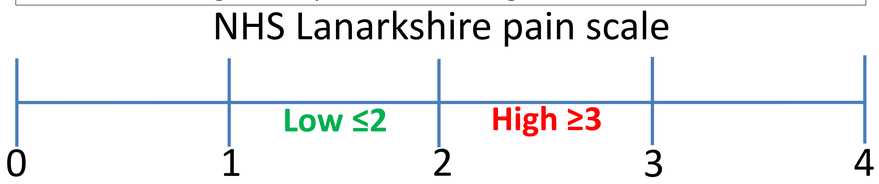
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Introduction

Maternal pain following Caesarean section (CS) may hinder recovery and ability to care for the newborn. NICE [1] and PROSPECT [2] guidance suggest analgesia be individualised. Regular Paracetamol and NSAID should be co-prescribed. NICE advise adding regular Dihydrocodeine where required. Codeine should be avoided. PROSPECT advise opioids are used for breakthrough where other techniques (e.g. regional) are contraindicated.

Our protocol
PR Diclofenac 100mg in theatre
Regular oral Paracetamol 1g
Regular oral Ibuprofen 400mg
Breakthrough Dihydrocodeine 30mg + Oramorph 5mg

Local policy states that patients should have low pain scores on movement. An audit of 65 patients undergoing CS in 2019-20 demonstrated 95% of patients self-reported being satisfied/very satisfied with pain relief, but 42% reported high pain scores on movement, and 31% high pain scores at rest. Only 28% of patients received rectal Diclofenac, 85% Paracetamol + Ibuprofen, and 86% breakthrough Dihydrocodeine. Results were presented locally. This re-audit aims to assess dynamic pain scores following introduction of regular Dihydrocodeine 30mg.



Methods

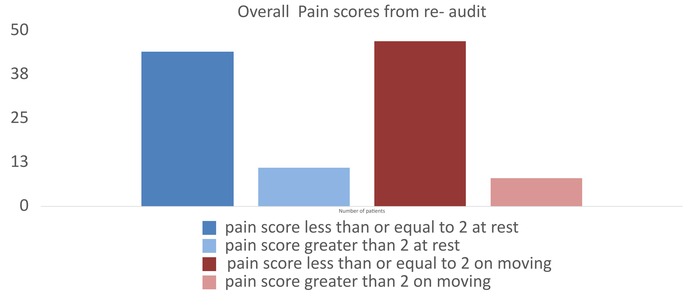
After ethical approval from the hospital clinical audit team, a prospective re-audit of postoperative CS pain and analgesia following neuraxial anaesthesia was performed using a standardised patient questionnaire conducted on day one or two postoperatively in Sep-Oct 2021. Participation was voluntary, occurring contemporaneously with routine post-neuraxial anaesthesia follow-up. The NHSL pain scale was used. Elective and emergency patients were included. General anaesthetic cases were excluded. Data was anonymised and shared securely amongst authors. *p*-values were calculated for movement pain scores.

Results

	First audit (n=65)	Second audit (n=55)	
Satisfied/very satisfied with pain management	62 **(95%)**	52 **(95%)**	
Max. pain score on movement ≤2	34 **(52%)**	15 (27%)	p = 0.005 CI = -0.40, -0.08
Max. pain score on movement ≥3	31 **(48%)**	40 (73%)	
Min. pain score on movement ≤2	59 **(91%)**	47 (85%)	p = 0.366 CI = -0.17, -0.06
Min. pain score on movement ≥3	6 **(9%)**	8 (15%)	
Max. pain score at rest ≤2	46 (71%)	44 **(80%)**	
Max. pain score at rest ≥3	19 (29%)	11 **(20%)**	
Min. pain score at rest ≤2	63 (97%)	55 **(100%)**	
Min. pain score at rest ≥3	2 (3%)	0 **(0%)**	
Mean breakthrough analgesia doses administered	1.5	0.6	
Patients who had no breakthrough analgesia administered	15 (23%)	38 (69%)	p = <0.0001 CI = -0.62, -0.30
Time longer than expected to receive breakthrough analgesia	7 **(17%)**	8 (30%)	p = 0.533 CI = -0.16, 0.08
PR Diclofenac administered (where indicated)	28%	**61%**	
Prescription compliance with protocol	56 **(86%)**	46 (84%)	

Discussion

Following introduction of regular Dihydrocodeine, pain scores on movement did not improve. Use of breakthrough analgesia was reduced. Administration rates of PR Diclofenac increased. Time taken to receive breakthrough analgesia increased, potentially affected by the increased Covid-19 pandemic related staff absence rates. Telephone reviews post-discharge were not evaluated for the re-audit, which may skew the results, with confounding factors contributing to postoperative pain.



Future work

- Consider introduction of regional anaesthesia (e.g. TAP block) and re-audit
- Consider increased NSAID doses to improve movement pain
- Review opioid prescribing
- Impacts of Covid-19 on staffing and analgesia administration – education and supporting midwives

References

1. Nice.org.uk. (2021). *Recommendations | Caesarean birth | Guidance | NICE*. [online] Available at: https://www.nice.org.uk/guidance/ng192/chapter/Recommendations#care-of-the-woman-after-caesarean-bir
2. Roofthooft, E., Joshi, G.P., Rawal, N., et al. (2020). PROSPECT guideline for elective caesarean section: updated systematic review and procedure-specific postoperative pain management recommendations. *Anaesthesia*, [online] 76(5), pp.665–680. Available at: https://associationofanaesthetists-publications.onlinelibrary.wiley.com/doi/epdf/10.1111/anae.15339

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