Retrospective Evaluation of Admissions for Chemotherapy-Induced Nausea, Vomiting, and Dehydration

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Purpose
This study will retrospectively review chemotherapy patients for admissions due to chemotherapy-induced nausea, vomiting, and dehydration at Lehigh Valley Health Network’s (LVHN) protocol for prevention of such admissions and emergency room (ER) visits.

This study is fundamentally descriptive. Rates of admission for chemotherapy-induced nausea and vomiting appear to be increasing at LVHN without a known cause. We anticipate a pattern of admissions to emerge which will be able to be used to guide an appropriate medical policy response to this problem.

Background
Today, many of our patients do not experience vomiting while undergoing chemotherapy due to improved prophylaxis regimens and agents, but it is certainly still a problem. The risk of chemotherapy-induced nausea and vomiting (CINV) lasts for 3 to 13 days, with 50% of patients experiencing symptoms 7 days after chemotherapy administration. Chemotherapeutic agents are classified into categories based on their potential to cause nausea and vomiting.

Chemotherapeutic agents are classified into categories based on their potential to induce nausea and vomiting, as illustrated in Figure 1. The high emetogenic chemotherapy (HEC) category includes drugs known to cause 100% incidence of nausea, vomiting, or dehydration within 24 hours after administration. Moderate emetogenic chemotherapy (MEC) includes drugs known to cause 50-99% incidence of nausea, vomiting, or dehydration within 24 hours after administration. Low emetogenic chemotherapy (LEC) includes drugs known to cause 10-50% incidence of nausea, vomiting, or dehydration within 24 hours after administration. Minimal emetogenic chemotherapy includes drugs known to cause less than 10% incidence of nausea, vomiting, or dehydration within 24 hours after administration.

Methods
The primary outcome of this study will be rates of admissions (number of chemotherapy administrations) compared by chemotherapeutic medication and by care plan emetogenicity. Care plan emetogenicity is predefined at LVHN based on regimen medications. Concomitant use of prophylactic antiemetic and hydration methods, as well as length of stay compared by care plan emetogenicity level.

Patient data to be collected includes:
- Age, gender, weight
- Presence of metastases, site of cancer, completed cycles of chemotherapy, history of CINV

Chemotherapy prescribing physician, location of chemotherapy treatment, chemotherapy medications and doses, regimen emetogenicity (as previously defined in the LVHN standardized care plan), pre-chemotherapy antiemetic and hydration, pre-chemotherapy antiemetic antimicrobial, chemotherapy administration (appropriate or inappropriate, where appropriate is defined as administration 30 to 60 minutes prior to chemotherapy administration), compliance with prophylactic antiemetics.

Study Design
Retrospective chart review of admissions for nausea, vomiting, or dehydration in patients receiving any IV chemotherapy including ER admissions, ER discharges, and direct admissions over 1 year

Study Population
- Inclusion Criteria:
  - Patients undergoing intravenous chemotherapy in the outpatient chemotherapy centers at LVHN
  - Patients with an ER visit to admission, ER visit to discharge, or direct hospital admission for nausea, vomiting, or dehydration within 10 days after receiving IV chemotherapy
- Exclusion Criteria:
  - Patients admitted for a reason other than nausea, vomiting, or dehydration
  - Patients with repeat admissions for nausea, vomiting, or dehydration on the same chemotherapy regimen
  - Patients receiving oral chemotherapy

Statistical Analysis
- Primary outcomes will be reported as rate of admission for each emetogenicity level and each predefined care plan.
- Through this study, we hope to evaluate the incidence of CINV in our chemotherapy patients in order to modify prophylactic treatment to reduce admissions for CINV and improve patient tolerance of chemotherapy.

Disclosure
Authors of this presentation have the following to disclose:
- Katelin Van Leer: Nothing to disclose
- Janine Barnaby: Nothing to disclose

References

Disclosures
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- Janine Barnaby: Nothing to disclose

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