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Characterization of pain in women after breast cancer treatment

Caracterização da dor em mulheres após tratamento do câncer de mama

Caracterización del dolor en mujeres después del tratamiento del cáncer de mama

Vânia Tie Koga Ferreira[1]
Maria Antonieta Spinoso Prado[1]
Marislei Sanches Panobianco[1]
Thais de Oliveira Gozzo[1]
Ana Maria de Almeida[1]

1. Universidade de São Paulo.
Ribeirão Preto - SP, Brazil.

Abstract

The aim was to characterize and locate the pain in women who received breast cancer treatment. The study has an exploratory-descriptive character with a quantitative approach, undertaken through measures of central tendency and percentages. The research was undertaken in the Center for Teaching, Research and Assistance in the Rehabilitation of Mastectomized Women, with 30 women. Data was collected in February - August 2008, using an instrument containing variables able to characterize and locate the pain. The data was treated using means, medians, mode, standard deviation and percentages. It stood out that 56.7% of the women mentioned that the pain is daily, 46.7% of the women mention that the pain began after the breast surgery, and that for 40% the pain is constant. Knowledge, recognition and management of the symptom allow alternative therapeutic options for pain relief, minimizing physical and emotional effects which may be caused in the lives of women who receive breast cancer treatment.

Keywords: Breast neoplasms; Pain; Post-operative complications; Mastectomy.

Resumo

Este estudo pretendeu caracterizar e localizar a dor nas mulheres submetidas ao tratamento por câncer de mama. Estudo de caráter exploratório, descritivo, com abordagem quantitativa, pelas medidas de tendência central e percentual. Pesquisa desenvolvida no Núcleo de Ensino e Pesquisa e Assistência na Reabilitação de Mastectomizadas com 30 mulheres. Os dados foram coletados no período de fevereiro a agosto de 2008, por meio de instrumento contendo variáveis capazes de caracterizar e localizar a dor, e foram tratados por meio de média, mediana, moda e desvio-padrão e percentual. Destacou-se que 56,7% mulheres referiram que a dor é diária, 46,7% mulheres referiram que a dor teve início após a cirurgia da mama, e para 40% a dor é constante. Conhecimento, reconhecimento e manejo do sintoma permitem ofertas terapêuticas alternativas para o alívio da dor, minimizando efeitos físicos e emocionais que podem ser causados na vida de mulheres submetidas ao tratamento por câncer de mama.

Palavras-chave: Neoplasias mamárias; Dor; Complicações pós-operatórias; Mastectomia.

Resumen

Caracterizar y localizar el dolor en mujeres sometidas al tratamiento de cáncer de mama. Estudio exploratorio y descriptivo, con abordaje cuantitativo, con medidas de tendencia central y porcentajes. La investigación fue desarrollada con 30 mujeres en el Núcleo de Enseñanza, Investigación y Asistencia en la Rehabilitación de Mastectomizadas. Los datos fueron colectados entre febrero y agosto de 2008 y recopilados por medio de instrumento que contiene variables capaces de caracterizar el dolor. El 56,7% de las mujeres destacaron el dolor diario; el 46,7%, informaron que el dolor tuvo inicio después de la cirugía y para 40% de las enfermas, el dolor es constante. El conocimiento, el reconocimiento y la gestión de las ofertas de los síntomas permiten terapias alternativas para disminuir el dolor, reducir al mínimo los efectos físicos y emocionales que se pueden causar en las vidas de las mujeres que reciben tratamiento para el cáncer de mama.

Palabras-clave: Neoplasias de la Mama; Dolor; Complicaciones postoperatorias; Mastectomía.

Corresponding Author:
Vânia Tie Koga Ferreira.
E-mail: vaniatie@hotmail.com

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INTRODUCTION

The Committee on Taxonomy of the International Association for the Study of Pain(IASP) conceptualizes pain as an unpleasant sensory and emotional experience, associated with real or potential tissue lesions or described in its terms[1]. Pain is, essentially, a subjective, multidimensional and complex symptom, resulting from the interaction between cognitive, sensory,emotional and cultural aspects, as well as from previous experiences[2].

Pain after treatment for breast cancer is common and may have various causes. Generally, the women who develop this symptom present functional reduction and important emotional changes[3].

If the women are not informed about this morbidity prior to the treatment, the symptom may be interpreted as something wrong in relation to the disease and can cause social and emotional complications[4].

As the symptom, when present, can be a limiting factor for undertaking activities of daily living and leisure, it can cause changes in body image and can reduce sexual activity. The changes in women with pain, after the treatment, can result in significant change in the quality of life, compared to women who do not present this symptom[3]. Information on this, provided to health professionals, can contribute by allowing a better understanding of the pain and by alleviating times of distress and stress[4].

The pain frequently occurs in the regions which were injured (axilla, the medial region of the arm and/or anterior wall of the thorax of the side affected) by the local treatment of the breast cancer. The symptoms include, burning, needle pain, feelings similar to minor electric shocks, and tightness in the axillary, medial and upper regions of the arm and/or in the thorax. It is also described as sudden and intense and is associated with chronic hyperesthesia, and can begin immediately after the surgery, six months or even a year following the treatment. It is a symptom which persists with rest and increases during daily activities, responding very poorly to drugs[4,5].

Because the women often believe that the presence of pain after the treatment is to be expected, they experience the symptom without often reporting it to the team. This being so, the team must inform the woman as to the occurrence of pain and when she mentions this complaint during consultations, she must be listened to and valued, this being an aspect which is generally neglected, since - according to Andersen and Kehlet (2011)[6] - there is a significant disagreement between the intensity of the pain understood by the health professional and that experienced by the patient. This disagreement is often one of the causes of the inadequate control of the pain[6].

Thus, this study's objective was to characterize, locate and identify the resources used for pain relief in the women who received treatment for breast cancer.

METHODOLOGY

This is a prospective, cross-sectional study with a descriptive-exploratory character. The research was undertaken in the Center for Teaching, Research and Assistance in Rehabilitation for Mastectomized Women, situated in the Ribeirão Preto School of Nursing, of the University of São Paulo (EERP/USP).

The data was collected in the period February - August 2008, following the project's approval by the EERP/USP Research Ethics Committee, under protocol nº 0802/2007, with participation upon signing of the Terms of Free and Informed Consent.

The research sample was composed of 30 women, who met the inclusion criteria of: having received surgery to treat breast cancer, having concluded the treatment at least one year previously, and complaining of pain related to the treatment for breast cancer.

The women were interviewed using an instrument containing variables for socio-demographic categorization and variables for describing the treatment and characterizing and locating the pain. Prior to its use, the instrument developed was assessed by five professionals from the area for evaluation and adaptation. The interview was arranged ahead of time and was held at a time convenient to the woman.

So as permit a better understanding of the pain experienced by mastectomized women, variables were emphasized which related to the start of this symptom, its frequency, duration, predominance, movements which contribute to its increasing, and forms of pain relief. The location was evaluated through a schematic representation of the human body, divided into front, dorsal, left and right, and with subdivisions numbered from 1 to 45[7]. Each woman was advised to mark the place which corresponded to the manifestation of the pain.

The data was stored using the Excel® application from Microsoft Office®, using double keying to benefit the reliability of the data-base. The statistical program used was the Statistical Package for Social Sciences (SPSS®), version 10.0, for presentation and organization of the data and characterization of the sample, and data on the breast cancer and the pain. It treated the data with the measures of central tendency, arithmetic mean, standard deviation (SD), median, and minimum and maximum values. For the tabulation of the data relating to the places where pain was identified using the body diagram, descriptive and percentage analysis was used.

RESULTS AND DISCUSSION

Among the 30 women who participated in the study, age varied from 32 to 79 years old, with a mean of 55.7 years old (SD = 11.46), median of 53 years old and the most frequent age being 43 years old; 73.3% were married; 63.3% were housewives; 70% were Roman Catholic, and their education varied from 0 to 17 years, with a mean of 7.13 years of study (SD = 4.84) and a median of six years, the most frequent length of schooling being four years.

In relation to the surgical treatment, the mean time which had passed since the surgery at the time of the study was four years (SD = 4.31) and the median was two years, two years also being the most frequent period of time since the surgery. In relation to the side, it was observed that the right breast was affected

in 50% of the women, and the left in 46.7%. When asked about the adjuvant treatment, 80% had undertaken chemotherapy and 76.7% had undertaken radiotherapy. The majority of the women in this study - 76.7% had not undertaken breast reconstruction surgery, as shown in Table 1.

Table 1. Distribution of the women interviewed, by laterality and type of surgery, undertaking of axillary dissection, lymph node dissection, treatment with radiotherapy and chemotherapy, and breast reconstruction (Ribeirão Preto - SP, 2008)

Variables	Categories	Nº	%
Laterality of the surgery	Right	15	50.0
	Left	14	46.7
	Bilateral	1	3.3
Type of surgery	Total mastectomy	15	50.0
	Quadrantectomy	15	50.0
Axillary dissection	Yes	29	96.7
	No	1	3.3
Sentinel lymph node dissection	Yes	8	26.7
	No	22	73.3
Radiotherapy	Yes	23	76.7
	No	7	23.3
Chemotherapy	Yes	24	80.0
	No	6	20.0
Breast reconstruction	Yes	7	23.3
	No	23	76.7
Total		30	100.0

This occurrence is in agreement with other studies directly relating the appearance of pain with the treatment. Because of the surgical technique, some structures such as the intercostobrachial nerve and the serratus anterior muscle can be injured, and the association of the radiotherapy with the surgery can lead to the occurrence of adhered scar tissue with fibrosis; for these reasons, these modes of treatment have been considered to be predisposing factors for the development of the pain[4,8-10].

Fabro et al. (2012) monitored 205 women over a six-month period and identified that six months post-surgery, the incidence of chronic pain was 108.4 (52.9%) in the 205 women evaluated. The chronic pain which appears after surgery is explained as the result of the injury to structures such as muscles and ligaments -and as neuropathic, when it affects nerves or is a dysfunction of the nervous system[6,8].

Therefore, when one evaluates the impact that these operations can have on the patients' quality of life, it is evidenced that the mastectomy can result in a lower score for quality of life, as the pain which can be caused by the surgery can lead to functional compromise[11].

In relation to the region, the women researched were requested to mark on the body diagram the places where the pain is most recurrent. Based on this identification, the most-frequent places mentioned were the right and left hemi-thorax (43.3 and 40% respectively) followed by the arm and forearm (66.7 and 56.7% respectively).

It was possible to ascertain that for 46.7% of the women, the pain began after the surgery for breast cancer, and that for 23.3% of the women, it began after the radiotherapy, it standing out that for 56.7% the pain is daily and that for 40% it is constant. It is observed that there is no predominance of a particular time for the occurrence of the pain, but that for those who present the more constant pattern (40%) the pain occurs more frequently in the afternoon and at night, as shown in Table 2.

Table 2. Distribution of the women interviewed, by the beginning of the pain, its frequency, duration and predominance (Ribeirão Preto - SP, 2008)

Variables	Categories	Nº	%
Start of pain	Prior to the breast surgery	7	23.3
	After the breast surgery	14	46.7
	After the radiotherapy	7	23.3
	After the breast reconstruction	2	6.7
Frequency of pain	Daily	17	56.7
	Every 2 - 3 days	5	16.7
	Weekly	3	10.0
	Other	5	16.7
Duration of pain	Constant	12	40.0
	< 1 hour	8	26.7
	Between 1-3 hours	4	13.3
	Between 3-5 hours	2	6.7
	> 6 hours	4	13.3
Predominance of the pain	Morning	2	6.7
	Afternoon	6	20.0
	Night	9	30.0
	None	13	43.3
Total		30	100.0

When Fabro et al. (2012)[3] sought the characteristics of the pain, they identified that the women who undertake treatment for breast cancer report the pain as intermittent and constant. The same was observed by Fecho et al (2009)[9]. The findings of Gartner et al (2012)[12] are in agreement with those of the present study.

In relation to the women's perception of the movement related to the increase in the intensity of the pain, the movements identified as being the most related were those of pushing and reaching, with frequencies of 63.3% and 60.0%, respectively.

The movement of pulling, for 50% of them, was also related to the increase in the pain's intensity. Considering that the surgical and adjuvant treatments can result in morbidities of the upper limbs and that these complications can lead to functional impairment, principally, of the upper limb on the same side as the tumor[3,5,10], it was attempted to relate the perception of the pain to the movements made by the upper limb. The undertaking of the movements is described by Nesvold et al. (2008) as one of the factors which can change or even worsen the women's perception of pain after the treatment for breast cancer. These movements are described as abrupt and which stretch the upper limb[10,12,14]. The neuropathic pain is the factor responsible for increasing the complaint of pain when undertaking these movements, as it can lead to the development of the mechanical situation of restriction of shoulder movement[3,4,10,12-14].

As the women in the sample studied were periodically undertaking exercises for rehabilitation of the range of movement of the upper limb, they were asked whether the pain increased when undertaking these exercises and 56.7% stated that it did not, while 23.3% reported that it sometimes increased and 20% said that the pain always increased with physical exercise. According to Hwang et al. (2008)[15], the practice of moderate physical exercise under supervision can reduce the complications which occur during the treatment, including pain, when compared to a person who does not undertake exercises for rehabilitation.

As the women in this study attend a rehabilitation service in which the practice of exercises is undertaken for one hour, three times a week, it is believed that this may be the reason why the women who made up this sample do not relate the pain to exercise. A study undertaken in the same service demonstrated that the women identified more benefits than barriers in relation to the practice of physical activity. This result shows that the benefits perceived are associated as much with the mind as the body, as, for them, practising physical activity brings important contributions to their health and to the prevention of illnesses, as well as assisting in the return of the function of the arms and shoulders on the same side as the surgery[16]. Chen et al. (2011)[16] and Gartner et al. (2009)[12] differ from this result, presenting important rates of relation between the pain and the practising of physical activity/exercise. It stands out, however, that the studies were carried out with women who did not attend rehabilitation services, which may suggest the practice of exercises at home in an inadequate way, that is, without the training of a trained professional, allowing the occurrence of the pain[12,17].

In the period in which this study was undertaken, the women used some resources for minimizing the pain, such as: massage, relaxation, and the use of medications. It was observed that the practice of massage was the resource used by 66.7% of the women and that relaxation was used by 50%, as shown by Table 3. However, the use of resources in the attempt to seek relief from the pain does not always give the expected result, as is the case with the use of analgesics[3]. Knowledge about the pain relief measures is extremely important for the teams who work with these women[4,18]. Appropriate pain management must be implemented, avoiding self-treatment, since this can further compromise the symptom of pain in women with breast cancer[11,13].

Table 3. Distribution of the women interviewed, by pain relief with medication, relaxation, massage, exercises, deep breathing, acupuncture, stretching, and transcutaneous electrical nerve stimulation (TENS) (Ribeirão Preto - SP, 2008)

Variables	Categories	Nº	%
Use of medications	Yes	14	46.7
	No	16	53.3
Practice of relaxation	Yes	15	50.0
	No	15	50.0
Practice of massage	Yes	20	66.7
	No	10	33.3
Practice of exercises	Yes	11	36.7
	No	19	63.3
Deep breathing technique	Yes	11	36.7
	No	19	63.3
Pain relief with stretching	Yes	10	33.3
	No	20	66.7
Use of the TENS	Yes	7	23.3
	No	23	76.7
Total		30	100.0

CONCLUSION

Pain is a symptom which affects the women who participated in the research, who had received treatment for breast cancer, it being the case that the pain frequently began after the surgery, but which could also have the radiotherapy as its starting point. It is located in the region on the same side as the surgery, being experienced when making movements such as pushing or reaching, happening every day and being constant, but without a predominant period of the day to appear. As a limitation, the study had the size of its sample.

The results demonstrate the importance of the evaluation of the pain in this population, principally prior to the surgery, so that the musculo-skeletal/articular causes and neuropathies may be discarded. One limitation of the present study was that it was not possible to evaluate the patients prior to the surgical intervention. One cannot assert, therefore, that these findings result from the surgical procedure, given that the majority of the women only seek this service after the surgery and when they are referred by the medical team.

It is of great relevance that pain should be valued and identified by the health professionals who monitor these women, informing the women about the pain and evaluating it, as some

women believe that the presence of pain is normal even after finishing their treatment.

Assessing it as early as possible and in the correct way are the health professionals' main tools for offering the adequate management of pain and for achieving the benefits expected from the treatment. Thus, by knowing how to recognize and treat the symptom, it is possible to offer therapeutic alternatives for its relief, minimizing the physical and emotional effects which pain can cause in the lives of these women.

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