Study Protocol

A study protocol on evidence generation of standard nursing protocol on chemotherapy induced neutropenia among staff nurses

ABSTRACT

BACKGROUND: - Neutropenia is a condition that can occur in chemotherapy patients. Neutropenia affects roughly one out of every three chemotherapy patients. If neutropenia develops, the patient's health affected, and the chemotherapy regimen or dose must be extended to allow the body creates new neutrophils. Even though neutropenia is common during chemotherapy, severe neutropenia is uncommon, and infections caused by it can result in significant morbidity and mortality. The protocol can help nurses make decisions about what type of care is best for their patients.

OBJECTIVES

1.To assess the base line data and practice of staff nurses regarding chemotherapy induced neutropenia.

2.To develop and implement evidence based standard nursing protocol on chemotherapy induced neutropenia among staff nurses

3.To associate the knowledge and practice score with selected demographic variables.

Material and Method: - The study will be based on experimental research approach with one group pertest post-test research design to evidence generation of standard nursing protocol on chemotherapy Induced neutropenia among staff nurses. A non-probability purposive sampling technique will be used to collect the data .The study include 100 staff nurses will be assessed by using self structured questionnaire

Expected result: - This study is on evidence generation of standard nursing protocol on chemotherapy Induced neutropenia among staff nurse hence it will be assessed by evidence generation of standard nursing protocol. Will be accepted as the results of intervention which leads to improved Knowledge regarding chemotherapy Induced neutropenia among staff nurses.

Keywords: - Evidence generation, Chemotherapy induced neutropenia(CIN) , standard nursing protocol

INTRODUCTION

Cancer is defined as the uncontrolled , abnormal development and spread of cells.[1] More than half of all cases of cancer are primarily caused by a variety of unhealthy risk factors. Cancer is a massive global burden and, after cardiovascular illnesses, it is second biggest cause of death. Furthermore, cancer is estimated to account for twenty sex million new cases and seventeen million deaths by 2030.[2]

Chemotherapy treatment for cancer is believed to trigger a loss of white blood cells resulting in a condition known as chemotherapy-induced neutropenia. When neutropenia is severe, it increases the risk of systemic infections,[3] which can lead to disease and death. According to National institute for health and care guidelines "check their fever if they feel sick and call in the hospital as fast as possible." Patients suffering from febrile neutropenia (FN) will be admitted to the hospital for an evaluation, which will involve a complete blood cell count (CBC).[4]

The development of an evidence-generating process must be associated with clinical guidelines and a daily examination of nurses based on their needs. The protocol can help nurses make decisions about what type of care is best for their patients. Clinical nursing procedures may increase nursing performance by allowing nurses to act independently. The protocol includes a comprehensive, up-to-date review of the condition, as well as rationale for each nursing intervention. Nursing protocols are also an excellent educational resource for nurses [5].

BACKGROUND

Neutropenia is a condition that can occur in chemotherapy patients. Neutropenia affects roughly one out of every three chemotherapy patients. If neutropenia develops, the patient's health gets affected. The chemotherapy regimen or dose must be extended to allow the body creates new neutrophils. Even though neutropenia is common during chemotherapy, severe neutropenia is uncommon, and infections caused by it can result in significant morbidity and mortality. Specific guidelines and protocol can help nurses with early interventions and prompt care to reduce the problems and implications of neutropenia, such as infection prevention measures, what to do when signs and symptoms of infection appear. Staff members should be well trained to improve patient outcomes and provide appropriate education, as well as becoming aware with the current state of neutropenia knowledge by knowing the evidence and standards for cancer patients who may develop chemotherapy-induced neutropenia.[6]

Need of the Study

More routine in-service training sessions for nurses are needed to keep their information of chemotherapy-induced neutropenia up to date. In addition to routine onsite supervision of nurses, hospital administration should make current nursing standard protocols available to nurses to guide their performance. The presence of strong evidence-based guidance can improve clinical care's effectiveness and consistency. Nurses must quickly the identify patients at higher risk of being neutropenic and supervise those who already have it in order to effectively undertake interventions to improve clinical outcomes and standard of living in chemotherapy patients.Nurses must also be aware of the physical, psychological, and financial aspects in order to effectively support patients. During the CIN experience, nurses can aid family in advocating for one another and supporting the family's integrity; while the immediate benefits may not be apparent to the nurse, the long-term benefits are significant.[7]

Methodology

The study will be based on experimental research approach with one group pertest post-test research design to Evidence generation of standard nursing protocol on chemotherapy Induced neutropenia among staff nurses. A non-probability purposive sampling technique will be used to collect the data .The study include 100 staff nurses will be assessed by using self structured questionnaire

CRITERIA OF THE STUDY

Inclusion Criteria:

- Staff nurses working in oncology ward for more than 1year
- Staff nurses who are willing to participate

Randomization

All participants are selected by sequentially numbered list at random.

Intervention

Evidence generation related to standard nursing protocol on chemotherapy Induced neutropenia among staff nurses under the guidance of Associate professor of Medical Surgical Nursing

Statistical analysis

Statistical analysis done by descriptive and inferential statics. The program used in the study was SPSS 24.0

Ethics and dissemination

Datta Meghe Institute of Medical Sciences (Deemed to be University), DMIMS(DU)/IEC/2021/303. The study will be conducted in accordance with the ethical guidelines prescribed by institutional Ethics Committee on Human Research.

Expected outcome / result

This study is on evidence generation of standard nursing protocol on chemotherapy Induced neutropenia among staff nurse hence it will be assessed by evidence generation of standard nursing protocol. Will be accepted as the results of intervention which leads to improved Knowledge regarding chemotherapy Induced neutropenia among staff nurses.

DISCUSSION

The introduction of clear evidence-based standards can aid in the improvement of clinical practice consistency and quality. Nursing efficiency may be improved by clinical nursing standard protocols that work independently. The protocol includes a comprehensive, up-to-date review of the disease process, as well as the rationale for each nursing action. The standard nursing protocols are also a valuable learning tool for nurses by following evidence-based guidelines, a nursing protocol can help to enhance clinical practice and possibly reduce CIN consequences [8]

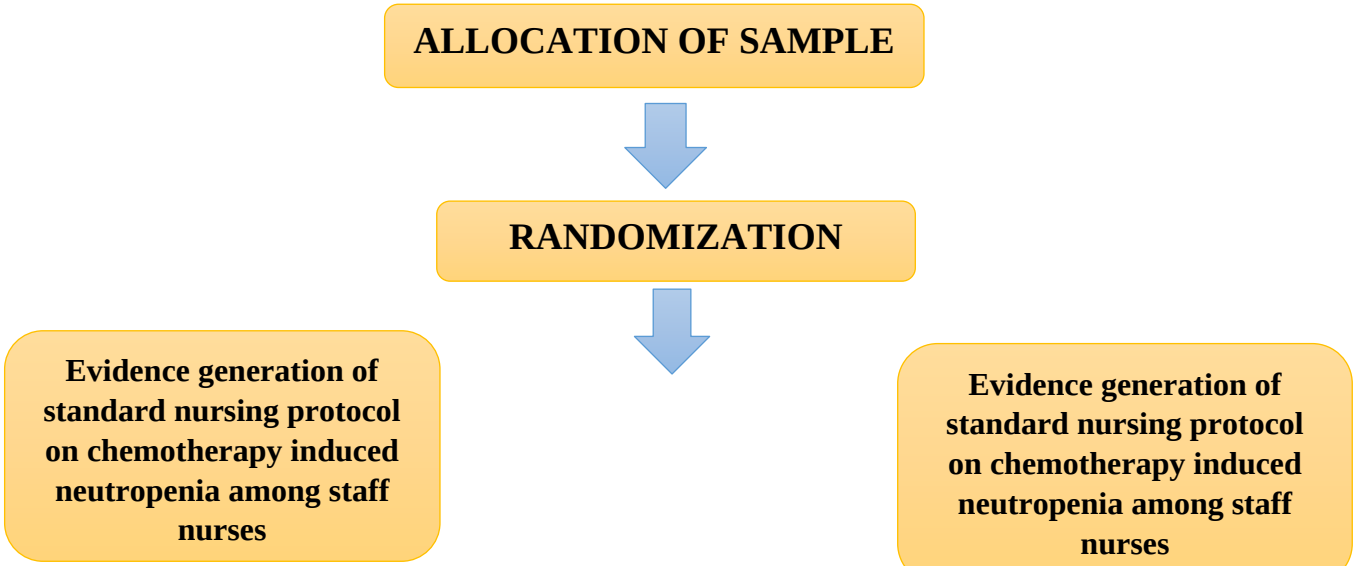
The study was conducted to develop a protocol for nurses and caregivers related to prevention, early detection and management of chemotherapy induced neutropenic complications. Quasi experimental research design used in the study. The preliminary draft was created after evaluating relevant research and for assessing nurses' and caregivers' current practises about the prevention, early detection, and management of chemotherapy-induced neutropenic consequences. Group discussions were held with nurses working in oncology units. In addition, a checklist for evaluating the protocol was created. Nurses and caregivers were taught as per the developed protocol. According to the study's findings, the current study has produced a set of accurate and reliable written guidelines for nurses and caregivers about the prevention, early diagnosis, and management of chemotherapy-induced neutropenic consequences.[9]

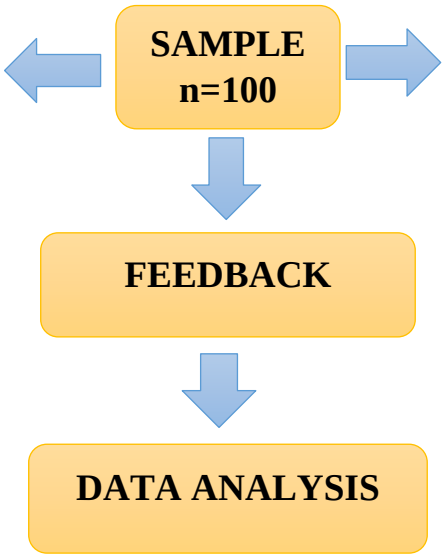
A review article on Chemotherapy Induced Peripheral Neuropathy (CIPN) can be precipitated by many modern chemotherapeutic agents. CIPN affects the patient's quality of life not only physically, but also functionally, spiritually, psychosocially and affects the family as well. If a severe acute syndrome occurs during chemotherapy, drug doses should be decreased or discontinued entirely. CIPN is a neurological side effect occurring during chemotherapy treatment in cancer patient depending on many factors such as age, complete total drug dose received, use of more than two groups of neurotoxic agents, period of therapy, concomitant neuropathies (for example, diabetic neuropathy), alcoholism and genetic vulnerability. Presently there are no standard guidelines for the assessment of CIPN. It is considered both objective evidence of neurological dysfunction and assessment of symptoms reported by the patient. Nurses can play a critical role in the early detection of CIPN in cancer patients, which can aid to plan and in modification of treatment. This will help patients to enjoy a better quality of life. This review aims to give an update regarding CIPN and nursing aspect.[10]

Conclusion

Study finding will be drawn by using the statistical analysis.

Fig 1- Schematic diagram of study methodology





Reference

1. Dighe SP, Shinde RK, Shinde SJ, Anand A. Review on Assessment of Response of Neo-Adjuvant Chemotherapy in Patients of Carcinoma Breast by High Frequency Ultrasound. J Evol Med Dent Sci. 2020 Dec 21;9(51):3873–81.

2. Cancer [Internet]. [cited 2021 Jun 18]. Available from: https://www.who.int/news-room/fact-sheets/detail/cancer

3. Anand AS, Shinde RK. To Compare the Effects of Adjuvant and Neoadjuvant Chemotherapy on Outcome of Stage III Carcinoma Breast. J Evol Med Dent Sci. 2020 Feb 24;9(8):496–501.

4. Gupta A. Management of Chemotherapy Induced Neutropenia – an Unmet Clinical Need. Am J Biomed Sci Res. 2019 Aug 10;4(5):313–8.

5. Development of a protocol for nurses and caregivers related to prevention, early detection and management of chemotherapy induced neutropenic complications | Nursing Midwifery Research [Internet]. [cited 2021 Jun 18]. Available from: https://nrfninechd.com/development-of-a-protocol-for-nurses-and-caregivers-related-to-prevention-early-detection-and-management-of-chemotherapy-induced-neutropenic-complications/

6. Lustberg MB. Management of Neutropenia in Cancer Patients. Clin Adv Hematol Oncol HO. 2012 Dec;10(12):825–6.

7. Osman SMT, Mohamed HM. Effectiveness of a Nursing Intervention Protocol for Chemotherapy Induced Neutropenia: Nurses and Patients' Related Outcome. 2016;10.

8. Rosenfeld RM, Shiffman RN. Clinical practice guideline development manual: A quality-driven approach for translating evidence into action. Otolaryngol--Head Neck Surg Off J Am Acad Otolaryngol-Head Neck Surg. 2009 Jun;140(6 Suppl 1):S1-43.

9. Development of a protocol for nurses and caregivers related to prevention, early detection and management of chemotherapy induced neutropenic complications | Nursing

Midwifery Research [Internet]. [cited 2021 Oct 3]. Available from: https://nrfninechd.com/development-of-a-protocol-for-nurses-and-caregivers-related-to-prevention-early-detection-and-management-of-chemotherapy-induced-neutropenic-complications/

10. Ankar R, Singh S. Chemotherapy Induced Peripheral Neuropathy – A Review. J Evol Med Dent Sci. 2020 Oct 19;9:3147–51.