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CHARACTERIZATION OF CANCER PAIN IN PATIENTS UNDERGOING RADIOTHERAPY

CARACTERIZAÇÃO DA DOR ONCOLÓGICA EM PACIENTES SUBMETIDOS À RADIOTERAPIA CARACTERIZACIÓN DEL DOLOR POR CÁNCER EN LOS PACIENTES SOMETIDOS A RADIOTERAPIA

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ABSTRACT

Objectives: to set the profile of the patients submitted to radiotherapy by gender and age and characterize the cancer pain. **Methodology:** descriptive and exploratory study with quantitative approach, developed in March and April 2010 in a charity hospital located in Teresina-PI, with 67 cancer patients undergoing radiotherapy. Data collection was conducted through a questionnaire applied through direct interviews, and data were analyzed with the software Statistical Product and Service Solutions (SPSS) version 17.0. This study was approved by the Ethics Committee in Research from Federal University of Piauí under CAAE number 0237.045.000-09. **Results:** they revealed that patients were mostly female, 65.7% of cases, the dominant age group was between 51 and 70 years (43.3%), of all patients on radiotherapy, 71.6 % also had surgery and 67.2% were taking concomitant chemotherapy; cervical cancer was the most prevalent with 23.9% of cases, followed by rectal cancer (14.9%) and breast cancer (13.4 %); 94.0% had localized pain, 29.8% had pain like stabbing, 38.8% had moderate pain and 32.8% severe pain. **Conclusion:** the cancer pain was present, in a moderate or severe way, in most people with advanced age and who were in "multitherapy", since the majority of patients performed other concomitant treatment with radiotherapy. This pain affects considerably the quality of life of these patients. Thus, this study will provide health professionals, especially nurses, greater knowledge about the profile of cancer patients and their pain complaints. **Descriptors:** pain; cancer; radiotherapy.

RESUMO

Objetivos: definir o perfil de pacientes submetidos à radioterapia quanto ao sexo e idade e caracterizar a dor oncológica. **Metodologia:** estudo descritivo e exploratório, com abordagem quantitativa, realizado nos meses de março e abril de 2010, em um hospital filantrópico localizado em Teresina-PI, Brasil com 67 pacientes oncológicos que se submeteram a radioterapia. A coleta de dados foi realizada com um questionário, aplicado por meio de entrevista dirigida, e os dados analisados pelo Programa *Statistical Product and Service Solutions* (SPSS), versão 17.0. Este estudo foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Federal do Piauí sob CAAE nº 0237.045.000-09. **Resultados:** predominou os pacientes do sexo feminino, 65,7% dos casos; a faixa etária dominante foi entre 51 e 70 anos (43,3%); do total de pacientes, 71,6% também fizeram cirurgia e 67,2% estavam realizando quimioterapia concomitantemente; a neoplasia de maior prevalência foi a de colo uterino com 23,9% dos casos, seguida da neoplasia de reto (14,9%) e de mama (13,4%); 94,0% tinham dor localizada; 29,8% dor em pontada; 38,8% dor moderada e 32,8% dor intensa. **Conclusão:** a dor oncológica esteve presente, de forma moderada ou intensa, na maioria das pessoas com idade avançada e que estavam em "multiterapia", já que, a maioria dos pacientes realizava outro tratamento concomitante à radioterapia. Essa dor prejudica, consideravelmente, a qualidade de vida destes pacientes. Assim, este estudo possibilitará aos profissionais de saúde, em especial ao enfermeiro, um maior conhecimento sobre o perfil do paciente oncológico e suas queixas dolorosas. **Descritores:** dor; câncer; radioterapia.

RESUMEN

Objetivos: determinar el perfil por sexo y edad y caracterizar el dolor del cáncer en pacientes sometidos a radioterapia. **Metodología:** estudio descriptivo y exploratorio, con abordaje cuantitativo, realizada en marzo y abril de 2010 en un hospital de caridad ubicado en Teresina-PI, con 67 pacientes que hacían radioterapia. La recolección de datos se llevó a cabo a través de un cuestionario aplicado a través de entrevistas directas, y los datos analizados en lo programa *Statistical Product and Service Solutions* (SPSS), versión 17.0. Este estudio fue aprobado por el Comité de Ética en Investigación de la Universidad Federal de Piauí, con nº. CAAE 0237.045.000-0. **Resultados:** se demostró que los pacientes eran en su mayoría mujeres, el 65,7% de los casos, el grupo de edad predominante fue entre 51 y 70 años (43,3%) de todos los pacientes en radioterapia, 71 6% también se sometieron a cirugía y el 67,2% estaban tomando quimioterapia concomitante, el cáncer fue la más frecuente del cuello uterino con el 23,9% de los casos, seguido del cáncer de recto (14,9%) y de mama (13 4%), 94,0% había localizado el dolor, el 29,8% tenía dolor como punzante, 38.8% tenían dolor moderado y el 32,8% dolor severo. **Conclusión:** el dolor en el cáncer estaba presente en moderada o grave, en la mayoría de las personas con edad avanzada y que eran "multiterapia", ya que la mayoría de los pacientes a cabo otro tratamiento concomitante con radioterapia. Este dolor afecta considerablemente la calidad de vida de estos pacientes. Así, este estudio permitirá a los profesionales de la salud, especialmente enfermeras, un mayor conocimiento sobre el perfil de los pacientes con cáncer y sus quejas de dolor. **Descriptor:** dolor; cáncer; radioterapia.

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INTRODUCTION

The cancer pain is part of everyday life for most people with cancer, becoming a serious public health problem. It arises as a consequence of the pathology itself or the treatments used today, especially radiotherapy. This factor generates stress, besides the physical aspect itself, which directly affects the quality of life of these individuals.

The cancer pain is described as a "total pain" and corresponds to a syndrome that in addition to nociception (injury) presents physical, emotional, social and spiritual factors that influence in their genesis and expression.¹

Cancer is a disease that affects a large proportion of a considerable number of people worldwide. The number of the new cases of the disease has been increasing in the last decades, shaping up as a major public health problem worldwide.²

Patients in advanced cancer phase face pain in different ways. Thus, the concept of total pain includes the components: sensory-discriminative (related to physical sensation), the fight against the disease and their respective treatment, the affective-motivational problems (anger, depression, hopelessness, desperation, guilt, near death) and the change of life plans, as a direct consequence, the patients start to settle only in short-term goals.³

Regarding the therapy used in this disease, the treatments included are clinical, surgical, chemotherapy and radiotherapy. The latter treatment, the focus of this study, the ionizing radiation is employed to stop cell growth. More than a half of cancer patients receive a form of radiotherapy in some moment of the treatment.⁴

However, radiation generates collateral effects of acute or late character. The most common acute complications are enteritis, characterized by diarrhea and abdominal colics, dysuria and increase of urinary frequency. The late manifestations in the gastrointestinal care occur in the first 18 months after therapy and after 28 months for the genito urinary system.⁵

A key point on the subject of pain is its correct evaluation, which aims to determine the factors that may maintain or exacerbate the pain, the suffering and disability, to determine the impact of pain on the patient's personal life, and to verify the effectiveness

of the used therapeutic interventions. Thus, for an accurate measurement is important to believe in the patient's verbal complaints, evaluating him on an ongoing basis, and appropriate use of instruments easy to interpret in terms of understanding of the patient and the professional. It is essential the recording of the informations for data sharing by the multidisciplinary team.⁶

In this context the nurse stands out, besides being the professional that spends more time with the patient, he must know deeply the treatment used and the pain complaints reported daily. These may be related to the ionizing radiation, to the medical treatment, surgery or chemotherapy, as well as the own neoplasia in patients.

Thus, the professional will be able to develop a care plan more humane and qualified, and be able to educate patients about the possible consequences and benefits of the treatment, often multiple. Thus, the role of the nurse can no longer be merely mechanical, raising this professional by the performance of a role of a high qualification, which somehow enhances the function of this profession.

Due to the high incidence of pain in cancer patients and the lack of information on this issue, among health professionals, particularly among nurses, who have a close proximity to cancer patients, this research was conducted, with the following objectives:

- To set the profile of patients undergoing radiotherapy according to sex and age.
- To characterize the cancer pain.

METHODOLOGY

A field study with a descriptive and exploratory nature of a quantitative approach. It consists of a cutout design matrix characterization << cancer pain in patients at a referral hospital for cancer treatment >> held in a charity hospital of Teresina-PI, which provides general and cancer care to a large portion of the local population and the surrounding states. This institution is a reference to the Northeast in the treatment of patients with malignancies.

The study population consisted of patients with cancer, hospitalized in two inpatient units of the hospital, which were treated in the wards, and those who agreed to participate in the study data were collected through individual interviews.

The survey sample was calculated considering that an average of 254 patients is hospitalized each month with a malignant neoplasm at the study site, so approximately 8.4 are admitted daily. Were selected three days of each week using the method of time windows, which allows the saving of time and personnel to search and prevents the bias of the seasons. The researchers attended the study site, in the morning or afternoon, and made an average of five interviews a day for eight weeks, totaling 120 patients.

The sample selection was carried out by random accident, which is formed from the elements as they come up, to complete the 120 patients. In this type of sampling there is no concern with the previous design, since the objective is to describe the main characteristics of the group or the problem and not generalize the findings by the power of biases that may arise.⁷

For the realization of this cut, we used 67 people who were undergoing radiotherapy. The criterion of inclusion for the observed study was radiotherapy and has shown cancer-related pain at some time during treatment. The study excluded patients with a lowered level of consciousness or psychiatric disorders.

The instrument used for data collection was a structured form previously prepared with closed questions and open-closed. In this instrument, were covered variables such as patient profile by gender and age, type of cancer appear, treatment used, pain complaints, location, quality and intensity of pain.

The data collection was carried out through direct interviews with predetermined script that allows closest approach between the researcher and the interviewee, and promote true cooperative involvement or participative between these subjects.

Apart from direct contact with patients was performed a search of their files to collect information relevant to the treatment used and the data of the tumor, since the patients in question were often lay about the disease and the treatment adopted . The data collection was performed by two researchers, between March and April 2010.

The data collection was initiated only after the approval of the research by the Ethics Committee in Research of UFPI under the Certificate of Presentation for Ethic Presentation (CAAE) No 0237.045.000-09 and with the approval of the Ethics Committee of the institution where the data were collected .

This study was conducted following the legal requirements of Resolution No. 196/96 of the National Health Council which deals with research involving humans.⁹ Only after a full investigation, acceptance and signing the consent form that is initiated data collection.

The collected data were entered into a database built with the Statistical Product and Service Solutions (SPSS) version 17.0, and held the descriptive statistical analysis.

RESULTS

- The data are shown in Tables 1-4.

Table 1. Profile of patients by sex and age. Teresina-PI, 2010.

Variables	n=67	%
Gender		
Female	44	65,7
Male	23	34,3
Total	67	100,0
Age		
10 to 20 years old	09	13,4
21 to 30 years old	06	9,0
31 to 40 years old	07	10,4
41 to 50 years old	11	16,4
51 to 60 years old	14	20,9
61 to 70 years old	15	22,4
71 or older	05	7,5
Total	67	100,0

It is noted in Table 1 that the studied population consisted mostly of individuals aged 51-70 years old and 51-60 years old (20.9%) and 61-70 years old (22 4%), there is also a predominance of females (65.7%).

Table 2. Distribution of patients according to the used treatment. Teresina-PI, 2010.

Treatment	n=67	%
Radiotherapy	67	100,0
Surgical	48	71,6
Chemotherapy	45	67,2
Total	67	100,0

Table 2 shows that all patients were receiving radiotherapy, 71.6% underwent to surgery and 67.2% were undergoing chemotherapy. Importantly, this table, a person can be used more than one type of treatment.

Table 3. Distribution of patients according to the present illness. Teresina-PI, 2010.

Current disease	n=67	%
Cervical cancer	16	23,9
Rectal cancer	10	14,9
Breast cancer	09	13,4
Nasopharynx cancer	08	11,9
Brain cancer	07	10,4
Boné metastasis	06	9,0
Renal cancer	06	9,0
Skin cancer	03	4,5
Pulmonary cancer	02	3,0
Total	67	100,0

The main neoplasia presented by patients who constituted this research was cervical cancer represented by 23.9% of cases, followed by cancer of the rectum with 14.9% and breast cancer with 13.4%, as was evidenced in Table 3.

Table 4. Characterization of cancer pain by location, quality and intensity of pain. Teresina-PI, 2010.

Variables	n=67	%
Location of the pain		
Located	63	94,0
Diffuse	04	6,0
Total	67	100,0
Quality of the pain		
Shock	02	3,0
Formication	04	6,0
Throbbing	14	20,9
Shooting	20	29,8
Pression	12	17,9
Burning	15	22,4
Total	67	100,0
Intensity of the pain		
Light	19	28,4
Moderated	26	38,8
Intense	22	32,8
Total	67	100,0

Table 4 shows that 94.0% had localized pain, represented by the majority of cases were 29.8% stabbing pain felt and 22.4% burning, pain intensity in most patients (38 8%) was moderate and severe 32.8%.

DISCUSSION

The analysis of the results of this research has enabled characterization of cancer pain in patients undergoing radiotherapy and to define their profiles by gender and age. Some factors may have limited the results, such as the fact that the pain is very subjective, and is considered to intensity, frequency or different quality in each individual.

Pain is an individual phenomenon, complex and multifactorial. For its evaluation we must consider the physical, emotional, social and spiritual. The sensation of pain is very personal, with its history, its context and its momento.¹⁰ Another study showed that pain, insomnia and fatigue are associated with individual characteristics, optimism, self-transcendence, humor and positive or negative.¹¹

When analyzing the profile of the sample in this study it was observed that was composed mostly of age 51-70 years old, 51-60 years old (20.9%) and 61-70 years old (22.4%), there is also a predominance of

females, represented by 65.7% of respondents.

The prevalence in this study, people aged over 50 years old can be explained by the fact that advanced age is considered a risk factor for several cancers, including breast and prostate cancer, which had a largely represented in this study.

With regard to the characterization of cancer pain, most patients had localized pain (94.0%) and only 6.0% diffuse pain. It was observed that most of respondents limited to pain or near the site of cancer presented. 29.8% had pain in the form of sharp and 38.8% had this pain with moderate intensity. It is not always possible to eliminate the pain, but you can always lighten it, and therefore, the patient must always be heard.

To measure the presence and severity of pain, one must consider not only the self-report, but also other variables such as depression or anxiety, the meaning of pain for the patient and their family support, because many patients do not report pain for fear of trouble. Thus, the assessment of pain, both physiological and the psychological symptoms are considered, it is important that there be a combined action in the treatment of pain with pharmacological and non-pharmacological interventions.¹³

Pain not relieved when compromises the performance of activities of daily living, appetite changes, sleep patterns and rest, movement, mood, leisure, professional, social and family interfering with the quality of life of individuals. In patients with cancer pain can trigger frustration, depression, social isolation and family, exacerbation of fear and pain.¹⁴

In addition, cancer-related pain scale is very large, since it affects from 50% to 70% of patients in all developmental stages of the disease and about 70% to 90% of those with advanced malignant disease.¹⁵

Concerning the malignancy presented by the patient, the cervical cancer represented himself as the highest incidence in the present study (23.9%), being similar to data from the National Cancer Institute, in 2010, which showed that cervical cancer is the second most frequent anatomical site in the female population (26.4%) in the city of Teresina, where the research was performed.¹⁶

The second of highest incidence was colorectal cancer (14.9%). A similar study showed that as the fourth most frequent malignant neoplasia in Brazil. The most

prevalent signs and symptoms were: abdominal pain, change in bowel habits, and weight loss, rectal pain and hematochezia (bright red blood in stool).¹⁷

The third highest incidence in this study, with 13.4% of cases, it was breast cancer. This is the most common cancer and leading cause of death among women, but can also occur in men. It is the second most frequent type in the world and its incidence has grown continuously over the last decade.¹⁸ Incidence rates increase every year as a reflection of the overall trend of the prevalence of lifestyles that promote exposure to risk factors.¹⁹

This high incidence of cervical cancer and breast cancer, can also be explained by the following fact: most people who comprised the study sample were female.

The treatment used was observed that patients who were undergoing radiation therapy, 71.6% underwent surgery and 67.2% were taking concomitant chemotherapy.

A similar study showed that patients in outpatient treatment, most of them were undergoing antineoplastic treatment (about 60% to 8% for chemotherapy and radiotherapy). The researcher says that the pain relief neoplastic set of measures includes radiotherapy and chemotherapy, surgical, pharmacological, emotional and educational needs. As the biological, emotional and participate in the cultural interpretation of pain threshold, is of utmost importance to assess and treat each one, when the goal is pain control.²⁰

Radiotherapy was being made by all participants in this study. Paper presented at the National Cancer Institute, in 2008, says that half of cancer patients are treated with radiation, with an increasing number of people who are cured with this treatment. For many patients, is a very effective way, so that the tumor disease disappears and be controlled, or even cured. When it is not possible to achieve cure, radiation can contribute to the improved quality of life. This is because radiation decreases the size of the tumor, which relieves the pressure, reduces bleeding, pain and other symptoms, providing relief to patients.²¹

In this perspective that the functions palliative, curative radiotherapy or complement are inflammatory, because of its effects on the release of vasoactive substances and inducing the death of inflammatory cells, tissue tropism modifier for producing functional frenator effect or

activator, depending on tissue, and the fractionation of the radiation dose, and antineoplastic, which is the main indication for radiotherapy.²²

However, radiation therapy also has adverse effects, the most common is the radiodermatitis, which affects the irradiated site. Another study of 47 patients showed that all 47 patients radiodermatitis during treatment, it causes discomfort and pain to the patient undergoing radiotherapy treatment.²³

Taking into account the high number of patients who are undergoing treatment by ionizing radiation, it is believed that the construction of knowledge in this area due to start in graduate nursing education by the adoption of specific subject to address this issue certainly it will add to the daily life of future nursing professional.²⁴

Already chemotherapy (CT) adjuvant has been a choice in the treatment of some cases of breast cancer and bowel cancer, reducing the chance of recurrence and increasing survival of patients. Once the tumor removed surgically, the recurrence of the disease may occur through possible micro occult metastases. Therefore, the purpose of the treatment by adjuvant chemotherapy is precisely eradicate micro-metastases, decreasing the chance of recurrence and increasing survival. However, the QT, can also be used as a primary treatment in inoperable lesions.²⁵

Despite the benefits provided by QT, this can cause side effects such as fatigue, nausea, vomiting, pain and insomnia. This can lead to impairment in physical function, emotional, cognitive and social. However, this same study showed that despite the increase in symptoms, the patients saw an improvement in their health and quality of life.¹⁸

With regard to surgical treatment, which was largely represented in this study (71.6% of respondents), it seems fair to say that an individualized treatment, considering criteria such as tumor size, extent of exposure, location, patient age and associated diseases, is more appropriate to define the best surgical therapy to be used.²⁶

There are numerous symptoms presented by patients with cancer as well as the legacy left by the treatments to be undergone by committing your life in many ways. We found physical discomfort and functional characterized by pain, fatigue, difficulty in performing daily activities, nausea and

vomiting, changes and / or disturbances in sleep and eating habits, as well as disorders related to the urinary tract and / or bowel, resulting in changes in everyday life.¹³

We know that in underdeveloped countries, most tumors are diagnosed at an advanced stage of disease, where cure is not possible and the control of symptoms is the goal of care. Thus, pain relief is an essential goal of treatment of cancer pain, especially when the patient is at rest or performing atividades⁶. For this, the nurse must establish and implement the nursing consultation with the development of actions that provide improved quality of life of cancer patients.²⁷

The observance of pain in cancer patients by nurses is essential and of great importance. It should describe the pain, addressing aspects such as location, intensity, temporal variation and factors that contribute to its improvement or worsening, as this more complete view of cancer patients may provide the nurse and the health team as a whole the attainment of a better host this patient in the radiotherapy room, doing so with that treatment becomes less sacrificial to this individual who is often weakened because of multiple treatments, as well as by the diagnostic cancer.

CONCLUSION

It was observed that the pain threshold is a constant feature of life in patients with malignancy who undergo radiotherapy and other cancer treatments. It was noted that the pain complaints are manifested in varying degrees among patients, because there were those who had the same cancer in the same grade and even then, as described, frequency and / or intensity of pain differently. This proves the subjectivity of pain, which depends not only of physical but also psychological, cultural, economic and social.

Showed the prevalence of patients aged between 51 and 70 years. The pain was presented mostly located, the type sharp and with moderate intensity. Furthermore, the majority of patients interviewed were female, which somehow contributed to the high percentage of people with cancer and uterine cancer, when compared to other types of cancer appear.

The importance of this study is focused on the possibility of developing nurses and other health professionals reflections on assistance to patients with pain, to go beyond the scientific and technical procedures, involves perceptions, feelings and ethics. This study

will enable these health professionals a better understanding of the profile of cancer patients and their pain complaints, a time to practice that profession with quality you need to keep up to date and engaged with patients.

Thus, the nurse should be aware of the fact that often the painful complaint coming from the patient may be the result of the radiation itself, in this case, this professional must act informing the patient about the possible side effects of radiotherapy, or even communicating with the doctor radiotherapist on effects wizard exacerbated. Thus, measurement of quality of life of cancer patients, nowadays, is an important resource for evaluating the results of treatment in the patient's perspective. The monitoring of symptoms and side effects of therapy are important aspects that influence the quality of life of cancer patients.

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