CHEMOTHERAPY IN PATIENTS WITH LUNG CANCER: A LOOK ON NURSING CARE

TRATAMENTO QUIMIOTERÁPICO EM PESSOAS COM CÂNCER DE PULMÃO: INVESTIGANDO CUIDADO DE ENFERMAGEM

LA QUIMIOTERAPIA EN EL TRATAMIENTO DE PERSONAS CON CÁNCER DE PULMÓN: LA INVESTIGACIÓN DE ENFERMERÍA

RESUMEN

Objetivo: analizar el cuidado de enfermería a la persona con cáncer de pulmón que recibe quimioterapia. Método: este es un estudio bibliográfico, descriptivo, de revisión integradora, con recorte temporal de 2012-2016, en las bases de datos BDENF, LILACS, PUBMED/MEDLINE, seleccionando los artículos trilingües completos. Los resultados fueron discutidos a la luz de la literatura.

Conclusión: a pesar de que la literatura era escasa, se mencionó el linde de cuidado de enfermería que se adopta para evitar la peoría de los efectos tóxicos causados por quimioterapia dirigida a un cuidado holístico con el desarrollo de habilidades del paciente para el auto-cuido y autoestima.

Descriptors: Pacientes; Enfermería Oncológica; Cuidados de Enfermería; Auto cuidado y autoestima.

INTEGRATIVE REVIEW ARTICLE

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ABSTRACT

Objective: to analyze the nursing care to the person with lung cancer undergoing chemotherapy. Method: this is a bibliographical, descriptive study, of integrative review, with temporal clipping from 2012-2016, in the databases BDENF, LILACS, PUBMED/MEDLINE, selecting complete trilingual articles. Data analysis based on the Content analysis technique in the modality of thematic analysis. The results are discussed in the light of the literature.

Conclusion: even though the literature was scarce, it mentioned the existence of nursing care to prevent the worsening of toxic effects caused by chemotherapy directed to a holistic care with the development of abilities of the patient for self-care and self-esteem. Descriptors: Patients; Oncology Nursing; Self-Care; Lung Neoplasms; Drug Therapy; Nursing Care.

RESUMEN

Objetivo: analizar el cuidado de enfermería a la persona con cáncer de pulmón en tratamiento quimioterápico. Método: trata-se de um estudo bibliográfico, descritivo, de revisão integrativa, com recorte temporal de 2012-2016, nas bases de dados BDENF, LILACS, PUBMED/MEDLINE, selecionando os artigos trilingües completos. Repassado-se a análise dos dados na técnica de Análise de conteúdo na modalidade Análise temática. Discutiram-se os resultados à luz da literatura. Resultados: compôs-se a amostra por seis artigos. Emergiram-se dois grandes temas: Gestão dos sintomas junto à pessoa com câncer de pulmão e Percepção do cuidado de enfermagem centrado no paciente com câncer de pulmão. Conclusão: constatou-se que a literatura mesmo escassa pontuou a existência do cuidado de enfermagem para evitar o agravamento dos efeitos tóxicos causados pela quimioterapia direcionada para um cuidado holístico com desenvolvimento de habilidades do paciente para o autocuidado e autoestima. Descriptores: Pacientes; Enfermagem Oncológica; Auto cuidado; Neoplasias Pulmonares; Tratamento Farmacológico; Cuidados de Enfermagem.
INTRODUCTION

Representing a public health problem worldwide, cancer is among the chronic non-communicable diseases (NCDS), occupying the second place in the ranking as one of the most prevalent, especially in developing countries, such as Brazil. With this, in the next ten years, the impact of the disease shall correspond to 80% of the more than 20% million new cases estimated for 2025.1

Developed countries show the highest rates of prevalence of cancer and developing countries, approximately 60% of new cases. In relation to the mortality rates, the situation is even worse, when observing that, of the eight million deaths foreseen, 70% occurred in those countries.2

The most common types of cancer in the world are lung (1.8 million), breast (1.7 million), intestine (1.4 million) and prostate (1.1 million). In men, the most frequent are lung (16.7%), prostate (15.0%), intestine (10.0%), stomach (8.5%) and liver (7.5%). In women, the highest frequencies found are breast (25.2%), intestine (9.2%), lung (8.7%), cervical cancer (7.9%), and stomach (4.8%).3

However, lung cancer increased 2% regarding annual cases and 90% regarding diagnosed cases and, at diagnosis, the disease is often in an advanced stage, hampering the treatment and decreasing the survival time of people. In Brazil, the mean survival time is five years and comprises 7 through 10% of cases, while, in developed countries, the survival rate is 13 through 23%.3-4

There are two main classifications of lung cancer: small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). The latter is divided into three distinct subtypes: large cell carcinoma, squamous cell carcinoma and adenocarcinoma, which can also affect people who have never smoked. The SCLC is more responsive to chemotherapy and radiotherapy due to its rapid growth and proliferation, and its clinical course is usually faster. Nevertheless, the resistance to chemotherapy and radiotherapy is also more frequent, which makes it highly malignant. The evaluation of the histological type is extremely important, which, in conjunction with other clinical and molecular data, is a fundamental step for determining the therapy.5-7

Chemotherapy can cause great negative impact on patients’ life due to its toxicity, which occurs by the deleterious effect on the division of normal cells of the body causing: bone marrow suppression, immunosuppression, nausea and vomiting, alopecia, renal toxicity, cardiotoxicity, pulmonary toxicity, neurotoxicity, gonadal lesion and sterility.5-8

Furthermore, there are the factors related to pain, suffering, deterioration of the human being, in addition to projections that indicate the number of deaths and years of life lost. From these factors, the care process connected to people in chemotherapy refers to the various human, physical, emotional, mental, expressive dimensions, which can be observed in relation to care, between the one offering and the one receiving the care, and has a direct connection with the environment where care actions occur.8 Thus, the sick person, environmental relations and family are considered as contributors of care.

Regarding the patients’ lack of knowledge about the illness and treatment process, evaluating the probability of occurrence of unwanted effects during the chemotherapy treatment is essential in order to provide a treatment without interruptions and, consequently, with a better clinical response.

The guiding question of this study was: what are the evidences expressed in the literature on nursing care to people in chemotherapeutic treatment with lung cancer?

OBJECTIVE

● To analyze nursing care to the person with lung cancer undergoing chemotherapy.

METHOD

This is a bibliographical study, integrative review type, based on evidence-based practice9, using the following steps: delimitation of the research question; establishment of sampling criteria; definition of the research characteristics; data analysis; interpretation of results and, finally, presentation of the results.10

The inclusion criteria were: complete articles, qualified journal, research results, experience reports, review and reflection in Portuguese, English or Spanish, available in electronic media, with free access, with temporal clipping of five years (2012-2016). The exclusion criteria were: texts that differed from the proposed theme, repeated articles, abstracts of annals, dissertations, theses, monographs, books, reports, editorials, letters to the reader, comments and paid articles.

The material selection occurred in May and June 2017. The search took place in the following databases: Virtual Health Library (VHL), in an integrated manner with the
Chemotherapy in patients with lung cancer. Cordeiro VS, Berardinelli LMM, Santos RS.

Nursing Database (BDENF), Latin American and Caribbean Literature in Health Sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), and through Capes Public/Publish Medline Journals (PUBMED/MEDLINE). The following descriptors and their combinations were used: lung cancer, nursing care, chemotherapy. Synonyms were also researched, suggested by the DeCS, at the moment of the search.

In LILACS, MEDLINE, and BDENF, the following descriptors were used: “lung cancer” or “lung neoplasm” and chemotherapy or care or treatment and nursing. The search resulted in 133 articles.

In Pubmed/MEDLINE, firstly, the employed descriptors were lung cancer and chemotherapy and care and nursing, returning no article, therefore, the descriptors were changed to: lung cancer and chemotherapy and nursing and care, resulting in 59 findings, totaling 193 articles.

The articles were classified as to the level of evidence, in accordance to standards adopted by the Critical Appraisal Skills Program: level I, a meta-analysis of multiple controlled studies; level II, individual study with experimental design; level III study with an almost experimental randomized design without randomization with single pre- and posttest groups, temporal series or case-control; level IV, with a non-experimental study as descriptive correlational and qualitative research or case studies; level V, report of cases or data obtained in a systematic way, with verifiable quality or evaluation data of programs; level VI opinion of reputable authorities based on clinical competence or opinion of committees of experts, including interpretations of non-research-based information. The results were analyzed and are presented in table 3.

For the analysis design, an instrument was prepared, containing information on title, authors, journal, year, type of research, used database, level of evidence, main results and conclusion.

Data analysis based on the following steps of thematic analysis: pre-analysis with reading and rereading of the material, material exploration and treatment of results obtained with organization, interpretation and presentation of results in the form of categories. The results were discussed in the light of the literature.

RESULTS

From a careful analysis, a final sample composed by six studies was found, which were used to support this research and that met the main goal. The flowchart of the search steps and selection of publications in the databases can be seen in figure 1.
Figure 1. Flowchart of selection of studies in the databases. Rio de Janeiro (RJ), Brazil, 2017.

Two studies were at BDENF, four at LILACS, 127 at MEDLINE and 59 at Pubmed/MEDLINE. Then, the titles and abstracts of articles were read, showing that 118 studies were duplicated and 59 did not discuss the care to the patient with lung cancer undergoing chemotherapy. In this way, 16 articles were selected for full reading, but only six of these referred to the theme.

In the sequence, a framework was prepared to present the synthesis of the studies included in the integrative review and contemplate information regarding title, authors, year, journal and design of the published studies. Then, the selected studies were critically analyzed, and the results were presented as a synthesis of knowledge of the theme (Figure 2).

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Year</th>
<th>Journal</th>
<th>Database</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing intervention to enhance outpatient chemotherapy symptom management: Patient-reported outcomes of a randomized controlled trial.</td>
<td>Traeger L, McDonnell TM, McCarty CE, Greer JA, El-Jawahri Areej, Temel JS.</td>
<td>2015</td>
<td>Cancer</td>
<td>Medline</td>
<td>Randomized controlled study</td>
</tr>
<tr>
<td>Relationships between patient knowledge and the severity of side effects, daily nutrient intake, psychological status, and performance status in lung cancer patients.</td>
<td>Tian J, Jia LN, Cheng ZC</td>
<td>2015</td>
<td>Current Oncology</td>
<td>Pubmed</td>
<td>Randomized controlled study</td>
</tr>
<tr>
<td>Taste Alteration in Patients Receiving Chemotherapy.</td>
<td>Sözeri E, Kutlutürkan S.</td>
<td>2015</td>
<td>Journal of Breast Health</td>
<td>Pubmed</td>
<td>Exploratory descriptive study</td>
</tr>
<tr>
<td>An e Health system supporting palliative care for patients with non-</td>
<td>Gustafson DH, DuBenske LL.</td>
<td>2013</td>
<td>Cancer</td>
<td>Medline</td>
<td>Randomized</td>
</tr>
</tbody>
</table>
small cell lung cancer: a randomized trial.

Implementing patient-centered care: using experience-based co-design to improve patient experience in breast and lung cancer services.

2012 Support Care Cancer. Medline Qualitative study

Figure 2. Scientific production on care to the person with lung cancer undergoing chemotherapy in the period from 2012 through 2016. Rio de Janeiro (RJ), Brazil, 2017.

According to the year of publication, the years 2014 and 2016 had no productions. There is a greater number of publications in the year 2015, with four studies, one study in 2013, one study in 2012. In relation to the area of the published studies, two articles belong to the multiprofessional area, and four to the nursing area.

The selected studies were organized by date of publication from the most recent to the oldest, and subsequently the articles were exhaustively read, summarizing the data to answer the question proposed in this study.

Regarding the methodological design of the material selected, there were two qualitative studies, two randomized controlled studies, one randomized study and one exploratory descriptive study. In relation to the strength of the evidence, three articles had level of evidence IV and three articles had level of evidence I, as shown in Figure 3.

<table>
<thead>
<tr>
<th>Title</th>
<th>Methodology</th>
<th>Level of evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung cancer treatment rates and the role of the lung cancer nurse specialist: a qualitative study.</td>
<td>Qualitative study</td>
<td>4</td>
</tr>
<tr>
<td>Nursing intervention to enhance patient chemotherapy symptom management: Patient-reported outcomes of a randomized controlled trial.</td>
<td>Randomized controlled study</td>
<td>1</td>
</tr>
<tr>
<td>Relationships between patient knowledge and the severity of side effects, daily nutrient intake, psychological status, and performance status in lung cancer patients.</td>
<td>Randomized controlled study</td>
<td>1</td>
</tr>
<tr>
<td>Taste Alteration in Patients Receiving Chemotherapy.</td>
<td>Exploratory descriptive study</td>
<td>4</td>
</tr>
<tr>
<td>An eHealth system supporting palliative care for patients with non-small cell lung cancer: a randomized trial.</td>
<td>Randomized study</td>
<td>1</td>
</tr>
<tr>
<td>Implementing patient-centered cancer care: using experience-based co-design to improve patient experience in breast and lung cancer services.</td>
<td>Qualitative study</td>
<td>4</td>
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Figure 3. Level of evidence of the scientific productions selected in the period from 2012 through 2016. Rio de Janeiro (RJ), 2017.

The analysis and interpretation sought to associate what the articles described with broader knowledge already obtained on the subject. From then on, the proximity between the themes and the repetition of these among them, two major themes emerged: Management of symptoms with the person with lung cancer and perception of nursing care centered on the patient with lung cancer.

**DISCUSSION**

- **Management of symptoms with the person with lung cancer**

  This category appeared in three studies: The first originated in four hospitals in the USA with the objective of identifying the symptoms that most affected patients with lung cancer over two years through a website built specifically for the patient with lung cancer.

  The study involved 246 patients, and, of this total, 124 patients formed the group with access to the specific study site and 122 patients formed a group assigned to the site of basic and general oncology available on the internet.

  Data collection occurred during two years and the invitation directed to the patient with life expectancy of at least four months. Then, the physical and emotional well-being was evaluated through a pre-test, and then there was a training for the use of the site, which aimed to provide well-organized information on lung cancer, care and cases of anxiety. In addition, tools were provided to enhance the care experience.

  Thus, this study showed that the patients of the group assigned to the site, built specifically for the patient with lung cancer,
Chemotherapy in patients with lung cancer is unavoidable. However, the side effects of chemotherapy can be distressing for patients. In this study, we evaluated the impact of a multiprofessional care program on patients undergoing chemotherapy for lung cancer. The study selected 120 patients, 60 of whom received the intervention described, and the other 60 received only the standard oncologic care, without nursing monitoring by phone. The patients received the intervention that contemplated standard oncologic care, accompanied by weekly telephone guidance and nursing professional support through the first two cycles of chemotherapy administration. There were reports of less toxic effects and an increased adherence to treatment. The study showed the management of care as an activity performed by nurses directed to sick people, highlighting four essential characteristics.

In this sense, the intention is the single recognition of their knowledge and aspects of care applied to the self-care primacies, valuing each patient’s full life, everything around him/her, a holistic perspective of human life. The nursing actions are undeniable in monitoring the reactions of the patient under chemotherapy, requiring encouragement to develop the patient’s skills for his/her health self-care, self-esteem and restore his/her quality of life.

Nurses’ perception is an important factor to develop the care process, which requires knowledge addressing the complexity of the universe therapy, especially in scientific-technical dimensions, interactive and care. Thus, nursing is also responsible for life, promotion of well-being and health. In this way, there hope for the development of prevention and care measures with patients in order to involve them in the care process, help them to recognize themselves as responsible for changing their own lives, actively participating in the process, redrafting their life modes and habits, aiming to stay healthy with autonomy to manage their health.

A study aimed at reducing the effects of treatment to patients who started chemotherapy and increased patient satisfaction with care in order to decrease the likelihood of developing depression and/or anxiety symptoms. The study selected 120 patients, 60 patients received the intervention that contemplated standard oncologic care, guidance and nursing professional support by telephone, during the first two cycles of chemotherapy administration and the other 60 patients received only the standard cancer care, without nursing monitoring by phone.

None of the results differed between the randomized groups. There were reports of
lack of energy and sleepiness as the effects that most affected patients of both groups, seen as one of the most frequent and difficult to manage related to chemotherapy.

Approximately 8% of the randomized group and 20% of the control group identified the onset of depression and anxiety; however, over the two cycles of chemotherapy, these effects improved.15 The amount of cancer patients who suffer from these psychological disorders is alarming, since this health status directly affects the patient’s self-care.

Regarding satisfaction with the care, the patients commonly reported that the nursing phone service provided tranquility, considered appropriate and acceptable; however, it did not improve the discomfort of the effects of chemotherapy immediately. There should be further studies like this, with alternative models and planning of nursing care during chemotherapy seeking to reduce the impact of the negative effects linked to treatment and the high rates of unplanned hospitalizations during chemotherapy.15

In this context, the care process was seen as the mode of providing care, being an interactive process that occurs between the nurse and the patient, in which the first plays an active role for incorporating actions accompanied by care behaviors. The second, the patient, has a more passive role and his/her situation may lead to a less passive role, thus contributing and being responsible for self-care.22

Therefore, nurse practices include a complete holistic evaluation of the needs of patients with lung cancer and assistance to control any effects that they can have.22 In addition, this professional also invests in information and actions on the illness and necessary self-care, using strategies to involve it.

- Perception of nursing care centered on the patient with lung cancer

This category emerged from three studies, namely: the first proposed to assess the relations of patient knowledge about the effects, daily intake of calories and proteins, depression, anxiety and performance status in a group of 172 patients with lung cancer, with 62 patients in the group that received the intervention.16

In comparison to the patients in the control group, the patients in the intervention group showed a daily intake of protein significantly better, a lower prevalence of depression, reduced severity of effects and better performance in general health status. The knowledge about the treatment, the effects and the self-care behaviors minimized the reactions caused by chemotherapy, reduced the amount of reactions and improved patients’ quality of life.16

The nurse should promote health and care during the care process, helping people undergoing chemotherapy to recognize themselves as responsible for changing their own lives, actively participating in all the dynamics, redrafting their ways of living the life habits in order to stay healthy with autonomy to manage their health. Thus, there should be the effective practice of nursing care for patients undergoing chemotherapy as necessary from individual plans as the target of interventions that are not limited to information, but in a space where the nurses act as mediators of their health needs, contributing to the empowerment in order to assume the direction of their own health.25

Another study aimed at determining factors that affect the patients using chemotherapeutic agents in terms of taste change. In this way, 184 patients received a form, which, among other items, classified and identified taste disorders in the following way: hypogeusia (decline in sensitivity to taste), ageusia (complete lack of taste), parageusia (distortion of the palate), cacogeusia (unpleasant taste that does not originate in food or drinks), fantogeusia (continuous abnormal taste in the mouth, usually bitter or metallic) and hypogeusia (increased flavor sensitivity). Thus, the higher the intensity of gustatory changes, the higher the score.17

The data showed a higher score for hypogeusia associated with the discomfort of patients undergoing chemotherapy that still smoke or have other associated disease. The same result occurred with patients who used other medicines, in addition to chemotherapy. In the literature, the drugs that cause the change of taste include antibiotics, analgesics, anti-hypertensive drugs, antidepressants, anticonvulsants, bronchodilators, muscle relaxants, antiepileptic, oral, psychopharmacological and mouth washers.17

The patients undergoing chemotherapy with Xerostomia presented a high score for the following amendments: hypogeusia, fantogeusia and parageusia. Patients with mucositis showed a higher intensity to the changes of cacogeusia, ageusia and hypogeusia, and, thus, a higher score.17 Regarding chemotherapy protocols, all presented some alteration in the patients’ taste, however, the medications doxorubicin, bleomycin, vinblastin and dacarbazine
obtained higher scores than the scores of other groups of medications. Thus, changes of fantogeusia and parageusia, ageusia, hypogeusia and cacogeusia showed greater intensity. The research concluded that most patients showed changes in taste even correlated or of lesser intensity. In addition, more descriptive and controlled randomized studies are necessary.17

Undesirable side effects during chemotherapy treatment are expected to occur, however, the patients themselves are responsible for deciding what is more comfortable considering the several meanings and their individuality. Thus, the need for an adjustment in the day-to-day conditions of disease is undoubtable, as well as implementing key actions that best suit the patient’s essence, aiming to provide a treatment without interruptions and, consequently, with a better clinical response.27

The third study sought to identify the problems and implement improvements in care for patients with lung cancer through an approach based on experience and reports of these patients as well as professionals involved in order to make healthcare more centered on the patient.19 Thus, patients with lung cancer reported a more effective understanding concerning their illness and treatment when addressed personally by nurses instead of leaflets and booklets. However, they stated that the guidelines would be more well acquitted if performed in specific and critical moments of the sick person.19

Patients considered discontinuity of care the fact of collecting their stories of illness and treatment several times throughout the process of care and consultations, when they questioned the lack of registration and communication among professionals. Furthermore, they mentioned the delay for any care, lack of a warm reception for newly diagnosed patients with first referral, improvement of access to the oncology service, including the nursing staff and implementing palliative care service led by nurses.19

The approach based on the experience of the patient with lung cancer for improving the service showed the perception of these people regarding other forms of care existing since the first contact with the health unit, but that causes a differential in the day-to-day of each patient. In short, efforts should focus on solving the points identified that guarantee the improvement of the care quality to these patients.19

Health professionals who deal with these situations should assist sick people to deal with their concerns and fears, supporting them so that they can positively influence their lives to adhesion and expectation of treatment.28 Therefore, health professionals are responsible for providing an appropriate attention and understanding of these individuals in their multiple dimensions.

The path that the sick person travels is long and with many changes that make him/her more vulnerable and exposed to damage and health problems. In these conditions, receiving attention from various areas of specific and specialized knowledge refers to a support structure, allowing the improvement of his/her living conditions.29

Based on the evidence of the study and imbued that the patient is often the care focus, the nursing interventions directly affect the reduction of morbidity and increased survival of oncologic patients.21,24

**CONCLUSION**

This review evidenced the scientific production on nursing care in the chemotherapeutic treatment of lung cancer. The publications showed the existence of nursing care as softener or even preventing the worsening of the reactions caused by chemotherapy based on an integral care with the constant presence of the nurse in the phases of illness, and his/her assistance or communication skills added to the holistic view. In this way, the development of abilities of the patient to the self-esteem and self-management was evidenced, thus configuring the maintenance of his/her quality of life.

This study expects to promote advances in research on the nursing care of the patient with lung cancer, because there is still a shortage in the production of studies about aspects geared exclusively for the patient with lung cancer, as well as evaluation of nurses’ specific care.

The national and international scientific production on the theme should expand, as well as nurses who work in care should publicize the experiences they have in relation to the patient with lung cancer.

The contribution to nursing as a science stands out, considering the opportunity to make studies related to the theme more accessible to professionals, which will respond and/or raise anxieties and questionings from clinical practice.
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Chemotherapy in patients with lung…


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Submission: 2018/02/07
Accepted: 2018/08/27
Publishing: 2018/10/01

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