Post-operative nausea and vomiting in obstetrics: an ongoing challenge

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Introduction

Post-operative nausea and vomiting (PONV) affects up to 80% of caesarean deliveries (CDs) [1].

Following a local audit (2013), single prophylactic antiemetic was advised for all operative deliveries, and an ERAS protocol was developed for elective CDs with a consequent reduction in starvation times.

This re-audit was performed to review intra-operative antiemetic prescription and PONV rates during operative deliveries.

Method

Following clinical governance approval, prospective data was collected via a proforma for all operative deliveries occurring during one week (December 2021).

In addition to prescriptions on anaesthetic and drug charts, patients were asked about PONV and whether this had affected their birth experience.



Figure 1: Qualitative data

Results

Quantitative data from 2021 (n=27) was compared with the previous audit (2013, n=100) in Table 1.

Antiemetic prescription increased and PONV reduced in elective CDs but reported PONV increased substantially in emergency operative deliveries despite increased use of antiemetics and no change in use of ergometrine.

Qualitative data (2021) revealed that PONV had a negative impact in 22% of respondents. Some notable comments are shown in Figure 1.

	2013 (n=100)	2021 (n=27)
All Cases (n)	100	27
Intra-operative antiemetic given	29 (29%)	19 (70.4%)
PONV reported	26 (26%)	12 (44.4%)
Elective CD (n)	29	11
Intra-operative antiemetic given	5 (17.2%)	10 (90.9%)
PONV reported	13 (44.8%)	3 (27.3%)
Emergency instrumental/ CD (n)	71	16
Intra-operative antiemetic given	24 (33.8%)	9 (56.3%)
PONV reported	13 (18.3%)	9 (56.3%)
Epidural for labour	28 (39.4%)	9 (56.3%)
Ergometrine given	11 (15.5%)	2 (12.5%)
Syntometrine given	19 (26.8%)	3 (18.8%)

Table 1 . Audit results in 2013 and 2021. Values are n (%), CD: caesarean delivery.

Discussion

Despite the overall increase in antiemetic use, the reported incidence of PONV in emergency cases increased with substantial impact on patient experience and ability to bond with their newborn baby.

The reduction in PONV in elective CDs was likely due to the introduction of an ERAS pathway, with reduced starvation times, and almost routine prophylactic antiemetic prescription.

Moving forward, we plan to;

- Continue the use of single agent antiemetic for elective CDs, aiming for 100% compliance, with departmental education.
- Explore the use of dual antiemetic therapy for emergency cases and review starvation guidelines during labour to minimise PONV following emergency operative delivery.

Conclusion

- **An increase in antiemetic usage has been observed since 2013.**
- **PONV incidence has reduced in elective CDs but increased in emergency cases.**
- **Further work is required to standardise emergency starvation times and antiemetic prescription.**

References
1. Tan HS, Habib AS. The optimum management of nausea and vomiting during and after caesarean delivery. Best Practice and Research, Clinical Anaesthesiology. 2020 Dec;34(4): 735-747.

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