

Potential Drug-Drug Interactions at a Referral Hematology-Oncology Ward in Iran: A Cross-Sectional Study

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Abstract : Purpose: To assess the pattern and probable risk factors for moderate and major drug-drug interactions in a referral hematology-oncology ward in Iran. Methods: All patients admitted to hematology-oncology ward of Dr. Shariati Hospital during a 6-month period and received at least two anti-cancer or non-anti-cancer medications simultaneously were included. All being scheduled anti-cancer and non-anti-cancer medications both prescribed and administered during ward stay were considered for drug-drug interaction screening by Lexi-Interact On- Desktop software. Results: One hundred and eighty-five drug-drug interactions with moderate or major severity were detected from 83 patients. Most of drug-drug interactions (69.73 %) were classified as pharmacokinetics. Fluconazole (25.95 %) was the most commonly offending medication in drug-drug interactions. Interaction of sulfamethoxazole-trimethoprim with fluconazole was the most common drug-drug interaction (27.27 %). Vincristine with imatinib was the only identified interaction between two anti-cancer agents. The number of administered medications during ward stay was considered as an independent risk factor for developing a drug-drug interaction. Conclusions: Potential moderate or major drug-drug interactions occur frequently in patients with hematological malignancies or related diseases. Performing larger standard studies are required to assess the real clinical and economical effects of drug-drug interactions on patients with hematological and non-hematological malignancies.

Keywords : drug-drug interactions, hematology-oncology ward, hematological malignancies

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