Clinical Pharmacy Services in Oncology-Hematology Unit, Peshawar, Pakistan

Iftikhar Ali[1], Jehanzeb Khan[2]

1. Department of Pharmacy services, Northwest General Hospital and Research Centre Khyber Pakhtunkhwa, Pakistan
2. Department of Pharmacy, University of Peshawar, Khyber Pakhtunkhwa, Pakistan

Abstract: Drug therapy problems are frequent and major challenge to health care providers that are related with morbidity, mortality and patient's quality of life. This study aimed to identify drug related problems and to highlight the role of clinical pharmacist at ward level in tertiary care hospitals. A total of 45 patient's case histories were recorded in medical oncology-hematology unit at Hayatabad Medical Complex, on the standard designed questionnaire. The percentage occurrence of different disease like aplastic anemia 15(33.33%), leukemia 30 (66.66%) were documented. The identified drug related problems were, drug interactions 6 (42.85) %, therapeutic duplication 2 (14.28%), inappropriate dosage 2 (14.28%), poly pharmacy 4(28.57%). Pharmacists can assume an imperative part in distinguishing and teaching the patients in regards to the treatment. Pakistan Pharmacist has not been educated for a patient-care role. With the focus on individual patients, extensive and responsible clinical pharmacy services will be an crucial segment of modern-day health care.

Keywords: drug related problems, clinical pharmacy, drug interactions

Introduction:

Drug related issues could be recognized as any event or condition including the drug therapy, which interferes on the other hand conceivably, interferes with the patient, attaining an ideal outcome of desired therapeutic goal. Drug related problems are usually and may bring about decreased quality of life, and even morbidity and mortality(1)Drug related problems are common in hospitalized patients and increase the cost of therapy and lengthen the hospital stay(2).

Optimization of the drug therapy and control of drug related problems cannot be handled by any health care professional alone, pharmaceutical services can manage and prevent the drug related problems effectively (3).

Patients with malignancies have changed pharmacokinetic as well as pharmaco-dynamics parameters and they receive complex drug therapy that can increase drug-drug interactions and adverse drug events.(4).

Clinical pharmacist participation in health care teams has been demonstrated to have a positive impact in clinical, pharmaceutical and cost-effective indicators.(5)

The Pharmacist has a key part in identification of drug related issues. This is far more critical on account of cancer patients, where the high number of treatment protocols and the extensive supportive therapy increases the number of drugs utilized. (6)

The aim of the study was to identify the drug related problems and highlight the role of clinical pharmacist in a tertiary care setting.

Methods and material:

This study was performed from November 2014 to January 2015 in Hayatabad medical complex Peshawar Khyber Pakhtunkhwa, Pakistan. A standard questionnaire was used for data collection during ward round and data were collected from patient medical charts. A total of 45 patient's case histories were recorded in medical oncology-hematology unit. Data were analyzed in Microsoft Excel.

Results and discussion

A total of 45 patient's drug therapy was assessed during the 90 days study period. Out of 45 patients 41(91.11%) were male and 4(8.88%) were female, mean age was25.4 (years), average hospital stay was 5.63 (days) and the diagnoses of patients were aplastic anemia 15 (33.33%), acute lymphocytic leukemia 15 (33.33%), Acute lymphoblastic leukemia10 (22.22%), and acute myeloid leukemia 5 (11.11%).

The nature of potential drug therapy problems, grouped to two, categories were identified namely, prescriber related potential DRPs and drug related potential DRPs.

The identified drug related problems are summarized in figure 01.

A total of 14 drug related problems were identified from 45 patient's therapy charts. Most of the

DPRs observed in our study resulted from the drug-drug interactions 6(42.85) %, of the total DRPs identified which incorporated more of drug- drug interactions, followed by Poly-pharmacy 4(28.57%) more than nine drugs were prescribed. Keeping in view poor economic status of majority population, the health care professional may prescribe minimum possible number of drugs, but it is quite understood that large numbers of drugs may be prescribed in case of need.
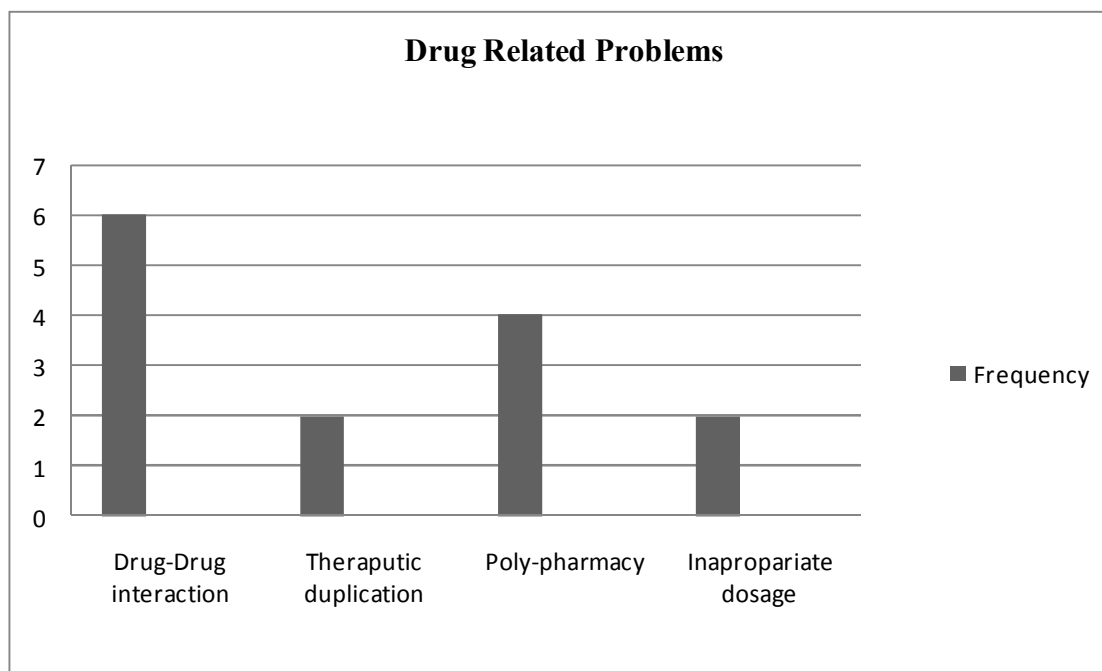

Fig: 01

The increase in total numbers, rates and patients with DRP could be explained by the more complete patient clinical data available to the clinical pharmacist when present in the health care providing team; this will allow the pharmacist to review patient's drug therapy more effectively.

Conclusions:
Involvement of clinical pharmacist in an oncology-hematology setup provides opportunity for the drug therapy management of cancer patients; Clinical pharmacists can be valuable to a health care providing team in oncology and can potentially lead to a decrease in health care expenses and to an improvement of the standard of patient care. Interacting with the health care team in ward rounds, identifying drug related problems as well as offering information to the patients and physicians can bring about more rewarding results for patients as well as hospital.

Conflicts of interest: None

References:
1. Viktil KK, Blix HS. The Impact of Clinical Pharmacists on Drug‑Related Problems and Clinical Outcomes. Basic & clinical pharmacology & toxicology. 2008;102(3):275-80.
2. van den Bemt PM, Egberts TC, Brouwers JR. Drug-related problems in hospitalised patients. Drug Safety. 2000;22(4):321-33.
3. Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. Am J Hosp Pharm. 1990;47(3):533-43.
4. Wong SW, Gray ES. Clinical pharmacy services in oncology clinics. Journal of Oncology Pharmacy Practice. 1999;5(1):49-54.

5. da Silva NM. The impact of pharmacist participation in a multidisciplinary team on an oncology ward compared with a ward clinical pharmacy service. Eur J Hosp Pharm Sci Pract. 2012;19(2):259-60.

6. Cavaco P, Dias S, Ornelas S, Ribeiro N, Falcão F. Pharmacotherapeutic follow-up in oncology. European Journal of Hospital Pharmacy: Science and Practice. 2012;19(2):225.

7. Baidu. http://www.baidu.com. 2017.

8. Google. http://www.google.com. 2017.

9. Ma H, *Chen G*. Stem cell. The Journal of American Science 2005;1(2):90-92.

10. Ma H, Cherng S. Nature of Life. Life Science Journal 2005;2(1):7-15.

11. National Center for Biotechnology Information, **U.S. National Library of Medicine.** http://www.ncbi.nlm.nih.gov/pubmed. 2017.

12. Wikipedia. The free encyclopedia. http://en.wikipedia.org. 2017.

13. Marsland Press. http://www.sciencepub.net. 2017.

7/25/2017