Analgesia post Lower Segment Caesarean Section: a fifth local re-audit of obstetric anaesthetic service and implementation of PROSPECT guidelines

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Background

- In 2021, PROSPECT updated guidelines related to analgesia for Lower Segment caesarean Section (LSCS) including regular paracetamol and NSAID in addition to a single dose of IV dexamethasone after delivery (1).
- Previous local audits between 2009 and 2015 had revealed a large percentage of omitted analgesic drug doses post-operatively and incorrect prescribing of post-operative ibuprofen after intra-operative diclofenac.
- This led to implementation of enhanced recovery pre-printed drug charts and the addition of prescribing safety reminders at the WHO sign out.
- We re-audited looking for improvement of these issues and compliance with new PROSPECT guidelines.

Methods

- PROSPECT guidelines were circulated through the anaesthetic department via email correspondence and journal club
- A retrospective audit was performed via note review of parturients undergoing LSCS in April, before the guidelines were circulated and July 2021, to assess for a difference in practice.
- Results were also compared to previous audit cycles
- Approval was granted by the local clinical governance department.

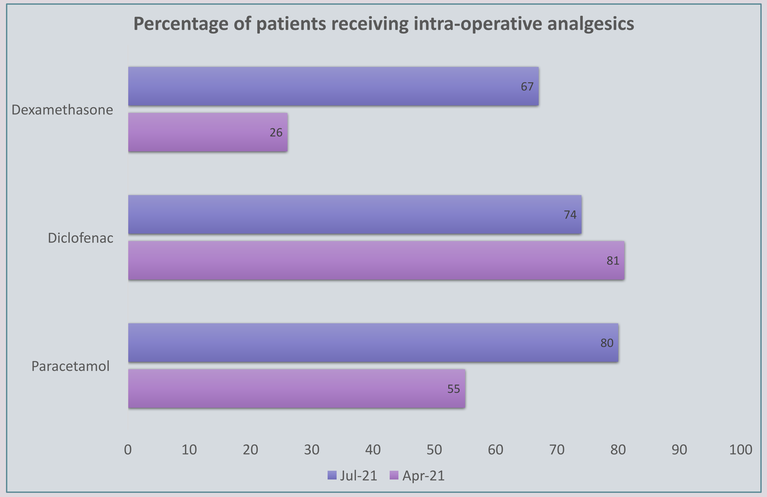


Figure 1: Showing change in percentage of patients receiving multimodal intra-operative analgesia between April and July 2021.

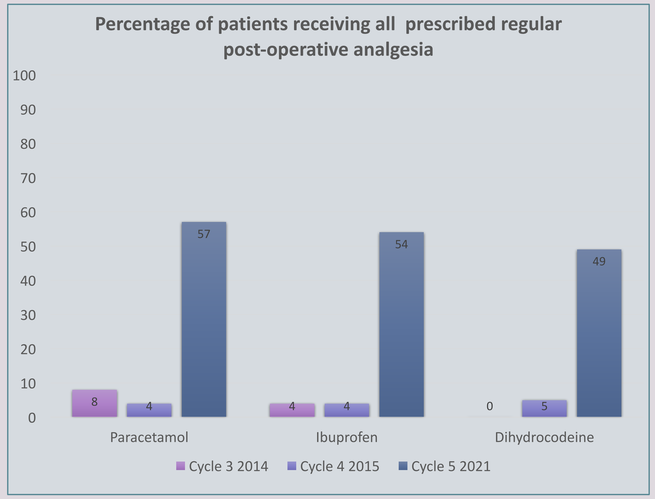


Figure 2: Showing percentage of patients receiving post-operative multimodal analgesia by subsequent audit cycle

Results

- 89 notes were reviewed (April N=43, July N=46). Elective LSCS = 48, emergency = 41. All patients received neuraxial anaesthesia by either spinal or epidural with an opiate.
- Intra-operative use of paracetamol and dexamethasone improved between April and July 2021 in line with PROSPECT guidelines (Fig 1).
- 100% were prescribed regular post-operative paracetamol, dihydrocodeine and ibuprofen, where not contraindicated, consistently increasing with each audit cycle (84% in 2009). In 2015 19 patients who received intra-operative diclofenac did not have ibuprofen crossed off their post-operative drug chart. This had reduced to only 1 patient in 2021.
- Omissions of prescribed post-operative regular medications have reduced between audit cycles (Fig 2).
- A summary of changes between subsequent audit cycles is shown
- Average length of stay was 38 hours. 55% (N=49) of all cases and 76% (N=31) of elective cases went home the next day.

Discussion

- This re-audit shows how repeated cycles of quality improvement and implementation of safety measures improves consistency in prescribing and responses to changes in national guidelines.
- Intra-operative diclofenac has remained consistent since 2014 and may change monthly due to the presence of patient-specific contraindications.
- These measures have included standardised enhanced recovery drug charts, safety reminders at theatre WHO sign-out, more inter-professional collaboration and staff education.
- These continued cycles of quality improvement have helped to underpin local Enhanced Recovery in Obstetric Surgery (EROS) principles resulting in a high percentage of parturients being discharged on the day after surgery compared to the national average of 40%(2).
- Improvements can still be made in drug omissions and documentation which highlights the challenges of QI in making gradual changes in the context of changing clinical goals and endpoints (3)
- Drug omissions may be further reduced by the implementation of electronic prescribing in 2022 and future work should also include service-user satisfaction.

Summary of changes

1st Audit Cycle 2009
- ❖ Post-op analgesic regime completed at clinician's discretion
- ❖ 60% received PR diclofenac in theatre

- ❖ 84% of patients were prescribed regular post-op analgesia
- ❖ 22% received all their prescribed analgesia

2nd Audit Cycle 2012
- ❖ New pre-printed drug charts with paracetamol QDS, ibuprofen TDS & dihydrocodeine QDS
- ❖ 84% received PR diclofenac in theatre

- ❖ 100% of patients were prescribed regular post-op analgesia
- ❖ 14% received all their prescribed analgesia

3rd Audit Cycle 2014
- ❖ Ibuprofen frequency increased to QDS to match paracetamol
- ❖ 88% received PR diclofenac in theatre

- ❖ 96% of patients were prescribed regular post-op analgesia
- ❖ 0% received all their prescribed analgesia

4th Audit Cycle 2015
- ❖ Drug dispensing changed, one MW per bay rather than one for entire ward
- ❖ 86% received PR diclofenac in theatre

- ❖ 100% of patients were prescribed regular post-op analgesia
- ❖ 0% received all their prescribed analgesia

5th Audit Cycle 2021
- ❖ PROSPECT Guidelines introduced
- ❖ 81% (April) and 74% (July) received PR diclofenac in theatre
- ❖ 67% of patients in July 2021 also received IV Dexamethasone

- ❖ 97% of patients were prescribed regular post-op analgesia
- ❖ For patients px regular analgesia, 52% received every dose

References

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