Journal of Nursing
Revista de Enfermagem
UFPE On Line
ISSN: 1981-8963

ORIGINAL ARTICLE

NURSING PROCEDURES BEFORE EXTRAVASATION OF ANTINEOPLASTIC CHEMOTHERAPEUTIC: STANDARD OPERATINGPROTOCOL

CONDUTAS DE ENFERMAGEM NO EXTRAVASAMENTO DE QUIMIOTERÁPICOS ANTINEOPLÁSICOS: PROTOCOLO OPERACIONAL PADRÃO

PROCEDIMIENTOSDE ENFERMERÍAANTELA EXTRAVASACIÓN DEANTINEOPLÁSICOSQUIMIOTERAPÉUTICOS: PROTOCOLODE FUNCIONAMIENTOESTÁNDAR

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ABSTRACT

Objective: developing a protocol of standard operational procedure related to extravasation of antineoplastic chemotherapy drugs during its administration. ***Method:*** a descriptive exploratory study with document analytical approach, through reading exploration techniques, interpretativeand selective of published research relating to reading antineoplastic chemotherapy. ***Results:*** the immediate therapeutic management should follow institutional protocol; hence the importance of establishing standardized procedures for a better solution of the problem minimizing damage to the patient. ***Conclusion:*** the study developed a standard operating protocol(POP) in order to standardize an action related to chemotherapy extravasation, thus providing a quality service from a specific situation. ***Descriptors:*** Hematologic Diseases; Antineoplastic; Oncology Nursing.

RESUMO

Objetivo*:**elaborar um protocolo de procedimento operacional padronizado referente ao extravasamento de drogas quimioterápicas antineoplásicas durante sua administração. ***Método*:**estudo exploratório descritivo com abordagem analítica documental, por meio da técnica de leitura exploratória, interpretativa e seletiva das pesquisas publicadas relativas à quimioterapia antineoplásica.Resultados*:**a conduta terapêutica imediata deve seguir protocolo da instituição, daí a importância de se estabelecer procedimentos padronizados para uma melhor solução do problema minimizando os danos ao paciente.***Conclusão*:**o estudo desenvolveu um protocolo operacional padrão- POP com o intuito de padronizar uma ação referente ao extravasamento quimioterápico, assim proporcionando uma qualidade de assistência a partir de uma situação específica. ***Descritores***: Doenças Hematológicas; Antineoplásicos; Enfermagem Oncológica.

RESUMEN

Objetivo: desarrollar un protocolo de procedimiento operativo estándar relacionado con la extravasación de fármacos de quimioterapia antineoplásicos durante su administración. ***Método:*** un estudio descriptivo exploratorio con enfoque analítico documental, a través de las técnicas de lectura exploratoria, interpretativay selectiva de las investigaciones publicadas en relación con la quimioterapia antineoplásica. ***Resultados:*** la gestión terapéutica inmediata debe seguir el protocolo de la institución, de ahí la importancia de establecer procedimientos estandarizados para una mejor solución del problema, minimizando el daño a los pacientes. ***Conclusión:*** el estudio desarrolló un protocolo de funcionamiento estándar (POP) para estandarizar una acción relacionada con la extravasación de quimioterapia, proporcionando así un servicio de calidad a partir de una situación específica. ***Descriptores:*** Enfermedades hematológicas; Antineoplásicos; Enfermería Oncológica.

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INTRODUCTION

The term cancer is used generically to represent a group of more than 100 diseases, including malignant tumors of different locations. Important cause of illness and death in Brazil since 2003, malignant neoplasms constitute the second cause of death in the population, representing almost 17% of deaths of known cause, reported in 2007 in the Mortality Information System.[1]

Hematologic malignancies (blood cancers) represent a significant proportion of occurrence of cancer in a Brazilian population, especially among the young. Study of the National Institute to Combat Cancer (INCA) made a new survey about the picture of the incidence and mortality of cancer in children and adolescents in the country, reveals that for the twenty cancers studied, the leukemia was what most affected age group analyzed, 0-18 years. Besides being the most common type, is also the disease has the highest mortality (35%). The survey showed, even to children between 1 and 4 years old that they were the most affected, with 31,6% of registered cases. The second highest incidence of cancer among children and adolescents, the study pointed out, is the lymphoma tumor that grows in the lymphatic system. This cancer affects 15,5% of the group studied, but is more aggressive among adolescents between 15 and 18 years old, representing 35,6% of patients.[2]

Hematological malignancies are malignancies originating in blood cells and since its inception usually no longer is restricted to a single region of the body, manifesting itself in various parts of the body without respecting anatomical barriers. The organs most often involved in this process are: blood, bone marrow, lymph nodes, spleen and liver. In hematological malignancies include: Acute Lymphoblastic Leukemia (ALL), Chronic Lymphoid Leukemia (CLL), acute myeloid leukemia (AML), chronic myeloid leukemia (CML), Binephototypical leukemia, Hodgkin lymphoma (HL), non-Hodgkin lymphoma (NHL), Lymphoma, Cutaneous T, Multiple Myeloma (MM) cells Myelodysplastic Syndromes (MDS).[3]

In the context of the treatment, the anticancer therapeutic arsenal is expanded and perfected every day, with the inclusion of medications which are incorporated in most cases to an already long list of therapies available, technological innovations and even hematopoietic stem cell transplantation.[4]

The administration of antineoplastic drugs should be performed efficiently, safely and responsibly in order to implement the objectives of therapy and thus be achieved, an improvement in the patient's condition. In this perspective, the actions of professionals should be guided by extreme competence to eliminate failures during the preparation and administration of antineoplastic agents, thus requiring highly skilled and specially trained for this type of procedure.[5]

The antineoplastic drugs are administered by trained nurses due to the complexity of administration of some drugs and the need for detailed knowledge about the specific care related to each drug, the indications and side therapeutic effects.[6] However, many problems limit the administration of these drugs, so the pathways used for their administration have contraindications and require specific care.[7]

The leakage is one of the most serious complications deriving from the treatment intravenous antineoplastic chemotherapy. It consists on the infiltration of these chemotherapeutics to the surrounding tissues, causing to the patient severe functional and aesthetic damages. Among the most frequent causes of extravasation are unconfirmed or incorrect position of the venous catheter (displacement) and vessel rupture.[4]

There are also factors that contribute to the increased risk of extravasation of antineoplastic as puncture in small veins, inadequate site of venipuncture, prior chemotherapy in the same vessel, axillary, prior radiotherapy on the puncture site, nutritional changes, neuropathy Preview, confusion, restlessness, vomiting and cough, among others.[8]

Major signs of leakage can be identified: flow decrease serum or total cessation of infusion, the patient complains of burning pain or sting, swelling or redness in the area of venipuncture, stop venous return. The treatment must be immediate to the event allowing a specific and effective treatment as soon as detected.[6]In order to minimize, avoid or eliminate the possible damage from extravasation of antineoplastic drugs is necessary to standardize the implementation of activities related to the management of these agents prioritizing quality in providing this service.

The concern for quality in the provision of health services is not new and the goal of the client need of hospital services is to restore your health, troubleshoot and balance disorders. So he can enjoy quality care management system is needed that recognizes their needs, establish standards and seek to keep them to ensure safety in the execution of actions taken. Quality management can be

helpful to nursing, contributing to the implementation of new methodologies and changes needed to improve care and contentment of the staff and the patient. This can be achieved by standardization of activities performed by nurses, such as those related to extravasation of antineoplastic drugs ducts.[10]

The best way to start the standardization is through the understanding of how the whole process occur; being necessary a systematic representation by the use of Standardized Operating Procedure (SOP) that describes each critical and sequential step that should be taken by the operator to ensure the expected result being required the task, and relate to the technique. The technical acts induce repeated, sometimes by many different hands, with some assurance same result action.[9]Thus the process involves steps based on examining all activities in the organization's approach, contributing to the maintenance and improvement of safety patient such as the progress in performance and risk management.[10]

The SOP is a tool for quality management that strives for excellence in service delivery, seeking to reduce errors in routine actions. It is one developing dynamic tool that aims to standardize and minimize the occurrence of deviations in the implementation of key tasks for the quality of service, regardless of who does, for the correct operation of the process.[11]

It is conceptualized as a detailed description of all necessary to perform a particular procedure, ie operations, is a standardized script to perform an activity. Is of paramount importance within any functional process, the basic objective is to ensure, through standardization, the expected results for each task performed.[9]And the document that expresses the planning of repetitive work that must be performed to achieve the target pattern. Contains: list of equipment, parts and materials used in the task, quality standards, the job description of the procedures for critical activities, operating conditions and forbidden points of each task, control points (control items and quality characteristics) and control methods; ratio anomalies actionable.[12]

A coherent SOP ensures that at any time the actions taken to ensure the quality are the same, one shift to another, from one day to another it increases the predictability of its results, minimizing variations caused by clumsiness and random adjustments. The SOP also has an internal order to be a great tool for Quality Management to perform internal audits.[13]

In nursing, SOPs are contained in manuals and execution of actions must be in accordance with the guidelines and rules of the institution, be updated whenever necessary, according to scientific principles that should be followed by everyone (doctors, nurses and auxiliaries) in a standardized way.[14]

The present study shows the construction of a SOP used in nursing care of patients with hematologic disorders who are undergoing antineoplastic chemotherapy at the University Hospital of the State of Ceará;seeking to standardize actions in routine activities inherent to the specific care of these patients.

OBJETICVE

- Developing a protocol standard operational procedure related to extravasation of antineoplastic chemotherapy drugs during its administration.

METHOD

Descriptive exploratory study with analytical approach, developed by documentary survey, conducted through exploratory reading technique, and selective interpretation of published research on cancer chemotherapy. There were used as bibliographical sources, the Index Lilacs, Medline, research still being made to the articles referenced by the Internet information network.

The analysis of the articles found was made by collecting the following information: definition of antineoplastic drugs, their classification, aspects related to the risks arising from the preparation, administration and disposal of chemotherapy by nursing staff and legal aspects of the handling of chemotherapeutic agents in Brazil.

The referent study will be conducted in the following steps:

1-Survey data and information through research publications in the area, which will form an essential part of the processes that constitute the SOP;

2-Organization and distribution processes for the development of SOP;

3-Preparation of the SOP Protocol;

4- Spell Review of SOP;

5- Final formatting of SOP.

This work does not rely on funding and should be undertaken with funds by the researchers themselves.

The results were compiled and analyzed, presented with formatting in written media.

RESULTS AND DISCUSSION

The process of administration of chemotherapy is performed by a team of skilled nursing, nurse's competence to perform the task. Guidelines for the administration of chemotherapy were developed by the Oncology Nursing Society, [15]which recommends the administration of chemotherapy by trained nurses, to ensure a high quality standard. The Federal Board of Nursing (COFEN) supports the administration of chemotherapy by nursing technician under direct supervision of a nurse (COFEN 257/2001). [16]

The antineoplastic chemotherapeutic drugs may be administered by various routes: oral, topical, intramuscular, subcutaneous, intravenous, intra-arterial, intravesical, intrapleural, intraretal, intrathecal and intraperitoneal administration. The choice of route to be used depends on the treatment for each patient. [7,17]The intravenous and intrathecal are the most used in the hematology unit of the University Hospital of the Federal University of Ceará, established chemotherapy protocols used by the service, with an intravenous required on a larger scale.

The intravenous route is the most common, with faster absorption and allows achieving accurate serum. It consists of the injection of chemotherapy into a predetermined blood vessel. It is a major route for administration of chemotherapy and requires special care to prevent leakage. [7,17]Therefore, a specialized professional for the procedure is essential, frequent and careful review of this business during the administration of antineoplastic is required.

Since the primary route of administration is intravenous chemotherapy, the physician must have knowledge about infusion, understanding it as a set of core procedures in the treatment of patients undergoing chemotherapy treatment. Thus, standardization of rules and routines for carrying out the administration of antineoplastic chemotherapy procedure becomes important to an audience of qualified nurses providing safety to the patient and the professional who performs it.

How to extravasation some antineoplastic drugs can cause immediate tissue damage others are rapidly inactivated, causing no major damage. The vesicant chemotherapy lead to severe irritation with blistering and tissue destruction, patients have pain, redness, swelling, blistering and tissue necrosis causing major damage. Moreover irritants chemotherapeutic cause tissue irritation that does not progress to necrosis, causing redness, pain, inflammation at the puncture site and the venous route, burning and localized edema without blistering. [18-19]

The local effects of extravasation of anticancer chemotherapeutic agents are worrisome and should problems encountered by his administration be made known to the doctor immediately so that corrective measures can be taken to minimize local tissue injury.

The immediate therapeutic management should follow institutional protocol, hence the importance of establishing standardized for a better solution of the problem minimizing damage to the patient procedures. So based on the above elaborated the Standard Operating Procedure SOP for behavior in the extravasation of antineoplastic chemotherapy drugs during his administration (Figure 1).

STANDARD OPERATING PROCEDURE	N° Emission ___ /___/___ Review ___/ ___/ ___

Task: The conducts of extravasation of chemotherapeutic antineoplastic during its administration.
Executor: Nurse.
When performing: After detection of accidental infiltration of intravenous anticancer to the surrounding tissues.
Where to do: inpatient unit.
Expected result: Prevent damage to functional and esthetic to the patient.

- **Necessary conditions:**
- Tray (tub rim or another available);
- Syringe (3, 5 or 10 ml);
- Cotton balls;
- Package of gauze;
- Material for dressing (according to institutional protocol);
- Specific antidote (according to institutional protocol);
- Hot and cold compress bag. PPE (gloves, waterproof apron procedures, facial mask, glasses with side protection, plastic bag).

Procedures:

1. Interrupt immediately the infusion of the chemotherapeutic installed.
2. Do not remove the intravenous device.
3. Aspire through the device the residual medication extravasated as much as possible.
4. Apply the specific antidote (intravenous or subcutaneous topic), as the institution's Protocol or prescription, up to 1 hour.
5. Inject intravenous antidote by the same device.
6. Remove the intravenous device, avoiding doing local compression.
7. Cover the site with sterile occlusive dressing without compression.
8. Apply warm compress or icy as indication.
9. Guide the customer keep the limb elevated for 48 hours.
10. Administering local and systemic analgesics according to medical prescription.
11. Notify the physician immediately to extravasation detection.
12. Annotate descriptive procedure related nursing runs in the printed Journal of systematization of nursing care (SAE) of the patient, identifying: date, time, location/overflow device, and sequence of medicines, medical treatment and notification of nursing.
13. Documenting photographically and register in chart the evolution of the case.

Special Care:

1. If the overflow occurred for central access, check for liquid tank next to the reservoir fully implanted catheters or catheters canalized to output region. Try the drug intake present on site.
2. For the drugs vincristine, vindesine, vinblastine, vinorelbine, etoposide, teniposide: where did the extravasation of chemotherapy should be applied lightly heated water compress for 15 minutes, 3 to 4 times a day, during the 24 or 48 hours following the event run by evaluating the patient's response.
3. For other chemotherapy: where did the chemotherapeutic extravasation compress should be applied with cold water for 15 minutes, 3 the expecting mothers has been a day for 48 hours following the event occurred by evaluating the patient's response.
4. Regularly note the presence of erythema, induration, necrosis or complaint of local pain.
5. The antidotes, subcutaneous and intravenous topics shall be those set out in protocols of medical institution, so notify the doctor to establish drug conduct.
6. The photographic documentation must be carried out with the permission of the patient or family, recorded and signed by the person responsible.

Non-compliance actions	Corrective actions
1. Patient and/or family refusal procedure	1. Guide patient and/or family member about the harms that may result in leakage, if persists refusing to communicate and record medical occurrence in chart.

Approval___/___/___

Figure 1. Guidance for implementation of SOP conducts the extravasation of antineoplastic chemotherapy.

FINAL REMARKS

The study developed a standard operating protocol (SOP) in order to standardize an action related to chemotherapy extravasation, thus providing a quality service from a specific situation.

Standardization is an important management tool;it aims at standardizing the conduct in performing the tasks inherent to service sectors. It is an instrument that guarantees the quality.

The lack of standardization of procedures, lack of standards and routines and not using Systematization of Nursing Care - SAE may indicate disruption of service due to the different forms of professional conduct. So the standards are set to lay down the guidelines for the control and continuous quality improvement, and standardized care are detailed guidelines that represent the anticipated attendance, indicated for specific situations which will boost the development of organizations to improve their processes and outcomes.

Moreover, the implementation of the Systematization of Nursing Care, from standards and criteria, is based on the principle that such assistance transcends the execution of medical and administrative orders and mainly directs the real needs of the patient through a holistic vision and technical knowledge scientific. And thus the standards of nursing define their field of practice and provide guidance for its performance, design the desired skills and educational requirements of nurses ensuring better quality in assisting with the use of SOP;

thus, characterizing the importance of the use of SOP as a necessary tool in the management of health services.

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Submission: 2013/09/16
Accepted: 2014/01/27
Publishing: 2014/04/01

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