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Original Research Paper

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ADVERSE DRUG REACTION OF ANTICANCER DRUGS AMONG BREAST CARCINOMA PATIENTS OF TERTIARY CARE UNIVERSITY HOSPITAL OF CENTRAL INDIA

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ABSTRACT

Objective: Cancer being a deadly disease and global threat, necessitate the use of anticancer agents. Hence, continuous Adverse Drug Reaction (ADR) reporting should be carried out in the oncology departments of health care systems. The objective of the study was to assess commonly prescribed anticancer agents and report ADRs associated with the anticancer treatment. **Material and Method:** This observational, cross-sectional study was done in the Radiotherapy department of a tertiary care teaching hospital for a period of three months. Female Patients of breast carcinoma attending Radiotherapy department for chemotherapy were included. Patients were enquired about occurrence of any ADRs and details were noted. Preventability and severity of ADRs were assessed by modified Schumock and Thornton scale. **Result:** A total of 60 patients were included in the study. Nausea was the most commonly reported ADR followed by tingling of feet, vomiting, alopecia and abdominal pain. **Conclusion:** Inspite of various prophylactic antiemetic treatment majority of patients had nausea and vomiting which indicates that more vigorous prophylactic measures to prevent emesis need to be undertaken since these ADRs of the antineoplastic drugs are usually preventable.

KEYWORDS : Breast cancer, radiotherapy, adverse drug reaction

INTRODUCTION

Chemotherapy regimens are highly complex and associated with intolerable adverse effects. In a study of ADRs due to chemotherapeutic agents in Oncology patients highest incidence of ADRs was reported in patients treated for breast carcinoma (39.1%). [1]

ADRs posses a high financial burden on the health sector. ADR reporting and its treatment will enhance the effectiveness of therapy and thereby reduce the side effects which ultimately will reduce the rate of mortality.[2]

Programmes for monitoring and reporting ADRs in hospitals can aid in determining and evaluating the hazards connected to medication usage. This information may aid in the faster and more effective detection of adverse drug reactions (ADRs), as well as their future prevention.[3]

Studies evaluating adverse drug reactions in patients with breast cancer, especially in central India, are rare. Hence the present study was undertaken to evaluate the drug utilisation and adverse drug reaction associated with these drugs in patients of breast cancer in tertiary care hospital.

MATERIAL AND METHOD

A prospective, cross-sectional, observational study was carried out in Radiotherapy department of a tertiary care teaching hospital. The study was conducted after approval from the Institutional Ethics Committee.

Study Period: The study was initiated from July 2023 to September 2023.

All female patients diagnosed with breast cancer was identified.

Inclusion Criteria

Female patients aged ≥18 years diagnosed with breast cancer and on chemotherapy.

Exclusion Criteria

1. Female patients aged < 18 years
2. History suggestive of other types of cancer
3. Patient undergoing surgery for breast cancer

Patient was enquired about occurrence of any ADRs during the cycle of chemotherapy using a Adverse Drug Reaction reporting form. Preventability was assessed by modified Schumock and Thornton scale.[4]

Samples Size

The approximate sample size was 60 female patients based on the last three months of patient`s registered.

Statistical Analysis

An Excel-based tool (Microsoft Excel) version 2304 Build 16.0.16327.20200 was used for analysis.

RESULT

Average age of study population was 51.36 ± 10.66(mean ± SD) years. Majority of patients were in 41 – 50 years of age group. (table 1)

Table 1

Age Group	Number of Patients	Percentage
21-30	2	3%
31-40	4	6%
41-50	27	45%
51-60	17	28.33%
61-70	10	16.67%

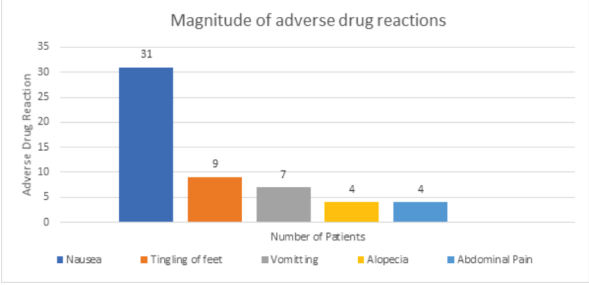

Fig. 1

Nausea was the most commonly reported ADR followed by tingling of feet, vomiting, alopecia and abdominal pain. (Fig. 1)

Preventability of the ADR was assessed by modified Schumock and Thornton scale. ADRs like nausea, vomiting, abdominal pain(gastritis) belonged to the category of "definitely preventable (76.36%) while ADRs like alopecia, tingling of feet belonged to the category of "not preventable"(23.63%).

DISCUSSION

With advances in modern medicine, anticancer treatment for many malignancies is now available which were previously considered fatal. This has resulted in improved survival with

reduced disease recurrence. But in spite of these advances, use of anticancer drugs always has its limitations due to the various associated ADRs.[5] This study aimed at evaluating ADRs associated with the use of anticancer drugs in patients of carcinoma breast. In this study majority of patients were found to be in the age group of 41 – 60 years and this is in accordance with age incidence of breast cancer in other similar studies performed.[6-8]

Nausea was the most common side effect, which is in accordance with previous studies.[1,2] In our study vomiting was third commonest ADR to be reported.

About 76.36% percent of all ADRs (mostly vomiting and nausea) were classified as "definitely preventable." This seems to be a cause for worry and indicates that stronger measures, including stricter antiemetic regimens, should be taken to lower the incidence of these ADRs. This would significantly lessen the pain these patients experience, who are already in a tremendous deal of misery as a result of their illness and its treatment.

Because this was a cross-sectional research, participants were only contacted once, and patients undergoing their first chemotherapy cycle were eliminated. Delay ADRs that occurred after the first cycle of chemotherapy would not have been discovered if the patients had been questioned on the day of their first chemotherapy cycle.

CONCLUSION

Continuing medical education (CME) courses on newer drug combinations, newly introduced drug molecules, and adverse drug reactions will go a long way in reducing irrational prescribing.

To ensure that practitioners have the knowledge and skills necessary to prescribe rationally, it is necessary to strengthen the mechanism for continuing professional development.

Such drug utilisation and adverse event reporting studies have the potential to enhance the standard of care provided to patients with breast cancer.

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