

Analysis of the antineoplastic medications errors in a 500-bed teaching hospital

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BACKGROUND:

Medication errors with antineoplastic drugs may be catastrophic due to the drug's high toxicity and small therapeutic index.

OBJECTIVE:

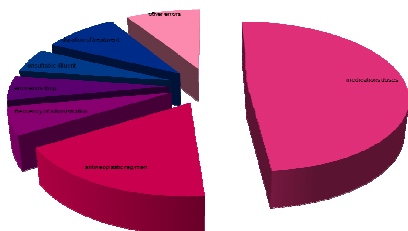
This study aimed to assess antineoplastic medication errors in terms of frequency, type of errors and severity for patients.

METHODS:

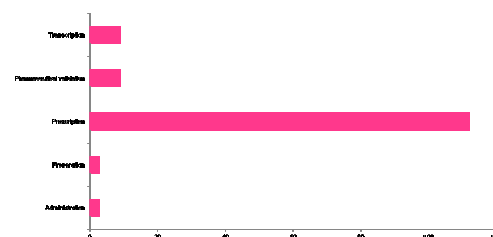
A 1-year prospective study was conducted (2011) in order to identify the medication errors that occurred during chemotherapy treatment cancer patients at a 500 bed-teaching hospital for patients in wards involved in the care of cancer patients. Wards included both daycare and inpatients units. All prescriptions and fabrications forms were verified by pharmacists. The different types of error were defined in a data collection form. For each intercepted medication error, the potential severity was evaluated according to the Ruiz-Jarabo 2000 version2 classification-system.

RESULTS:

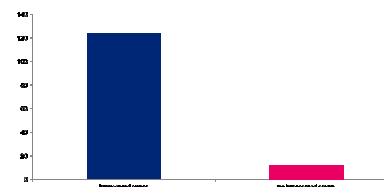
During the study period, the pharmacy unit prepared 17241 distinct anticancer drugs. In total, 136 medication errors were detected throughout the medication use process. Prescriptions errors represented 82% of errors, followed by pharmaceutical validation (7%) transcription (7%), preparation (2%) and administration errors (2%).



Among 136 medication errors, 124 were intercepted prior to administration while 12 reached the patients (9%). Overall 66% of no intercepted medication errors had no impact for the patient and only 3 cases required enhanced monitoring.



The most common casual drug was carboplatin, which was involved in 25 cases, despite corresponding to only 2.8% of anticancer drugs prescribed at our institution. Overall, in 66 cases erroneous medication doses were recorded (48.5%), 24 errors were linked to the choice of antineoplastic regimen (17.6%) while in 12 cases, erroneous duration of treatment was prescribed (8.8%).



CONCLUSIONS:

In our study the pharmaceutical validation allowed mainly to identify prescriptions errors (82%), almost all errors were intercepted prior to patient administration. Wrong dose represented the most common type of error. Few pharmaceutical errors (transcription, validation, preparation) were detected.