ORIGINAL ARTICLE

Quality of life of women with breast cancer in Pinar del Río

Calidad de vida de mujeres con cáncer de mama en Pinar del Río

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ABSTRACT

Introduction: breast cancer in Cuba constitutes the second disease of this type with the highest incidence and mortality, affecting the quality of life of those who suffer it.
Objective: to evaluate the quality of life of women with clinical and anatomopathological diagnosis of breast cancer in Pinar del Río municipality in 2017, five years after diagnosis and treatment.
Methods: transversal and analytical research carried out on women from Pinar del Río municipality diagnosed with breast cancer, years 2011 and 2012, stages 0 to II, attended at the Provincial Center of attention to the oncologic patient, III Congress of Pinar del Río. The universe was formed by 135 and the sample by 78, selected through a non-probabilistic intentional sampling. To obtain the information, the EORTC QLQ-C30 questionnaire (Version 3) of the European Organization for Research and Treatment of Cancer Quality of Life was applied.
Results: women predominantly evaluated their cognitive function (87,18 %), activities of daily living (79,49 %) and physical function (62,82 %) as good; a statistically significant association of these variables with the stage at diagnosis was demonstrated. None evaluated their quality of life related to symptoms well.
Conclusions: most women with breast cancer five years after their diagnosis and treatment assess quality of life related to regular symptoms. Diagnosis in advanced stages of the disease reduces the quality of life of women.

Keywords: Noncommunicable Diseases; Breast Neoplasms; Quality of Life.

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RESUMEN

Introducción: el cáncer de mama en Cuba constituye la segunda enfermedad de este tipo con mayor incidencia y mortalidad, afectando la calidad de vida de quienes lo padecen.
Objetivo: evaluar la calidad de vida de mujeres con diagnóstico clínico y anátomo patológico de cáncer de mama en el municipio Pinar del Río en el año 2017, cinco años después del diagnóstico y tratamiento.
Métodos: investigación transversal y analítica realizada a mujeres del municipio Pinar del Río diagnosticadas con cáncer de mama, años 2011 y 2012, estadíos 0 al II, atendidas en el Centro Provincial de atención al paciente oncológico, III Congreso de Pinar del Río. El universo estuvo formado por 135 y la muestra por 78, seleccionadas a través de un muestreo intencional no probabilístico. Para la obtención de la información se aplicó el cuestionario EORTC QLQ-C30 (Versión 3) de la organización europea para la investigación y el tratamiento de la calidad de vida del cáncer.
Resultados: predominaron mujeres que evalúan de bien su función cognitiva (87,18 %), las actividades cotidianas (79,49 %), función física (62,82 %), se demostró asociación estadística significativa de estas variables con la etapa al diagnóstico. Ninguna evalúa su calidad de vida relacionada con los síntomas de bien.
Conclusiones: la mayoría de las mujeres con cáncer de mama después de cinco años de su diagnóstico y tratamiento evalúan calidad de vida relacionada con los síntomas de regular. El diagnóstico en etapas avanzadas de la enfermedad, reduce la calidad de vida de las mujeres.

Palabras clave: Enfermedades Crónicas no Transmisibles; Cáncer de Mama; Calidad de Vida.

INTRODUCTION

Breast cancer is a heterogeneous disease caused by the progressive accumulation of genetic aberrations, there are multiple factors that elevate the risk of developing it but 50 % of the cases are not identified.[1] It is the accelerated, disordered and uncontrolled proliferation of cells with mutated genes, which normally act by suppressing or stimulating the continuity of the cell cycle belonging to different tissues of a mammary gland.[2]

Seven of the 10 leading causes of death are now noncommunicable diseases, according to WHO's World Health Statistics 2019, an increase from 2000, when noncommunicable diseases were four of the 10 leading causes of death. The new data cover 2000 to 2019, inclusive.[3]

Health-related quality of life (HRQoL) is defined as the measure of the changes in health that people experience when they suffer from any disease, or when they undergo certain treatment. Incorporating the measurement of HRQoL at the individual level improves the comprehensive assessment of people's health, evaluates the effectiveness of some interventions, and guides the development of new therapies or changes the focus of health care.[4]

The location of metastatic breast cancer is well documented in the literature and is most frequently found in the bone, liver, lung and brain. However, there are other less frequent locations such as the peritoneum (8-10 %), although necropsy series have found rates of up to 35%, which indicates the great difficulty involved in the diagnosis of this pathology. However, several studies indicate that the pattern of metastasis of breast cancer presents significant differences according to its histological type, whether ductal or lobular. Thus, while infiltrating ductal carcinomas more frequently metastasize to lymph nodes, lung and pleura, lobular

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carcinomas metastasize to the gastrointestinal tract, genitourinary tract, liver, bone marrow and the peritoneum and retroperitoneum.[5]

It is currently estimated that out of nine million new cases of cancer, four million are in developed countries and five million in developing countries. According to the forecasts of the World Cancer Report, it is predicted that in 2030 more than 1,6 million people will die from this disease worldwide.[6]

In Cuba, cancer has been among the first two causes of death since the 1970s; about 24 000 Cubans die each year from this cause. In 2018, it was the leading cause of death in 8 provinces of the country and has remained the leading cause of years of life potentially lost since 2000. It is the disease that produces more deaths between one and 64 years and from 65 years of age, it is the second cause of death, after heart disease.[7] At the end of 2020, a total of 1,714 women died of malignant breast tumors in Cuba, representing a risk of 30,4 per 100,000 inhabitants of this sex. Referring to morbidity, breast cancer occupied in 2017 the second place in women between 30 to 44 years of age with a gross rate of 33,1 per 100 000 inhabitants followed by cervical cancer, similarly it occupied the second place between the ages of 45 to 59 years with 1392 cases and an incidence of 100,1 per 100 000 inhabitants of the female sex.[8]

With the objective of evaluating the quality of life of women with clinical and anatomo pathological diagnosis of breast cancer in the municipality Pinar del Río year 2017, five years after diagnosis and treatment, the following research is carried out.

METHODS

A cross-sectional, analytical research was conducted on women with clinical and anatomo-pathological diagnosis of breast cancer in the year 2017, five years after diagnosis. The universe was made up of 135 women, who were attended at the Provincial Center for Oncological Patient Care III Congress of Pinar del Río in the years 2011 and 2012, the sample was selected through a purposive non-probabilistic sampling considering all patients who at the time of diagnosis of their disease were in stages 0-I-II and who five years later were alive and gave their consent to participate in the research. The study consisted of 78 patients.

The variables studied were age, educational level, marital status, occupation, stage of breast cancer at the time of diagnosis and treatment, in addition to variables to explore the area of functioning (physical function, daily activities, emotional role, cognitive function and social function) and area of symptoms, which included symptoms and global state of health.

To obtain the information, the cancer registry of the oncology hospital was reviewed, from which the name and address of the patients with breast cancer who met the conditions that would include them in the research were extracted, a home visit was made where, after informed consent, the EORTC QLQ-C30 (Version 3) questionnaire (European Organization for Research and Treatment of Cancer Quality of Life) was applied, composed of 30 items, which is structured in five functional scales: physical, emotional, cognitive, social functioning and activities of daily living; three symptom scales: fatigue, pain, nausea and vomiting; a global health status scale; and six independent items (dyspnea, insomnia, anorexia, constipation, diarrhea, economic impact), in addition to a semi-structured interview.

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The evaluation of the EORTC QLQ-C30 questionnaire was performed as follows: all items were rated between one and four (1: not at all, 2: a little, 3: quite a lot and 4: a lot), except in the global health scale where the items were rated between one and seven (one: very bad and seven: excellent). The scores of the functioning scales and the symptom scales were from zero to 100, where the higher score represented a better level of functioning, the analysis and processing of the data was performed by means of the statistical program SPSS Version 11,5, making use of summary measures for qualitative variables (absolute and percentage frequencies) and for quantitative variables (average), as well as inferential statistics for nonparametric tests (Spearman's coefficient), which allowed analyzing the relationship between the independent variables age, occupation, educational level, marital status, stage at diagnosis and treatment, with the dependent variables related to the area of functioning and area of symptoms. For the representation of the information, the statistical significance of the relationship between the variables conceived in this research was taken into account for a confidence level of 95 %.

Written informed consent was requested from the patients to be investigated, and the nature of the study and its purely investigative and non-invasive nature were explained to them.

RESULTS

The quality of life of the breast cancer patients was represented in Table 1.

Table 1. Evaluation of quality of life in breast cancer patients according to age, occupation, educational level, marital status, stage at diagnosis and treatment received. Pinar del Río 2017.

Quality of life	Age	Marital status	Educational level	Occupation	Stage at diagnosis	Treatment
Physical function	C=0,179 p=0,117	C=0,137 p=0,233	C=-0,105 p=0,362	C=-0,141 p=0,218	C=0,409** p=0,000	C=-0,035 p=0,762
Emotional role	C=-0,008 p=0,948	C=0,017 p=0,884	C=-0,149 p=0,193	C=-0,183 p=0,108	C=0,343** p=0,002	C=-0,118 p=0,304
Cognitive function	C=-0,221 p=0,052	C= 0,030 p=0,794	C= -0,019 p=0,867	C= -0,040 p=0,730	C=-0,253* p=0,025	C=-0,042 p=0,714
Social function	C=0,193 p=0,090	C=0,077 p=0,505	C=-0,176 p=0,124	C=-0,234* p=0,039	C=-0,146 p=0,202	C=-0,100 p=0,381
Daily activities	C=0,081 p=0,478	C=0,011 p=0,926	C=0,047 p=0,686	C=0,083 p=0,468	C=-0,247* p=0,029	C=-0,043 p=0,710
Symptoms	C=-0,057 p=0,620	C=0,001 p=0,994	C=0,015 p=0,899	C=-0,092 p=0,425	C=-0,121 p=0,291	C=-0,027 p=0,814
Global health status	C=0,143 p=0,212	C=0,100 p=0,385	C=-0,122 p=0,288	C=-0,083 p=0,467	C=-0,493** p=0,000	C=-0,156 p=0,173

*The correlation is significant at the 0.05 error significance level.
**The correlation is significant at the 0.01 error significance level.

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Regarding the quality of life related to physical function, the physical function evaluated as good (62,82 %) predominated, according to the stage at diagnosis, an inverse correlation was demonstrated by means of Spearman's coefficient, strong and statistically significant, p≤0,01, as the stage at diagnosis increases, the physical function of the patients is reduced.

The regular emotional role represented 58,97 %, concerning the stage at diagnosis showed an inverse correlation, strong and statistically significant, p≤0,01, as the stage at diagnosis increases, the quality of life related to the emotional sphere is reduced.

87,18 % of women with breast cancer evaluated cognitive function of well, the relationship between quality of life determined by cognitive function and stage at diagnosis demonstrated by Spearman's coefficient an inverse correlation between both variables and statistically significant p≤0,05, as the stage at diagnosis increases, cognitive function is reduced.

Regular social function stood out with 51,28 %. The relationship between social function and stage at diagnosis measured by Spearman's coefficient proved an inverse relationship, as stage at diagnosis increases, social function decreases, but this is not statistically significant p ≥0,05.

88,46 % evaluated the quality of life related to symptoms as fair; no patients were identified who evaluated it as good. The Spearman correlation coefficient found an inverse correlation between symptom-related quality of life and the stage at diagnosis, which was not statistically significant, p ≥0,05. As the stage at diagnosis increases, symptoms are reduced.

Women with breast cancer who evaluated daily activities as good (79,49 %) predominated, only one patient evaluated them as bad; the relationship between daily activities and the stage at diagnosis by means of Spearman's coefficient showed an inverse and statistically significant association p≤0,05, as the stage at diagnosis increases, daily activities are reduced in patients.

As for the overall health status, the quality of life evaluated as good (61,54 %) predominated, the relationship between the stage at diagnosis and the quality of life relative to the overall health status showed by means of the Spearman correlation coefficient a strong and statistically significant inverse relationship (p≤0,01) between both variables, as the stage at diagnosis increases, the overall health status is reduced.

The statistic used in this research showed a statistically significant relationship between the non-explanatory variable stage at diagnosis and physical function, emotional role, cognitive function, daily activities and global health status, but not for social function and symptoms.

No statistically significant relationship was observed between age, marital status, educational level, diagnosis and treatment received with the rest of the variables explained, considering that they do not constitute a determining factor in the quality of life of breast cancer patients in this research.

As for occupation, an inverse and statistically significant correlation (p≤0,05) was found between this and social function, as the occupational status at diagnosis increases, social function is reduced.

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DISCUSSION

Olivares (et al.),[9] found that women with breast cancer have a predominantly regular quality of life in both physical and psychological aspects. In the social dimension, they are at a poor level. Coinciding with the result of this research in the psychological aspect, not so in the physical and social.

The early diagnosis of breast cancer influences the quality of life of ill women, so active screening should be intensified in the most vulnerable age groups.

Tezanos P.,[10] states that cancer not only affects the patient's body but also her emotional life, and some studies suggest that this could have a positive impact on the survival rate. A study published in The Lancet of women suffering from breast cancer reported a survival rate up to 18 months longer in patients who attended a psychological support program, which consisted of group discussions about the disease, techniques for pain management derived from chemotherapy and radiotherapy, and social support. However, other researchers have criticized the studies that support this positive relationship between psychotherapy and survival, claiming that the evidence is not sufficient for this practice to be considered a necessary part of treatment.

Multiple studies have shown that genetic, neuroendocrine, immune, nervous system, emotional, personality and behavioral factors are involved in responses to bacterial and viral infections. Psychoneuroimmunology studies and investigates the mechanisms of interaction and communication between the brain and the nervous, immune and neuroendocrine systems, which are responsible for maintaining the homeostasis of the organism.[11]

The inverse relationship between cognitive function and stage at diagnosis could be related to the high percentage of patients diagnosed after 50 years of age, in which degenerative changes of the nervous system increase.

According to the National Cancer Institute,[12] treatment with endocrine therapy produced deficits in verbal memory, verbal fluency, motor speed, attention and working memory, but did not affect psychomotor speed.

Mejía Rojas (et al.),[13] found as a final model for health-related quality of life in breast cancer patients that the dimensions that most affect this deterioration are the side effects of chemotherapy, sexual function, breast symptoms and the poor outlook for the future after adjustment.

According to a study by Barber MJ (et al.),[14] body image was particularly affected by breast loss; some women expressed feelings of shame about the absence and asymmetry. Other patients reported that hair loss and fatigue affected their quality of life in relation to limitations in daily and work tasks. Regarding the social sphere, there were restrictions associated with not wanting to show themselves; some patients report having modified their social life due to physical discomfort and the need for care. Other patients strengthened their bonds and attended new social settings (support groups, talks, workshops).

Similar results to those obtained in this study were obtained by Villar,[15] when he reflects that the scores were high in most of the dimensions of quality of life in the functional scales, and low in the symptom scales, with the exception of the global state of health.

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CONCLUSIONS

Most women with breast cancer five years after diagnosis and treatment rate quality of life related to symptoms and emotional state as fair, most rate it as good for cognitive function and activities of daily living. Diagnosis in advanced stages of the disease reduces the quality of life of women, affecting the emotional sphere, overall health status, physical and cognitive function and daily activities. Therefore, timely diagnosis of the disease should be guaranteed to favor a better quality of life after diagnosis and treatment.

Conflict of interest

The authors declare that there is no conflict of interest.

Authors' contribution

YGP: Drafting of the manuscript, data collection/obtaining results, data analysis, revision of the final version of the article.
ERMT: Analysis and interpretation of the data, technical advice, revision of the final version of the article.
YCRÁ: Conception and design of the article, contribution of patients or study material, analysis of the results, revision of the final version of the article.
MMM: Statistical advice, analysis of the results, revision of the final version of the article.
CRR: Critical revision of the manuscript, analysis of the results, revision of the final version of the article.

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