

# Being NICE? Antiemetic Prophylaxis for Elective Caesarean Delivery

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## Introduction & Aim

Intraoperative nausea and vomiting (IONV) during caesarean section under regional anaesthesia can be distressing and uncomfortable for patients and may have a negative impact on their overall birthing experience. National guidance advocates that women undergoing caesarean delivery should be routinely offered antiemetics [1]. We postulated that this was not routine practice in our unit.

## Methods

Following approval by the local audit lead a prospective review of all elective caesarean deliveries over a six-week period was conducted.

## Results

Eighty three parturients were reviewed, of which eleven (13%) received a prophylactic antiemetic (figure 1). Eighteen (22%) received a rescue antiemetic in theatre (figure 2). All patients who received a prophylactic antiemetic required no further antiemetic treatment.

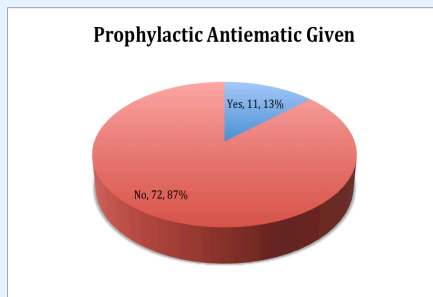


Figure 1: Patients Given Prophylactic Antiemetic

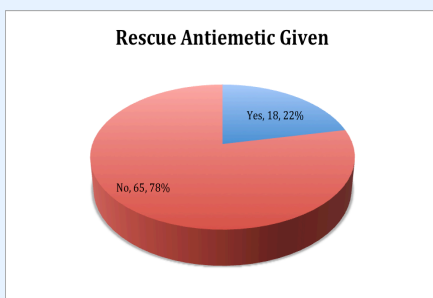


Figure 2: Patients Given Rescue Antiemetic in Theatre

## Discussion

The incidence of IONV during elective caesarean delivery is reported to be as high as 80% [1]. Only 13% received antiemetic prophylaxis in our audit and suggests that we may be underestimating its incidence.

The cause of IONV is multifactorial (figure 3), and our approach to its prevention and treatment should be likewise [2]

### Anaesthetic Causes

Hypotension	Increased vagal activity	Parental opioids	Neuraxial opioids
<ul style="list-style-type: none"> <li>Aortocaval compression</li> <li>Dehydration</li> <li>High block</li> </ul>	<ul style="list-style-type: none"> <li>Peritoneal traction</li> </ul>	<ul style="list-style-type: none"> <li>Direct emetic effect</li> </ul>	<ul style="list-style-type: none"> <li>Direct emetic effect (dose dependant)</li> </ul>

### Non-Anaesthetic Causes

Surgical stimuli	Ureteric Agent	Motion
<ul style="list-style-type: none"> <li>Minimally invasive</li> </ul>	<ul style="list-style-type: none"> <li>Ergometrine</li> <li>Syntocinon</li> </ul>	<ul style="list-style-type: none"> <li>Exteriorisation of the uterus</li> </ul>

Figure 3: Causes of IONV during caesarean section under regional anaesthesia

Review of the cases in which rescue antiemetic treatment was required suggests the following could be useful indicators to stratify risk.

- ◆ Higher spinal block height (T3 and above)
- ◆ Requiring phenylephrine infusion rate greater than 2mg/hr to treat hypotension
- ◆ Estimated blood loss of greater than 1200mls
- ◆ Use of ergometrine
- ◆ Surgical stimuli (exteriorisation of uterus, peritoneal traction during closure)

We suggest development of a scoring system similar to the Apfel score used for postoperative nausea and vomiting in general anaesthesia [3], but specific to caesarean delivery under regional anaesthesia will be a useful tool to risk assess patients. Introduction of this should reduce the incidence of IONV and improve the birthing experience of the mother.

## References

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