

Prophylactic Ondansetron Administration for Nausea Management in Elective Caesarean Sections: A Paradigm Shift in Enhanced Recovery Guidelines

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Introduction

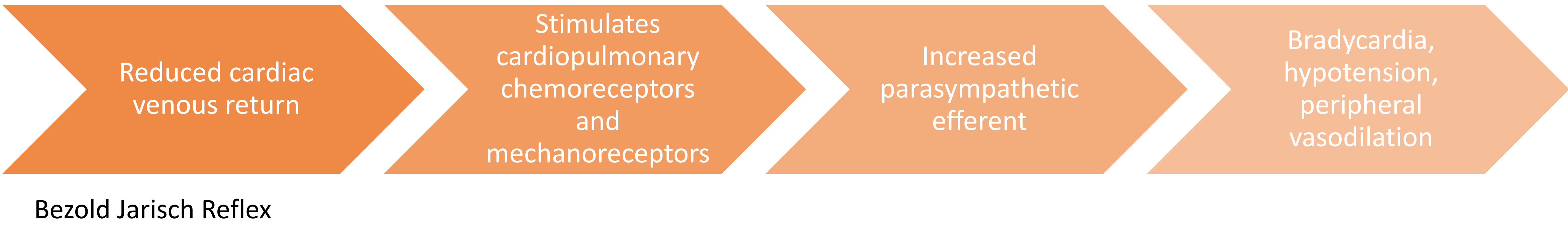
Enhanced recovery after surgery principles have reformed the approach to improving surgical care, focusing on accelerating recovery and optimising patient outcomes. Enhanced Recovery After Caesarean (ERAC) expands these principles to apply to obstetrics (1). Nausea and vomiting, a common complication following spinal anaesthesia, can significantly impact the patient's experience. Our study explores the incidence of nausea in women undergoing caesarean sections, with a focus on the timing of ondansetron administration. We aim to assess the effectiveness of prophylactic ondansetron given immediately after spinal administration in reducing the incidence of nausea.

Methods

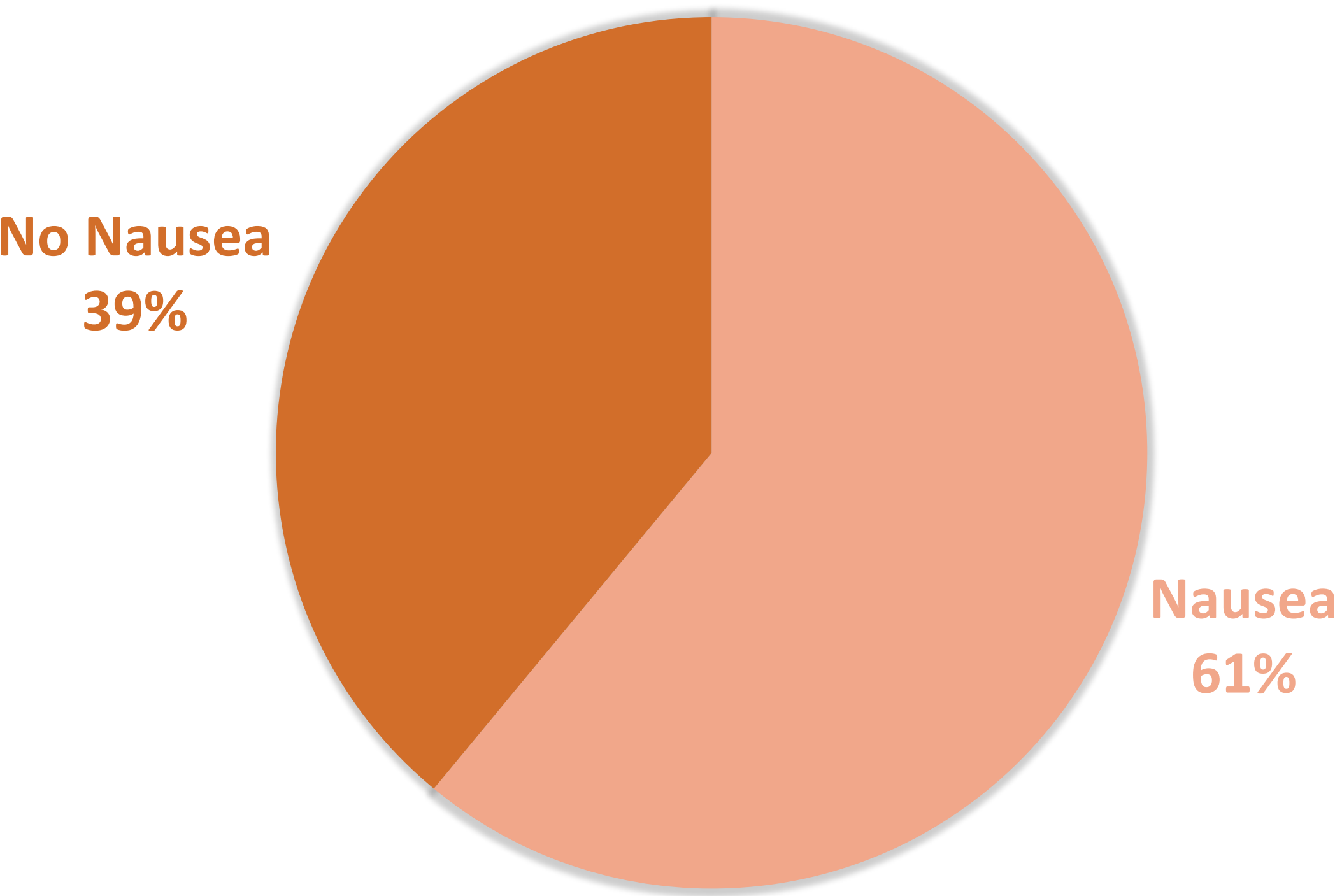
A retrospective cohort study was conducted at West Suffolk Hospital, involving 20 patients undergoing caesarean sections over a one week period. Patients were categorised into two groups: those who received prophylactic ondansetron immediately after spinal administration and those who did not. The primary outcome was the incidence of nausea.

Results

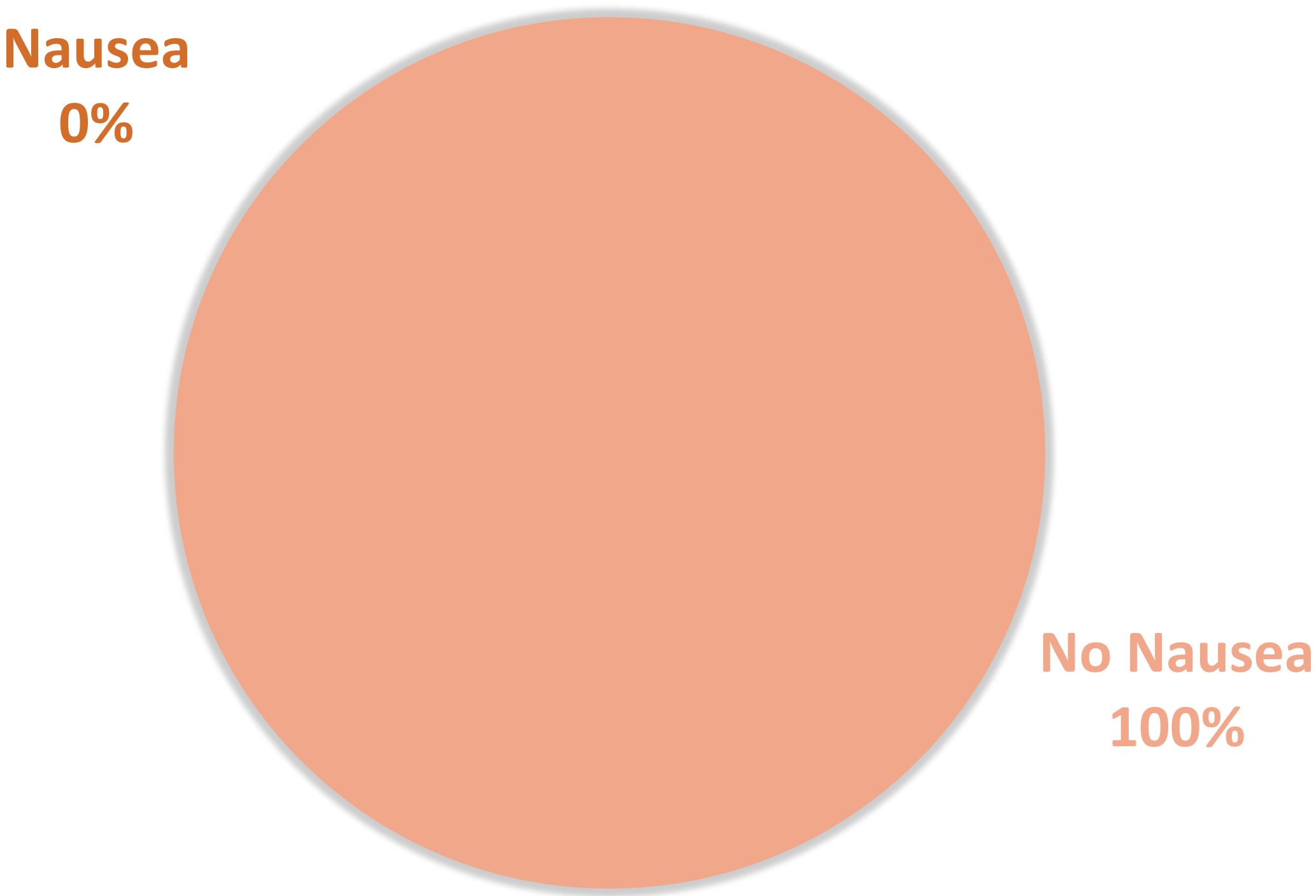
Analysis revealed an overall 40% incidence of nausea or vomiting. Of the women who received a dose of ondansetron immediately after spinal administration, the incidence of nausea was 0%. Of the women who received ondansetron after surgery had commenced, the incidence of nausea was 61%. Stratifying by timing, patients who received prophylactic ondansetron demonstrated a reduction in the incidence of nausea compared to those who received it reactively with statistically significant results, $p=0.018$



ADMINISTERED ONDANSETRON IMMEDIATELY AFTER SPINAL



ADMINISTERED ONDANSETRON AFTER KNIFE-TO-SKIN



Discussion

The findings of this study underscore the potential benefits of prophylactic ondansetron administration in mitigating nausea following spinal anaesthesia. The pharmacodynamic properties of Ondansetron, the Bezold-Jarisch reflex, which involves serotonin-mediated vagal stimulation, is associated in the prevention of hypotension, a common side effect of spinal anaesthesia (2). By mitigating this reflex, ondansetron not only addresses nausea but also contributes to haemodynamic stability. As a result of our findings we have updated local ERAC guidelines to incorporate administration of prophylactic ondansetron. We anticipate a more favourable postoperative experience for patients undergoing caesarean sections, leading to enhanced satisfaction and faster recovery. As we implement this change in local guidelines, we aim to collect further data to validate our refined approach, ultimately contributing to the broader advancement of obstetric anaesthetic care.

References

1. Adshead D, Wrench I, Woolnough M. Enhanced recovery for elective Caesarean section. Br J Anaesth Educ. 2020 Jul 15. DOI: <https://doi.org/10.1016/j.bjae.2020.05.003>. Accessed January 11, 2024.