Service Priorities and Programmes

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Prescription Verification Service on Anticancer Medications by Oncology Clinical Pharmacist at Queen Elizabeth Hospital

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Introduction

A prescription verification service on anticancer medications by oncology clinical pharmacist has been implemented in the Department of Clinical Oncology, Queen Elizabeth Hospital.

Objectives

This retrospective audit aims to evaluate the number and type of recommendations made by the oncology clinical pharmacist.

Methodology

Drug-related recommendations made by the oncology clinical pharmacist from January to June 2015 were documented. The Classification for Drug-related problems developed by the Pharmaceutical Care Network Europe Foundation was adopted for the analysis.

Result

3,198 anticancer medication orders were screened. A total of 509 recommendations were made, of which 137 were classified as drug-related problems: 48 (35.0%) for missing pre-medications or supportive care medications, 18 (13.1%) for unrecognized discrepancies between prescription and treatment protocol, 12 (8.8%) for treatment duration prescribed shorter than intended, 11 (8.0%) for underdosing and 10 (7.3%) for overdosing. In recommendations on pre-medications and supportive care medications, aprepitant (11, 8%) and famotidine (9, 6.6%) were the most commonly involved. Recommendations were made when an anticancer medication was underdosed for >10% and carboplatin (5, 3.6%), cyclophosphamide (2, 1.5%) and trastuzumab (2, 1.5%) were the top three medications involved. Carboplatin was prescribed at a dose lower than intended because of miscalculation of creatinine clearance or omission of an intended dose escalation in the prescription. Cyclophosphamide was underdosed when the dose of docetaxel (75mg/m2) was

mistaken as that of cyclophosphamide (500mg/m2) in the TAC regimen (docetaxel, doxorubicin and cyclophosphamide). The need for reloading trastuzumab from 6mg/kg to 8mg/kg when there was >28 days between 2 doses was omitted. Prescriptions with anticancer medications overdosed for more than 10% were intervened and carboplatin (6, 4.4%) was the most commonly involved. Carboplatin was prescribed at a dose higher than intended when the creatinine clearance was miscalculated. 657 prescriptions involved only oral anticancer medications and 21 (3.2%) recommendations were made. Top 3 recommendations involved 8 anticancer medications not prescribed on to-take-home prescriptions, 4 drug-drug interactions and 3 insufficient supplies until the next follow-up. The audit demonstrated that clinical pharmacists have a role in improving medication safety and optimising treatment outcome. Direct screening of prescriptions and prompt interventions in drug-related problems were also provided.