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COMPARISON AND REVIEW OF DRUG UTILIZATION EVALUATION IN ANTI-CANCER DRUGS AND THEIR SIDE EFFECTS ALONG WITH SUPPORTIVE THERAPY

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ABSTRACT
Background: The main aim of drug utilization evaluation is to promote rational use of drugs which allow prescribing of well-documented drugs in an optimal dose on right indication with accurate information. Drug utilization studies in oncology contribute assessment of patient adherence to the treatment, physician adherence to the guidelines and safety of anticancer drugs and supportive therapy. **Conclusion:** The above study concluded that the most of the anticancer drugs are used in combination, Paclitaxel, carboplatin, 5-FUC are most commonly used drugs in different types of cancers. Lung and pharynx cancer are more predominant followed by stomach, breast, oesophagus, ovary. WHO promotes drug utilisation studies are needed in health care setup to evaluate and ensure the rational drug use.

KEYWORDS: Rational use, Anti-cancer drugs, supportive therapy, palliative therapy, Adherence.

INTRODUCTION
Cancer is uncontrolled growth and spreading of abnormal forms of one's own body cells, which is one of the main cause of morbidity and mortality worldwide.[1,8] Chemotherapy is one of the main component in the management of carcinomas.[1,3] Drug utilization evaluation of anticancer drugs is a process of systemic quality improvement which is specially designed to review anti-cancer drugs use and their adverse effect and drug interaction and contraindications of these drugs and or patterns of prescription and development of criteria and standard which gives a description of optimal drug use and promote rational use of anti-cancer drugs.[5,8,3] Chemotherapy drugs are used to destroy cancer cells but these agents are also most common class of drugs causing adverse effects which are uncomfortable, temporary or life threatening which leads to decrease in dose of anti-cancer drugs and addition of supportive therapy.[5,8]

DISCUSSION
The principle of drug utilization study is to encourage the rational use of drugs in population. The study present the most commonly used drugs are cisplatin, paclitaxel,5-FUC, doxorubicin, ifosfamide, oxaliplatin and leucovorin.[13] Chemotherapy includes antineoplastic agents adjuvant and supplementing therapeutic standards. The supportive therapy is used to reduced ADRs with chemotherapy [13]. The most common ADRs are found nausea and vomiting treated with antiemetic which used as preventive therpay.[5,9]

The cytoprotectant agents are leucovorin, mesna, filgrastim. The generally utilized adjuvant treatment is diclofenac, B-complex, ranitidine, dexamethasone, granisetron, ondansetron and mannitol.[9]

Overall study observed there are 30 types of cancer and 33 anticancer drugs are prescribed to patients. The anticancer drugs mostly prescribe as combination regimen, which increase the effectiveness of treatment of cancer patients.[10]

Changes in medication is based upon patient details, type of cancer and its stage and toxicity of cancer.[8] the study shows the drugs are prescribes in generic name which helps to improve rational drug use, reduce cost of drug and reduce the error while prescribing.[8] This DUE study shows the severity, frequency of chemotherapy in cancer patients.[6] DUE defined by WHO as it is marketing, distribution and prescription use of drugs.[3] WHO

promotes drug utilization studies in health care system to assess and ensure the rational use of drugs.[2]

Table 1: Prevalence of carcinoma.

Type of cancer	percentage
Lung	17.5
Pharynx	16.5
Breast	14.5
Stomach	11.6
Oesophagus	8.4
NHL	5.7
Oral cavity	5.65
Ovary	4.42
Multiple myeloma	2.6
Prostate	2.5
Tongue	2.15
AML	1.98
Cervix	1.9
Leukemia	1.7
HL	1.7

Table-1 shows distribution of carcinoma among study participants. The lung(17.5%) and pharynx(16.5%) cancers are most predominant. Followed by stomach(11.6) , breast (14.5%) , oesophagus (8.4%), ovary (4.42%) , multiple myeloma (2.6%) , prostate (2.5%) , NHL (5.7%) , AML (1.98%) , leukemia (1.7%) , oral cavity (5.65%) , cervix (1.9%).

Table 2: The different treatment regimens used in cancer patients.

Organ System name	Treatment regimens used
Gastrointestinal	1. Cisplatin/Carboplatin + Radiation therapy 2. Oxaliplatin + Capacetabine 3. 5-FU(5-Fluorouracil) + Radiation therapy 4. 5FU + Oxaliplatin (FOLFOX) 5. DCF-docetaxel, cisplatin + 5-fluorouracil 6. GEMOX- Gemcitabine + oxaliplatin
Head and neck cancers	1.Cisplatin/Carboplatin (+ or-) Radiation therapy 2.Cisplatin+ Paclitaxel (+or-) Radiation Therapy
Breast cancers	1.Doxorubicin+Cyclophosphamide+Radiation Therapy 2. Paclitaxel
Reproductive system	1. Cisplatin+ Radiation therapy 2. Carboplatin+ Paclitaxel
Respiratory	Carboplatin+ Paclitaxel

Table-2 shows different type of treatment for different type of cancers. And combination of drugs are used widely for the treatment of carcinomas.

CONCLUSION

The above study concluded that the most of the anticancer drugs are used in combination, Paclitaxel, carboplatin ,5-FUC are most commonly used drugs in different types of cancers. Lung and pharynx cancer are more predominant followed by stomach, breast, oesophagus, and ovary. WHO promotes that more such drug utilisation studies are needed in every health care setting to assess and assure the rational drug use.

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