A Study to Assess the Knowledge Level Regarding Safety Measures on Handling of Chemotherapeutic Drugs among Nurses in Selected Cancer Hospital, Kanpur.

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ABSTRACT

Lack Cancer refers to any one of a large number of diseases characterized by the development of abnormal cells that divide uncontrollably and have the ability to infiltrate and destroy normal body tissue. Cancer often has the ability to spread throughout body. Cancer is the second-leading cause of death in the world. But survival rates are improving for many types of cancer, to improvements in cancer screening, treatment and prevention. Chemotherapeutic drugs, administered as infusions or bolus injections, are usually prepared individually for each patient. Chemotherapeutic is the use of cytotoxic drugs in the treatment of cancer that provides cure, control, and palliation. The study was conducted with the aim to assess knowledge about safety measures regarding handling chemotherapeutic drugs among staff nurses .A Quantitative approach with descriptive research design was used in this study .100 Staff nurses were selected as samples by convenient sampling technique. Structured knowledge questionnaire was prepared and validated. The result of the study shows that out of 100 samples 13 (13%) are having poor knowledge, 54 (54%) are having average knowledge and 33 (33%) are having good knowledge. The mean and standard deviation of knowledge score were 12.01 and 2.14 respectively. With regard to association between knowledge and selected demographical variables of samples shows no significance. The study concludes that the staff nurses have moderate level of knowledge regarding safe handling of chemotherapeutic drugs.

Keywords: Chemotherapeutic agents, Safety measures, Staff nurses, knowledge questionnaire

Introduction

Cancer is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body. These contrast with benign tumors, which do not spread. Possible signs and symptoms include a lump, abnormal bleeding, prolonged cough, unexplained weight loss, and a change in bowel movements while these symptoms may indicate cancer, they can also have other causes. Over 100 types of cancers affect humans [1]

The risk of developing certain cancers can be reduced by not smoking, maintaining a healthy weight, limiting alcohol intake, eating plenty of vegetables, fruits, and whole grains, vaccination against certain infectious diseases, limiting consumption of processed meat and red meat, and limiting exposure to sunlight. Early detection through screening is useful for cervical and colorectal cancer. The benefits of screening in breast cancer are controversial. Cancer is often treated with some combination of radiation therapy, chemotherapeutic drugs and targeted therapy. [2]

The goal of surgery is to remove the

Cancer or as much of the cancer as possible. A chemotherapeutic drug uses drugs to kill cancer cells. Radiation therapy uses high-powered energy beams, such as X-rays or protons, to kill cancer cells. Radiation treatment can come from a machine outside body (external beam radiation), or it can be placed inside body (brachytherapy) Bone marrow transplant. Bone marrow is the material inside your bones that makes blood cells from blood stem cells. A bone marrow transplant, also known as a stem cell transplant, can use your own bone marrow stem cells or those from a donor. Bone marrow transplants allow and use higher doses of chemotherapy to treat cancer. It may also be used to replace diseased bone marrow. Immunotherapy also known as biological therapy uses body's immune system to fight cancer. Cancer can survive unchecked in body because immune system doesn't recognize it as an intruder. Immunotherapy can help immune system "see" the cancer and attack it. Hormone therapy. Some types of cancer are fueled by body's hormones. Examples include breast cancer and prostate cancer. Removing those hormones from the body or blocking their effects may cause the cancer cells to stop growing. Targeted drug therapy. Targeted drug treatment

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focuses on specific abnormalities within cancer cells that allow them to survive. [3]

Chemotherapeutic is strong medicine, so it is safest for people without cancer to avoid direct contact with the drugs. That's why oncology nurses wear gloves, goggles, gowns and masks. When the treatment session is over, these items are disposed of in special bags or bins. After each chemotherapeutic session, the drugs may remain in body for up to a week. This depends on the type of drugs used. The drugs are then released into urine, farces and vomit. They could also be passed to other body fluids such as saliva, sweat, semen or vaginal discharge, and breast milk. [4]

Problem Statement

A study to assess the knowledge level regarding safety measures on handling of chemotherapeutic drugs among nurses in selected cancer hospital, Kanpur.

Objectives

To assess the level of knowledge regarding safety measures on handling of chemotherapeutic drugs among nurses.

To associate between the level of knowledge regarding safety measures on handling of chemotherapeutic drugs among nurses with their selected demographic variables

Hypothesis

$H0_1$: There is a significant level of safety measures on handling of chemotherapeutic drugs among nurses in selected cancer hospital, Kanpur

Methods and Materials

Quantitative research approach was used to assess the level of knowledge regarding safety measures on handling of chemotherapeutic drugs among nurses. A descriptive research design was adopted. This study was under taken in .J.K. Cancer hospital. 100 staff nurses were selected as samples by convenient sampling technique.

Methods of data collection

The data collection was done in two weeks in J.K. Cancer hospital .data was collected from 100 sample that fulfilled inclusion criteria .the written consent of the participants was obtained before data collection and assurance was given to study participants the confidentiality of data was collected from sample .the data was analyzed on the basis of objectives of the study by using descriptive and inferential statistics.

- Master data sheet was organized.
- Demographic variables were analyzed in terms of frequencies and percentages.

- Knowledge of staff nurses was presented in form of mean, median and standard deviation.
- A planned questionnaire was ready in such a way it consist of two parts.

Tools
Demographic data:

It contains five items for obtaining information regarding Age, Gender, Educational qualification, experience in yrs., Religion, Any knowledge regarding chemotherapeutic drugs, Source of knowledge.

Knowledge level

The structured multiple choice questionnaire regarding safety measures on handling of chemotherapeutic drugs consists of 25 multiple choice questions. Each question has four response for every right answer the score was 1 and score 0 was given for wrong answers.

Data analysis and interpretation

Section 1: Level of knowledge regarding safety measures on handling of chemotherapeutic drugs among staff nurses.

Section 2: To association between levels of knowledge regarding safety measures on handling of chemotherapeutic drugs among nurses with their selected demographic variables.

Section -1

Table 1 Level of knowledge regarding safety measures on handling of chemotherapeutic Drugs.   N=100

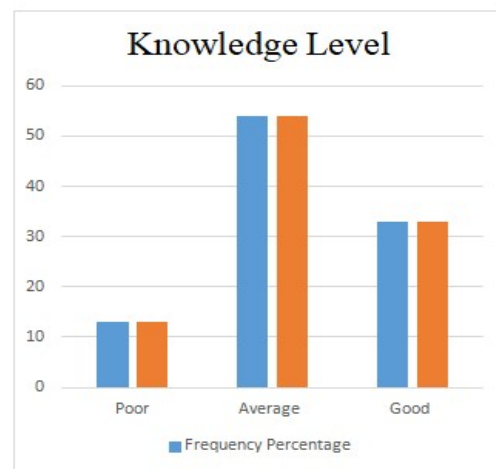| S.N.	Level of Knowledge	Freq	%
1.	Poor	13	13
2.	Average	54	54
3.	Good	33	33

Figure 1: Bar diagram shows the knowledge level

(Table: - 1, Figure 1) shows that out of 100 staff nurses 13(13%) are having poor knowledge 54 (54%) are having average knowledge 33(33%) are having good knowledge regarding safety measure on handling of chemotherapy drugs

Table 2: Mean and Standard Deviation of Knowledge Score

S.no	Knowledge Score	
1.	Mean (x)	Standard Deviation(SD)
	12.01	2.14

Table:2 explains the mean (x) and standard deviation (SD) of knowledge level regarding safety measures on handling of chemotherapeutic drugs among staff nurses were 12.01 and 2.14 respectively

Section 2
Association between levels of knowledge regarding safety measures on handling of chemotherapeutic drugs among nurses with their selected demographic variables shows No Significance

Conclusion
The present study concludes that most of the staff nurse having Moderate level of knowledge regarding airway management and having no significance between demographic variables.

References
[1] https://en.wikipedia.org/wiki/Cancer.
[2] https://www.cancervic.org.au/cancer-information/treatments/treatments-types/chemotherapeutic/side_effects_of_chemotherapeutic.
[3] https://www.mayoclinic.org/tests-procedures/cancer-treatment.
[4] Bouraoui S, Brahem A, Tabka F, Mrizek N, Saad A, et al. (2011) Assessment of chromosomal aberrations, micronuclei and proliferation rate index in peripheral lymphocytes from Tunisian nurses handling cytotoxic drugs. Environ Toxicol Pharmacol 31(1): 250-257.
[5] https//www.mayoclinic.org/wiki/chemotherapy.
[6] https//www.healthline.com<health>chemotherapy.
[7] https://www.researchgate.net/publication/319191546Knowledge_of_chemotherapy_and_occupational_safety_measures_among_nurses_in_oncology_units
[8] Valanis B, Vollmer WM, Labuhn K, Glass A, Corelle C Antineoplastic drug handling protection after OSHA guidelines: Comparison by profession, handling activity and work site. Journal of Occupational Medicine 34(2): 149-155.
[9] http://dx.doi.org/10.4236/ojn.2012.22015 Published Online June 2012 (http://www.SciRP.org/journal/ojn/)
[10] Assessment of Nurse's Safe Behavior towards chemotherapy. https://www.ncbi.nlm.nih.gov›articles › PMC7007613