Guideline adherence in the prophylaxis of acute chemotherapy-induced nausea and vomiting among paediatric patients

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ABSTRACT

Introduction: Chemotherapy-induced nausea and vomiting (CINV) is a distressing adverse effect that can severely impact quality of life of paediatric patients undergoing cancer treatment. Although international antiemetic prescribing guidelines were made available, studies have shown inconsistent adherence to the guideline recommendations. **Objective:** This study aimed to investigate the adherence to CINV guideline in paediatric oncology patients for the prophylaxis of acute CINV, incidence of acute CINV, and the association between guideline adherence and CINV control. **Materials and Methods:** A retrospective chart review was conducted at Hospital Tunku Ampuan Besar Tuanku Aishah Rohani, Hospital Pakar Kanak-Kanak Universiti Kebangsaan Malaysia (HPKK), included paediatric patients who received highly, moderately, and low emetogenic chemotherapy between June 2022 to May 2024. CINV guideline adherence was compared against the international Pediatric Oncology Group of Ontario (POGO) CINV Guideline 2022. **Results:** 106 patients were included in the study. Granisetron was the most frequently prescribed antiemetics for the prophylaxis of acute CINV, followed by dexamethasone and metoclopramide. No patient received aprepitant. It was shown that 53% of patients received antiemetics adherence to the international guideline. The incidence of acute CINV was 20%. Patients who received antiemetic prophylaxis adherent to the international guideline had significantly higher rate of CINV control compared to those non-adherents (96.4% vs 62%, respectively; $p<0.001$). **Discussion:** Underprescription of dexamethasone and aprepitant was observed, deviating from the recommendations by the international guideline according to emetogenicities. It was due to concerns about adverse effects associated with dexamethasone and absence of aprepitant from the formulary. Adhering to guidelines improve CINV control, leading to their adoption in practice. **Conclusion:** This study highlights that adherence to the international guideline contributed to better CINV control. Strategies to improve guideline adherence should be addressed, such as underprescription of antiemetics and the adoption of the international guideline into local practice, to improve CINV outcomes.

Keywords: Chemotherapy-induced nausea and vomiting (CINV), antiemetic prescribing patterns, CINV control, antiemetic guideline adherence, paediatric cancer patients