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ORIGINAL ARTICLE

Pain in cancer patients under chemotherapy*

Dor em pacientes oncológicos sob tratamento quimioterápico

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SUMMARY

BACKGROUND AND OBJECTIVES: Advanced cancer usually causes pain, the intensity of which depends on site, level of evolution and type of treatment. This study aimed at evaluating pain in cancer patients who are or have been treated with chemotherapy in a hospital from the city of Imperatriz/MA.
METHOD: Data were collected through questionnaires with identification, pre-existing diseases, clinical manifestations, numerical pain evaluation scale and McGill questionnaire.
RESULTS: It has been observed that breast cancer (50%) and lung cancer (38.8%) were the most prevalent, respectively, among females and males. Pain was reported by 58.6% of patients during the interview or during the interview's week and most frequently reported sites were upper and lower limbs (18.5%) and chest (11.1%). Mean pain intensity evaluated by the numerical scale was 6.7 ± 1.83, which may be considered moderate pain and sensory pain by McGill questionnaire.
CONCLUSION: Moderate and sensory pain was present in most cancer patients and has led to loss of energy to perform daily activities.
Keywords: Cancer, Nursing team, Pain, Pain measurement.

RESUMO

JUSTIFICATIVA E OBJETIVOS: O câncer em estágio avançado geralmente causa dor cuja intensidade varia com a sua localização, o grau de evolução e o tipo de tratamento. O objetivo deste estudo foi avaliar a dor em pacientes oncológicos que estão ou estiveram em tratamento quimioterápico em hospital no município de Imperatriz-MA.
MÉTODO: Os dados foram coletados a partir de questionários contendo identificação, doenças pré-existentes, manifestações clínicas, a escala numérica de avaliação da dor e o questionário McGill.
RESULTADOS: Observou-se que o câncer de mama (50%) e o câncer de pulmão (38,8%) foram respectivamente os mais prevalentes no gênero feminino e masculino. A dor foi relatada por 58,6% dos pacientes no momento da entrevista ou na semana da mesma, sendo os locais mais relacionados: membros superiores e inferiores (18,5%) e tórax (11,1%). A intensidade média da dor avaliada pela escala numérica foi 6,7 ± 1,83, o que pode ser caracterizada dor de moderada intensidade e pelo questionário McGill, foi caracterizada como sensorial.
CONCLUSÃO: A dor de moderada intensidade e de caráter sensorial estava presente na maioria dos pacientes oncológicos levando-os a perda de energia para executar atividades diárias.
Descritores: Câncer, Dor, Enfermagem, Medição da Dor.

INTRODUCTION

Advanced cancer usually causes pain, defined according to the International Association for the Study of Pain (IASP) as a disagreeable sensory and emotional experience, associated to real or potential injury or described in terms of such injury[1].
Cancer pain may be controlled with drugs such as anti-inflammatory, opioids, antidepressants, anticonvulsants, benzodiazepines, steroids, betablockers and vasoconstrictors, among others. Pain suppression is not always

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successful, even with the use of drugs and complementary therapies. Pain is the final product of a complex process, which may involve emotional aspects, spiritual, cognitive and sensory components. Cancer pain has both characteristics of acute and chronic pain. As acute pain, cancer pain is directly associated to tissue injury. When cancer pain persists or worsens, it may be a sign of disease progression and creates a sensation of hopelessness because patients fear that it is not worth continuing this way, or patients loose the sense of life if they have to live with pain[2], being necessary a deeper understanding of cancer pain treatment.

So, this study aimed at evaluating cancer pain intensity through standardized scales validated for the Portuguese language.

METHOD

After the approval of the Teaching Hospital Ethics Committee, Federal University of Maranhão (Opinion 061/11), this quantitative, descriptive and transversal study was carried out at the Oncology Unit of Hospital São Rafael, in the city of Imperatriz, MA, from February to April 2011. We interviewed by convenience sample 75 patients, excluding those never submitted to chemotherapy and those less than 18 years of age.

Data were collected from questionnaires with identification, pre-existing diseases, clinical manifestations, pain numerical evaluation scale and McGill questionnaire with internationally accepted standard and adapted to the Portuguese language.

McGill questionnaire is a tool providing quantitative measurements and allowing the communication of pain sensory, affective and evaluative qualities. In has four categories divided in 20 subcategories which describe different pain qualities. Respondents may choose the word which best describes different pain qualities[3]. From all categories, 10 belong to sensory (temporal, special, pressure in a point, incision, compression, traction, heat, liveliness, deafness and general sensory); 5 to affective (tiredness, autonomic, fear, punishment and displeasure); 1 subjective and 4 mixed (pain/movement, sensory, cold and emotional). Each category has between 2 and 6 words which are in increasing order of intensity. The word representing the lowest pain intensity is 1 and so on[4].

In the numerical pain evaluation scale, patients estimate their pain in a scale from zero to 10 where zero is “no pain”, 5 is “moderate pain” and 10 is “the worst imaginable pain”.

Data were statistically treated with the program “Statistic for Windows” version 7.

RESULTS

From 75 respondents, 74.7% were females and 25.3% were males. Mean group age was 54.98 ± 15.88 years, being 54.64 ± 14.95 years for females and 56 ± 18.78 years for males, being 62.6% Caucasians, 28.0% Mulattos and 9.4% African-Brazilians. Predominant family income was 1 minimum wage (36%) and 2 minimum wages (26.6%). As to level of education, 53.3% had just basic education and only 4% university level.

Predominant primary cancer in females was breast cancer (50%), followed by bowel and ovaries (12.5% each). Males had predominance of lung cancer (36.8%) followed by prostate cancer (15.7%) (Table 1).

As to pre-existing diseases, 70.6% of patients reported systemic hypertension (SH), lung and liver diseases. As to clinical manifestations caused by treatment, most prevalent were metabolic (89.3%), gastrointestinal (74.6%) and psychological (61.7%). Pain was reported by 58.6% of patients during the interview or in the week of the interview, being more frequent in upper and lower limbs (18.5%) and chest (11.1%). Mean pain intensity evaluated by the numerical scale was 6.7± 1.83, which may be considered moderate pain.

Another studied pain variable was McGill questionnaire, with differences between words chosen by males and females. Most mentioned words are shown in table 2. The words “flickering”, “beating”, “cramping”, “scalding”, “hurting”, “rasping”, “vicious”, “drawing”, “freezing” and “nauseating” were not chosen by males, and females have not mentioned the words “flickering”, “pounding”, “shooting”, “stabbing”, “cutting”, “gnawing”, “itchy”, “aching”, “rasping”, “vicious”, “miserable” and “torturing”.

A study has shown that affective components chosen by patients (26.4%) have overcome the initial inventory ratio (17.9%). In our study, the largest number of keywords has determined the sensory component, but keywords presented with higher intensity were from the affective component (Table 3).

Still with regard to pain, it was observed that there are different actions taken by patients in the attempt to improve. From them, 46.42% have stated lying down, be reserved or try to relax to relieve pain, 16% use gel or massage and 8.92% prey for god to take the pain away. From 35 patients reporting pain, only 22 take medication according to medical prescription and 13

Table 1 – Origin of primary cancer

	Females (n)	%	Males (n)	%
Breast	28	50.00	-	-
Ovary	7	12.50	-	-
Hodgkin's lymphoma	2	3.57	2	10.53
Stomach	1	1.79	-	-
Uterus	4	7.14	-	-
Skin	1	1.79	1	5.26
Cervix	4	7.14	-	-
Bowel	7	12.50	2	10.52
Acute lymphoblastic leukemia	1	1.79	-	-
Acute myeloid leukemia	1	1.79	-	-
Throat	-	-	1	5.26
Lung	-	-	7	36.84
Multiple myeloma	-	-	1	5.26
Prostate	-	-	3	15.79
Bladder	-	-	1	5.26
Sarcoma	-	-	1	5.26
Total	56	100.00	19	100.00

Tabela 2 – Palavras mais escolhidas por pacientes oncológicos avaliados por meio da versão brasileira do questionário McGill

	Males (n = 11)	(%)	Females (n = 15)	(%)	Total	(%)
Throbbing	4	36.36	8	53.33	12	46.15
Jumping	6	54.55	11	73.33	17	65.38
Pricking	6	54.55	6	40	12	46.15
Sharp	7	63.64	12	80	19	73.08
Pinching	4	36.36	4	26.67	8	30.77
Hot	5	45.45	4	26.66	9	34.62
Stinging	5	45.45	3	20	8	30.77
Sore	4	36.36	5	33.33	9	34.62
Tender	7	63.64	9	60	16	61.54
Tiring	9	81.82	10	66.67	19	73.07
Sickening	8	72.73	12	80	20	76.92
Fearful	5	45.45	6	40	11	42.31
Grueling	6	54.55	5	33.33	11	42.31
Wretched	7	63.64	7	46.67	14	53.85
Cool	3	27.27	2	13.33	5	19.23
Nagging	4	36.36	6	40	10	38.46
Tugging	3	27.27	6	40	9	34.61
Burning	3	27.27	5	33.33	8	30.76
Smarting	2	18.18	6	40	8	30.76
Troublesome	3	27.27	6	40	9	34.61
Piercing	4	36.36	5	33.33	9	34.61
Tearing	3	27.27	4	26.66	7	26.92

Table 3 – Total pain evaluation index

Categories (maximum score)	Males (n = 11)	Females (n = 15)	Total
Sensory (31)	21.45 ± 4.10	16.53 ± 5.70	18.61± 5.57
Affective (13)	8.27 ± 2.68	6.60 ± 2.35	7.30 ± 2.58
Evaluative (5)	2.81 ± 1.66	2.33 ± 1.44	2.53 ± 1.52
Miscellaneous (11)	8 ± 2.72	6.93 ± 2.73	7.38 ± 2.72
Total (60)	40.54 ± 7.40	32.40 ± 7.40	35.84 ± 9.28

reported that sometimes they have not taken drugs due to lack of money.

From these patients, 86.6% followed treatment orientations, the others used unconventional alternatives such as baked snake powder and *mastruz* with aloe vera to decrease pain. The use was based on the belief that these are natural drugs. When asked about prescribed medication, 46.6% of patients reporting pain used analgesics, being major drugs used morphine (8.0%), tramadol (8.0%), codeine (8.0%) and non-steroid anti-inflammatory drugs (NSAIDS).

DISCUSSION

The ratio of almost 3 female respondents for each male shows that males do not look as much for health services, confirming the fact that care is not seen as a male practice[6]. Mean age is in agreement with American Cancer Society data where 77% of all cancers are diagnosed at 55 years of age or more and that aging per se is a risk factor for the incidence of neoplasias because it makes individuals more susceptible to malignant transformations[7]. Elderly people cells exposed for a longer time to different cancer risk factors, including the presence of chronic degenerative diseases, partially explains why cancer is more frequent in such individuals[8].

With regard to the type of cancer, breast cancer is the second more frequent type in the world and the most common among females. Every year, 22% of new cancer cases in females are breast cancer[9].

Risk factors related to females' reproductive life, such as early menarche, nulliparity, first term gestation above 30 years of age, oral contraceptives, late menopause and hormone replacement are well established with regard to breast cancer development and incidence rates rapidly increase until 50 years of age; then, this increase is slower[9].

Most common cancer type among males was lung cancer, which is decreasing among males in many places such as North America, Nordic countries, Europe and Oceania, while rates among females have rapidly increased in almost all places. The second most common was prostate cancer, with figures similar to those found by other studies[9,10].

As to clinical manifestations caused by treatment, metabolic manifestations were weight loss or gain, and gastrointestinal manifestations were diarrhea, vomiting, anorexia and nausea, which is in line with other studies and shows that these are the most evident side effects of chemotherapy[11]. Most prevalent psychological manifestations were insomnia and anxiety, probably due to the disease and its possible outcome, which may be healing with or without sequelae or death. Similar results were found by other studies where most frequent symptoms were delirium and sleep changes[12], and pain was reported by 58.6% of patients.

Pain may be acute or chronic, visceral and somatic, in addition to neuropathic and psychogenic pain common in cancer patients because it may be related to physical injuries[13]. The sensation of constant pain has as consequence the loss of energy and friends, unrelieved pain generates anxiety and depressive symptoms worsening such losses and impairing cognitive functions, daily and social activities and sleep, which is interrupted by pain in 58% of patients[14].

In fact, several cancer features and its treatment may affect mental and physical balance, such as daily activities limitation, chemotherapy side effects and loss of self-esteem. Cancer is a catastrophic event in their lives, as from which they will have to cope with anxiety associated to a disease which may be fatal and to the adverse side effects of its treatment. Many patients also end up experiencing changes in their jobs status, in social relations, in their physical capacity and in their role within the family[15].

Although feeling cancer pain, patients submitted to chemotherapy may also present with paresthesia, hyporeflexia, sensory or motor loss and neurovegetative dysfunction.

It is questionable whether the higher number of affective keywords would be characteristic of chronic pain patients in general, or whether this finding has some specificity with regard to neoplastic pain, because the affective component was significantly higher in painful cancer patients as compared to chronic pain of equal intensity however not neoplastic[7,16].

It is known that unrelieved pain generates anxiety and depressive symptoms, worsening such losses and impairing cognitive functions, daily and social activities and sleep[14].

Pain intrigues many professionals and encourages the search for new answers for evaluation and control. The involvement of the nursing team in chronic pain research and therapy is highly significant for the development of knowledge and innovative strategies for patients care. The way health professionals act and communicate with each other and how they cope with patients' pain are aspects influenced by their definitions[17].

So, nurses shall play their role in controlling pain, shall have responsibility in the diagnostic evaluation,

in the intervention and treatment monitoring through communication with patients. To consider this set of factors which interact in cancer patients chronic pain processes is an important step to interpret nursing care for cancer patients.

CONCLUSION

Moderate and sensory pain is present in most cancer patients impairing their energy to perform daily activities.

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