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Submitting author: Miss Yi Ming Cherise CHAN
Post title: Pharmacist, Queen Elizabeth Hospital, KCC

Evaluation of the Prescribing Pattern and Efficacy of Antiemetic for Chemotherapy-Induced Nausea and Vomiting in a Hong Kong Public Hospital

Chau RYH(1)(2), Chan YM(1)(2), Wong KM(1), Lam TN(2), Leung WYS(1)(2), Law KM(1), Yiu HY(3), Ngan RKC(3)
(1)Department of Pharmacy, Queen Elizabeth Hospital, (2)School of Pharmacy, The Chinese University of Hong Kong, (3)Department of Clinical Oncology, Queen Elizabeth Hospital

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Introduction

Prescribing antiemetics to prevent chemotherapy-induced nausea and vomiting(CINV) is often based on institutional guidelines, individual clinical judgment, and local reimbursement pattern. Aprepitant has been a self-financed item until just recently. Patients' affordability has largely governed its use and thereby may have affected the emesis control in a significant proportion of patients.

Objectives

This study aimed to determine the antiemetic prescribing pattern and evaluate CINV control in patients newly started on cisplatin-based, carboplatin-based or combination anthracycline-cyclophosphamide(AC) based chemotherapy.

Methodology

A prospective, observational study was conducted in Queen Elizabeth Hospital. Patient characteristics and treatment details for the first two cycles of chemotherapy were collected. CINV outcomes from days 1 to 7 or 8 were evaluated through self-reported emesis diary. Comparison of patterns of antiemetic drug prescriptions with international recommendations, proportion of patients who achieved complete response(CR) or complete protection(CP) and who experienced emesis were determined.

Result

Eighty-seven subjects were enrolled over 8 weeks in early 2015. It was observed that antiemetic prescribing adhered more closely to international guidelines in the acute phase(59.4%) than the delayed phase(50.0%). All subjects on high emetic risk regimens were prescribed dexamethasone(100%) and serotonin antagonist(100%)

on day 1, but not aprepitant(25% in cisplatin-based; 54.3% in AC-based regimens). Serotonin antagonist was not prescribed for acute CINV in 35.7% patients on moderate emetic risk regimens. Dexamethasone was prescribed for preventing delayed CINV in 25.4% patients on high emetic risk regimens and 50.0% patients on moderate emetic risk regimens, while serotonin antagonist was prescribed in less than 10% patients. CP and CR were higher on the day of chemotherapy(59.5%; 78.4%) than on subsequent days(17.6%; 36.5%) in 74 subjects included in efficacy analysis. Twenty-two(29.7%) patients vomited, five of whom added serotonin antagonist post-chemotherapy at second cycle but three still experienced emesis. Subgroup analysis showed that fewer subjects on AC-based chemotherapy prescribed with aprepitant experienced emesis(5.6% versus 58.3%, p=0.003). With aprepitant becoming free for patients receiving high emetic risk chemotherapy, prescribing aprepitant for preventing acute and prolonged dexamethasone / serotonin antagonist for delayed emesis in all such patients are recommended to improve adherence to international guidelines and strengthen CINV control.