Evaluation of the Nursing Intervention for Patients with Cancer Undergoing Chemotherapy in AL_Amal National Hospital for Cancer Management and Baghdad Teaching Hospital

تقويم التداخلات التمريضية لمرضى السرطان الخاضعين للعلاج الكيميائي في مستشفى الأمل الوطني لعلاج السرطان ومستشفى بغداد التعليمي

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الخلاصة :
الأهداف : تهدف الدراسة إلى تقويم التداخلات التمريضية المقدمة من قبل الممرضين من كلا الجنسين للمرضى الخاضعين للعلاج الكيميائي وتحديد العلاقة بين التداخلات التمريضية وبين الصفات العامة للممرضين مثل (العمر – الجنس – مستوى التعليم –سنوات ألخبره في التمريض – سنوات ألخبره في وحدات العلاج الكيميائي – الدورات التدريبية – عدد الدورات التدريبية)
المنهجية :دراسة وصفية تقويمية للفترة من (كانون الثاني ٢٠١٣ حتى آب ٢٠١٤) لتقويم التداخلات التمريضية المقدمة من قبل الممرضين من كلا الجنسين للمرضى الخاضعين للعلاج الكيميائي قبل وبعد العناية التمريضية وقد أجريت الدراسة على الممرضين الذين كانوا يعملون في وحدات العلاج الكيميائي في مستشفى الأمل الوطني لعلاج السرطان، مستشفى الأورام التعليمي، ومستشفى بغداد التعليمي. وشملت عينة البحث (٧٠) من الممرضين الذين كانوا يعملون في وحدات العلاج الكيميائي بحيث جمعت البيانات بعد إن تم بناء استمارة استبانه من قبل الباحثة ذات العلاقة لإغراض الدراسة ومكونه من جزئيين رئيسيين ،الجزء الأول شمل صفحة تحديد الخصائص الديموغرافية للممرضين الذين شاركوا في الدراسة من خلال ورقة خاصة والتي تشمل (٧) البنود، ويتكون الجزء الثاني من تقويم التداخلات التمريضية لمرضى السرطان الخاضعين للعلاج الكيميائي تشمل (١٢) فقرة. تم فحص مصداقية الاستبيان من خلال (١٧) من الخبراء في مجالات مختلفة (الذين لديهم أكثر من ٥ سنوات من الخبرة في مجال العمل). وتم فحص الثبات عن طريق حساب معامل الارتباط بيرسون، والذي كانت قيمته مقبولة إحصائيا (٠.٨٥) =r وجمعت البيانات من خلال الملاحظة، بعد ذلك تم تحليل البيانات من خلال تطبيق التحليل الوصفي (التكرار، النسبة المئوية) فضلا عن التحليل ألاستنتاجي للبيانات (الوسط الحسابي، معامل الارتباط بيرسون) باستخدام الحقيبة الإحصائية للعلوم الاجتماعية ، الإصدار التاسع عشر .
النتائج : وقد أظهرت الدراسة أن غالبية أفراد العينة من الفئة العمرية بين (٤٠ - ٤٩) سنة، وكان معظم عينة الدراسة من الإناث، والأغلبية متزوجون ،ومعظمهم من خريجي إعدادية التمريض، واغلبهم لديهم (١ - ٥) سنوات من الخبرة في مجال التمريض،و لديهم (١ - ٥) سنوات من الخبرة في وحدات العلاج الكيماوي ،و الخبرة المكتسبة لديهم من العمل مع المرضى الخاضعين للعلاج الكيميائي، كما أن معظم أفراد العينة لم تأخذ أي دورة تدريبية .
الاستنتاج : وقد استنتجت الدراسة أن هناك دلالة قوية في مجال تهيئة العلاج الكيماوي و المهارات التمريضية ألمقدمه من قبل الكادر التمريضي في تلك الوحدات .
التوصيات :وقد أوصت الدراسة بتنظيم دورات تدريبية خاصة لجميع الممرضين والممرضات العاملين في وحدات من العلاج الكيميائي، والتي تشمل برامج لدورات خاصة للتداخلات التمريض في هذه الوحدات وتصميم وتوزيع كتيب لجميع الممرضين والممرضات الذين يعملون في وحدات العلاج الكيميائي وأيضا زيادة عدد الممرضات المهنية من خريجي كليات التمريض في وحدات العلاج الكيماوي .

Abstract :
Objective : The study aims to evaluate the nursing intervention provided to patients undergoing chemotherapy, and determine the relationship between nursing intervention and the demographic characteristics of the nurses that include (age , gender , level of education, years of experience in nursing , years of experience in chemotherapy units , sharing in training sessions concerned to chemotherapy , number of training sessions)
Methodology: Descriptive study carried out during the period from (January 2013 until August 2014) to evaluate the nursing intervention provided to patients undergoing chemotherapy pre and post nursing care , The study has been conducted on nurses who were working in chemotherapy units in AL _ Amal National Hospital for Cancer Management, Oncology Teaching Hospital , and Baghdad Teaching Hospital . Included research sample (70) of the nurses who were working in units of chemotherapy . Where the data was collected after it was built form questionnaire by the researcher related to the purposes of the study and is composed of two main parts. The first part concerned with determination of the demographic characteristics of the nurse's who have participated in the study through special sheet which include (7) items .The second part consists of evaluating nursing interventions for cancer patients undergoing chemotherapy include (12) items. The validity of the questionnaire was examined through (17) experts in the different fields (who have had more than 5 years of experience in the job field). The stability by calculating the Pearson correlation coefficient, which was worth acceptable statistically (r=0.85) and data was collected through observation, after it has been analyzed data from through the application of descriptive analysis (frequency, percentage) as well as Inferential data analysis (

Means of scores and Pearson correlation coefficient) . using the statistical bag of Social Sciences, version nineteenth.

Result: The study showed that the majority of the sample of the age group between (40–49) years old, Most of the study sample were Female, Most of them graduates from Secondary nursing school, they have Years of experience in nursing (1 – 5) Year, Years of experience in units of chemotherapy (1 – 5) year, Experience gained in the chemotherapy by Working with patients undergoing chemotherapy, and the Most of the sample did not take any training session .

Conclusion : The study concluded that there is a strong indication in the area of the creation of chemotherapy and nursing intervention provided by the nursing staff in those units.

Recommendation :The study Recommended to organize Special training courses to all nurses working in units of chemotherapy, which include programs for special courses for nursing interventions in these units and designing and distributing a booklet to all nurses who work in chemotherapy units, also increasing the number of professional nurses graduates from colleges of nursing in chemotherapy units.

Keywords: evaluation, nursing intervention, chemotherapy.

INTRODUCTION:

Cancer known medically as malignant neoplasia, is a broad group of diseases involving unregulated cell growth. In cancer, cells divide and grow uncontrollably, forming malignant tumors, which may invade nearby parts of the body. The cancer may also spread to more distant parts of the body through the lymphatic system or bloodstream. Not all tumors are cancerous; benign tumors do not invade neighboring tissues and do not spread throughout the body. There are over 200 different known cancers that affect humans. [1]

Cancer staging can be divided into a clinical stage and a pathologic stage. In the TNM (Tumor, Node, Metastasis) system, clinical stage and pathologic stage are denoted by a small "c" or "p" before the stage. Clinical stage : is based on all of the available information obtained before a surgery to remove the tumor. Thus, it may include information about the tumor obtained by physical examination, radiologic examination, and endoscopy. Pathologic stage : adds additional information gained by examination of the tumor microscopically by a pathologist . [2]

Chemotherapy is the treatment of cancer with one or more cytotoxic anti-neoplastic drugs (chemotherapeutic agents) as part of a standardized regimen. The term encompasses any of a large variety of different anticancer drugs, which are divided into broad categories such as alkylating agents and ant metabolites .[3]

Traditional chemotherapeutic agents act by killing cells that divide rapidly, one of the main properties of most cancer cells . The efficacy of chemotherapy depends on the type of cancer and the stage. In combination with surgery, chemotherapy has proven useful in a number of different cancer types including: breast cancer, colorectal cancer, pancreatic cancer, osteogenic sarcoma, testicular cancer, ovarian cancer, and certain lung cancers. [4]

The effectiveness of chemotherapy is often limited by toxicity to other tissues in the body. Even when it is impossible for chemotherapy to provide a permanent cure, chemotherapy may be useful to reduce symptoms like pain or to reduce the size of an inoperable tumor in the hope that surgery will be possible in the future.[5]

(Fitzimmons,2005) Nurses therefore have a legal and professional responsibility to feel competent in this role and follow all of the procedures laid down by the organization within which they work, to ensure the safe handling, delivery and disposal of cytotoxic drugs. It is apparent is that oncology nurses are playing a pivotal role in the rapid developments occurring in chemotherapy practice and as such the role is continually evolving[6].

(Verity,2005) Chemotherapeutic techniques have a range of side-effects that depend on the type of medications used. The most common medications affect mainly the fast-dividing cells of the body, such as blood cells and the cells lining the mouth, stomach, and

intestines. Chemotherapy related toxicities can occur acutely after administration, within hours or days, or chronically, from weeks to years[7].

Nausea, vomiting, anorexia, diarrhea, abdominal cramps, and constipation are common side-effects of chemotherapeutic medications that kill fast-dividing cells [8] .
Malnutrition and dehydration can result when the patient does not eat or drink enough, or when the patient vomits frequently, because of gastrointestinal damage. This can result in rapid weight loss, or occasionally in weight gain, if the patient eats too much in an effort to allay nausea or heartburn. Weight gain can also be caused by some steroid medications. These side-effects can frequently be reduced or eliminated with antiemetic drugs . [9]
Nausea and vomiting are two of the most feared cancer treatment-related side-effects for cancer patients and their families. The patients receiving chemotherapy ranked nausea and vomiting as the first and second most severe side-effects, respectively. (Up to 20% of patients receiving highly emetogenic agents in this era postponed, or even refused, potentially curative treatments[10].

Chemotherapy-induced nausea and vomiting (CINV) are common with many treatments and some forms of cancer. Since the 1990s, several novel classes of antiemetic have been developed and commercialized, becoming a nearly universal standard in chemotherapy regimens, and helping to successfully manage these symptoms in a large portion of patients. Effective mediation of these unpleasant and sometimes-crippling symptoms results in increased quality of life for the patient and more efficient treatment cycles, due to less stoppage of treatment due to better tolerance by the patient, and due to better overall health of the patient [9].

Consultation and informed consent. Before treatment begins, the patient will meet with a medical oncologist who will review medical records and perform a physical examination. Based on the size and location of the cancer, age, overall health, and a number of other factors, the doctor will work with patient to develop a specific treatment regimen (schedule). This treatment schedule may consist of a specific number of cycles given over a specific period of time or may involve treatment that continues for as long as your cancer responds. The doctor will also discuss the potential risks and benefits of chemotherapy with the patient. If the patient choose to receive chemotherapy, must patient will be asked to give written permission (informed consent) and undergo tests to plan the treatment [11].

The informed consent form confirms that patient have received information about the treatment options and that patient are willing to undergo chemotherapy. By signing the informed consent form patient are also telling the health care team that he understand there is no guarantee the treatment will achieve the intended results. Meanwhile, patient learn what he should or should not eat or drink on the day of the treatment so the chemotherapy will work most effectively [12].

Objectives of the study :

The present study aims to achieve the following goals:

1) To evaluate the nursing intervention provided to patients undergoing chemotherapy pre, during, and post nursing care
2) To find the relationship between nursing intervention and the demographic characteristics of the nurses that includes (age –gender – level of education–number of years of experiences in chemotherapy units – training session).

METHODOLOGY:

Descriptive study carried out during the period from (October 2013 until August 2014) to evaluate the nursing intervention provided to patients undergoing chemotherapy pre and post nursing care, The study has been conducted on nurses who were working in

chemotherapy units in AL _ Amal National Hospital for Cancer Management, Oncology Teaching Hospital, and Baghdad Teaching Hospital. Included research sample (70) of the nurses who were working in units of chemotherapy .

A questionnaire was designed & constructed by the researcher related to measure the variables. Such a construction was employed through review of literature . The questionnaire consisted of (2) parts, whereas the first part concerned with determination of the demographic characteristics of the nurse's who have participated in the study through special sheet which include (7) items**,** such as included the (age, gender, level of education, years of experience in nursing, years of experience in chemotherapy units, sharing in training sessions concerned to chemotherapy nurse's interventions for the patients with cancer established by the hospital, number of training sessions).

The second part concerned nursing intervention provided to patients undergoing chemotherapy and consists of (12) items .

These items are measured, scored and rated on a 3 level type liker scale (3) for always, (2) for sometimes and (1) for never.

The data were collected from 25th January to 20th June of 2014: the researcher gathered the subjects responses through an application of a direct observant approach by the mean of the designed interventions checklist. Nurses interventions were observed while they were working in chemotherapy units for patients with cancer during the day. The observational checklist which used and took about (1-2) days at morning shift, each nurse was observed on an individual basis. A total of 3 episodes of events were observed for each respondents practices as a means of data collection.

Three correct practices out of 3 episodes were rated as always; 2 correct practices out of 3 episodes were rated as sometime; and one or no correct practices out of 3 episodes was rated as never.

The researcher used the appropriate statistical means in the data analysis which include .descriptive data analysis (Frequency and Percentage) and Inferential Data Analysis (Means of scores and Pearson correlation coefficient).

Whereas mean of score equal to (1.5 – 2.5), less than (1.5) was considered low significant, from (1.5 – 2.5) was considered moderate significant, (2.5) and above was considered highly significant. The data analysis approaches are used in order to analyze and assess the result of the study under the application of the statistical package of social science (SPSS)ver. (19.0).

RESULTS:

Table(1) : Distribution demographic characteristics for nurses gender

Gender	Frequency	Percent	Cumulative Percent
Male	**33**	**47.1**	**47.1**
Female	**37**	**52.9**	**100.0**
Total	**70**	**100**	

This table indicated that majority of gender were in female (37) and were accounted (52.9%)

Table(2) : Distribution demographic characteristics for nurses age .

Age	Frequency	Percent	Cumulative Percent
20 – 29 year	20	28.6	28.6
30 – 39 year	17	24.3	52.9
40 – 49 year	21	30.0	82.9
50 year and more than	12	17.1	100.0
Total	70	100	

Table 2 indicated that majority of age were in group (40 - 49) and were accounted (30%) .

Table(3) : Distribution demographic characteristics for nurses education Level

Level of education	Frequency	Percent	Cumulative Percent
Medium school nursing graduate	9	12.9	12.9
Secondary school nursing graduate	28	40.0	52.9
Institutes of Health graduate	16	22.9	75.8
College of Nursing graduate or more	17	24.2	100.0
Total	70	100	

Table 3 shows that majority of education Level were in Secondary school nursing graduate and were accounted (40%) .

Table(4) : Distribution demographic characteristics for nurses Years of experience in nursing .

Years of experience in nursing	Frequency	Percent	Cumulative Percent
1 – 5 year .	30	42.9	42.9
6 – 10 year .	9	12.9	55.7
11 – 15 year .	6	8.6	64.3
16 – 20 year .	11	15.7	80.0
21 year and more than .	14	20.0	100.0
Total	70	100	

Table 4 shows that majority of Years of experience in nursing (30) were in (1 – 5) and were accounted (42.9%) .

Table(5) : Distribution demographic characteristics for nurses Years of experience in units of chemotherapy .

Years of experience in units of chemotherapy	Frequency	Percent	Cumulative Percent
1 – 5 year	42	60.0	60.0
6 – 10 year	17	24.3	84.3
11 – 15 year	8	11.4	95.7
16 – 20 year	3	4.3	100.0
21 year and more	0	0	
Total	70	100	

Table 5 shows that majority of Years of experience in units of chemotherapy (42) were in (1 – 5) and were accounted (60%) .

Table(6) : Distribution demographic characteristics for nurses Experience gained in the chemotherapy from .

Experience gained in the chemotherapy	Frequency	Percent	Cumulative Percent
Review of books and articles that have to do chemotherapy	0	0	0
Participate in training courses in chemotherapy .	34	48.6	48.6
Working with patients undergoing chemotherapy	36	51.4	100.0
Total	70	100	

Table 6 shows that majority of sample take experience in the chemotherapy (36) were in working with patients undergoing chemotherapy and were accounted (51.4%).

Table (7) : Distribution demographic characteristics for nurses Training sessions

Training sessions	Frequency	Percent	Cumulative Percent
Yes .	34	48.6	48.6
No .	36	51.4	100.0
Total	70	100	

Table 7 shows that majority of sample did not take any training session (36) and were accounted (51.4%) .

Table (8): Mean of scores of the items (nurses practices concerning Nursing skills in Prepare a dose of chemical treatment) :

Items		Always	Some times	Never	Mean of Scores	Severity
1	The nurse read the doctor's notes carefully	70	0	0	3.00	H
2	Wash hands thoroughly .	0	18	52	1.26	L
3	Preparation and wearing sterile gloves .	5	56	9	1.94	M
4	Preparation and wearing sterile mask .	0	9	61	1.13	L
5	The use of biological safety cabinet to prepare all the materials chemotherapy.	69	1	0	2.99	H
6	Note the general appearance of intravenous fluids (color, the presence of impurities) .	27	41	2	2.36	M
7	Note device administration .	1	62	7	1.91	M
8	Note the expiration date of the liquid intravenous and a device administration .	4	20	46	1.40	L
9	Preparation of intravenous fluids and treatment	69	1	0	2.99	H
10	Add medication to intravenous fluids .	70	0	0	3.00	H
11	Mixing the drug with intravenous fluids .	70	0	0	3.00	H
12	Put tape on the bag of intravenous fluid writes it (the patient's name, the name of the medication, the dose of the medication, the date, the time of administration, etc. -------	70	0	0	3.00	H
	Total	455	208	177	27.97	

This table demonstrated the mean of scores for the nursing intervention in Prepare a dose of chemical treatment which was highly significant on items (1, 5, 9, 10, 11, 12) and mean of scores are moderate significant on items (3, 6, 7) and mean of scores are low significant on remaining ones .

DISCUSSION:

The result indicated that majority of the sample gender were in female (37) and were accounted (52.9%) in (Table 1) This finding is approximately similar with (Ulrich, 2008) who reported that the majority of the nurses were mainly females[13].

In the present study it was found that encourage the practice of the nursing profession are females more than males and this is happening in Iraq and the world and this confirms the outcome of the study that more females than males.

The results of this study disagreed with MOH (2003) who showed that over (50%) of the nurse's staff were males [14]. The result study shows that the most of them age were in group (40 - 49) and were accounted (30%). The majority of those who work in chemotherapy have many years of work in this area to be the age of relatively large. The result of the table (3) shows that majority of education Level were Secondary school nursing graduate (28) and were accounted (40%)

Large number of Secondary school nursing graduate in Iraq whether affiliated to the Ministry of Higher Education. as well as affiliated to the Ministry of Health and the small number of nursing colleges compared with the number of Secondary school nursing led to the majority of the study sample in education Level are graduates of Secondary school nursing. The result of present study finding that majority of Years of experience in nursing (30) were in (1 – 5) and were accounted (42.9%).

New appointment each year to make the nursing experience in nursing is less than five years. The result of study finding show that majority of years of experience in units of chemotherapy (42) were in (1 – 5) and were accounted (60%).

Because the frequent transfers that occur among the health department reduce the gain experiences this area. The result of study finding show that majority of sample take experience in the chemotherapy (36) were in working with patients undergoing chemotherapy and were accounted(51.4%) (Table 6) The result of study finding shows that majority of sample did not take any training session (36) and were accounted (51.4%)

The results of this study agreed with WHO , (2006) which showed that there was a lack of opportunity for continuing education of health personal for nursing , shortage of teachers and the limited funding for research[15] .

This suggestion was in agreement with the finding the (Jasper) who reported To maintain and improve professional competence for nurse, to increase Professional Experience, to keep up with technology and good practices, many are must participate in professional development courses as part of a skill improve[16]

The result table (8) shows that highly significant mean of scores for the nursing intervention in Prepare a dose of chemical treatment on items (The nurse read the doctor's notes carefully), (The use of biological safety cabinet to prepare all the materials chemotherapy), (Preparation of intravenous fluids and treatment) (Add medication to intravenous fluids), (Mixing the drug with intravenous fluids), (Put tape on the bag of intravenous fluid writes it (the patient's name, the name of the medication, the dose of the medication, the date, the time of administration, etc .

These facts can be supported by American Society of Health (2006) who stated that the chemotherapy dose product labels include, name of patient, identification number, area or unit, generic drug name, unique product identifier, date of preparation, dose, total final volume, infusion solution, route of administration, drug concentration, residual volume and rate and route of administration, expiry date, time of expiry and name of nurse who checked the dose, date of planned treatment (if different than preparation date) [17].

The nurse should read the doctor orders for chemotherapy dose. the doctor must assess status, blood work, and body's ability to handle the chemotherapy before orders a treatment.

the doctor prescribes the name of the drug, the dose, the dates of treatment, the method of administration, the type of fluid to contain the drug, and the duration of the treatment[18].

CONCLUSION:

The result study finding that majorities of the sample were female and most of them were in secondary school nursing graduate and, the majority years of experience in nursing less than five years and did not take any training session and take experience in the chemotherapy from working with patients undergoing chemotherapy.

RECOMMENDATION:

1. Organize Special training courses to all nurses working in units of chemotherapy, which include programs for special courses for nursing interventions in these units.
2. Designing and distributing a booklet to all nurses who work in chemotherapy units including for nursing interventions in this units.
3. Increasing the number of professional nurses graduates from colleges of nursing in chemotherapy units.
4. Provide them with scientific resources related to chemotherapy nursing interventions.

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