Service Priorities and Programmes

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Causes of unplanned readmissions in oncology patients receiving systemic anticancer therapy

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Introduction

Systemic anticancer therapy, in particular chemotherapy, is generally associated with a range of adverse events. Some of them may result in unplanned hospitalisation, an outcome which is undesirable to both the patient and the healthcare system. The causes of unplanned readmission in oncology patients receiving systemic anticancer therapy have not been evaluated in any local studies.

Objectives

To examine the causes of unplanned readmissions in patients receiving systemic anticancer therapy under the care of the Department of Clinical Oncology in Queen Elizabeth Hospital and identify potential areas for improvement.

Methodology

Episodes of admission to, hospitalisation in and discharge from the target wards in February 2013 were retrieved from the Clinical Data Analysis and Reporting System (CDARS). Every episode was studied in the Electronic Patient Record (EPR) and assessed as either planned or unplanned and either a readmission or a non-readmission, using a 30-day time frame. Episodes classified as unplanned readmissions were further categorised according to the type of oncological treatment. Neutropenia and/or fever, anaemia, vomiting, diarrhoea and localised infections were pre-specified problems of interest and episodes admitted for these problems were further evaluated.

Result

In February 2013, 1,613 episodes were identified and 121 were classified as unplanned readmissions. Patients in 60 of these 121 episodes were receiving systemic anticancer therapy, including chemotherapy, targeted therapy and/or hormonal therapy, with or without radiotherapy, at the Department of Clinical Oncology.

Fifty-four (90%) of the episodes had chemotherapy as part of the regimen. Of these 60 episodes involving systemic anticancer therapy, 18 were related to neutropenia and/or fever. The top four related regimen were ‘docetaxel and cyclophosphamide’ (TC), gemcitabine, ‘gemcitabine and cisplatin’ (GP) and ‘trastuzumab and tamoxifen’. Before admission, 12 (66.6%) of them had not received any prophylactic G-CSF or antibiotics. After the admission, 14 (77.8%) patients had resumed therapy and six (33.3%) had either a reduction in the dose or an escalation in prophylactic strategies. Other pre-specified problems, including anaemia (n=9), vomiting (n=3), diarrhoea (n=2) and localised infections (n=2), were also identified. This study has provided insights on several potentially drug-related causes of unplanned readmissions in oncology patients. Follow-up investigations into individual episodes, e.g. those admitted for neutropenia and/or fever, may provide further guidance in the development of prophylactic strategies.