A Study on Drug Utilization Pattern in Breast Cancer Patients in a Tertiary Care Teaching Hospital

*Hansie Wilson[1], Chinju Prasad K[1], Gibin Biju[1], Chaithra[1],
Dr. Chetan B. Savant[2], Dr. Janaki Torvi[3]

[1]Pharm D, Department of Pharmacy Practice, Soniya Education Trust's College of Pharmacy, Dharwad

[2]Assistant Professor, Department of Pharmacy Practice, Soniya Education Trust's College of Pharmacy, Dharwad

[3]HOD and Professor, Department of Pharmacology, Karnataka Institute of Medical Science, Hubballi

Corresponding author: Hansie Wilson

Email Id: serviceheb@gmail.com

ABSTRACT

Background: Breast cancer is the second most common cancer overall and the fifth leading cause of cancer death worldwide. Assessing the utilization patterns of anticancer and supportive care drugs is necessary for ensuring effectiveness and patient's quality of life. **Objectives:** The main aim is to analyze the prescribing pattern of anticancer agents and supportive drugs in breast cancer patients and to assess the possible drug-drug interactions. **Methods:** A prospective observational study was conducted on in-patients of the Oncology Department at Karnataka Institute of Medical Science, Hubballi for six months. All the necessary information including clinical data, and therapeutic data was collected from the patient case sheets. Drugs were screened for interactions by using the IBM Micromedex Drug Interaction Application. **Results:** Breast cancer was most prevalent in the age group of 36-49 (46.29%). It was found that family history was not a significant risk factor for breast cancer. 25.92% of patients were diagnosed with stage IIIA disease. Use of an anthracycline-based regimen was found to be higher. Most of the patients received adjuvant chemotherapy (56.84%) whereas 31.57% received neoadjuvant chemotherapy. AC regimen (48.42%) was the most prescribed followed by AC-Paclitaxel. Amongst anti-neoplastic agents, cyclophosphamide (34.4%) and doxorubicin (31.07%) were prominent. Targeted therapy was given to 1.05% of patients with HER2-positive tumors, while endocrine therapy was prescribed for 1.05% with hormone–responsive tumors. Dexamethasone (8.55%), ondansetron (91.66%), and pantoprazole (97.22%) were commonly prescribed supportive care medications. The most observed drug interactions were cyclophosphamide + doxorubicin and cyclophosphamide + ondansetron. **Conclusion:** The study concluded that the occurrence of breast cancer has undergone an

age shift and is now presenting at younger ages in the Indian population. Anthracycline-based regimens were the most used which improves the patients' Disease-Free Survival (DFS) and Overall Survival (OS). Public awareness and screening centers for early detection among younger women are crucial.

Keywords: Breast cancer, Drug utilization pattern, Risk factors, Drug-Drug interaction