



Functional capacity of women with breast neoplasm undergoing palliative chemotherapy

Capacidade funcional de mulheres com neoplasia mamária em quimioterapia paliativa
Capacidad funcional de mujeres con neoplasia de mama en quimioterapia paliativa

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ABSTRACT

Objective: To evaluate the functional capacity of women with breast neoplasm undergoing palliative chemotherapy. **Method:** Cross-sectional study with an analysis of medical records of women with breast cancer undergoing palliative chemotherapy. **Results:** Out of one hundred evaluated records, most registered 50 years or older (66%), primary education (53%), an income of 1 to 2 minimum wages (87%), invasive ductal carcinoma (95%), positive hormone receptor (64%), and histological grade 1 and 2 (57%). Performance status 0 (49%), 1 (39%), and 2 (12%) were prevalent; these imply, respectively, active patients, with mild and moderate activity restriction. One to four chemotherapy schemes were associated with the inappetence ($p=0.00$) and weight loss ($p=0.001$) symptoms. The main complications were neuropathy (31%), medullary compression syndrome (21%), neutropenia (9%), and death (28%). **Conclusion:** Out of the analyzed women, 88% presented functional capacity 0 and 1, had no or mild restriction of daily activities, were multiply treated, and manifested manageable symptoms. Others, however, presented moderate to severe clinical complications during the treatment, progressing to exclusive palliative care or death.

DESCRIPTORS

Breast Neoplasms; Palliative Care; Drug Therapy; Oncology Nursing.

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INTRODUCTION

Breast cancer corresponds to the neoplasm with the highest incidence, with a high mortality rate among women worldwide. In Brazil, the estimate for 2018–2019 is of 59,700 new cases; there is a tendency for mortality from this condition to increase⁽¹⁻³⁾. When diagnosed in an initial stage (I and II), it presents a good prognosis and high cure rate. On the other hand, advanced stages (III and IV), which correspond to 38% of breast neoplasm diagnosed in Brazil, are associated with worse prognosis and low survival⁽⁴⁾, which directs therapeutic efforts to extended or exclusive palliative care⁽²⁾.

Fortunately, palliative treatment has advanced in the last decades, enabling the control of symptoms through multi-dimensional evaluation and the implementation of specific interventions, such as surgery, hormone therapy, biological therapy, radiotherapy, chemotherapy, and support care⁽⁵⁻⁷⁾, all of which with palliative goals. These were effective in controlling metastatic cancer and become more efficient when integrated with the standard oncological treatment from the moment of disease diagnosis⁽⁸⁾.

Chemotherapy with a palliative goal is still an important systemic treatment option for advanced breast tumors by reduction of tumor mass size, with a consequent reduction in symptoms and an improvement in survival, and its application is based on tumor biology, which encompasses the tumor's histological (differentiation, mitosis, and progression) and molecular characteristics (presence of hormone receptors, overexpression of human epidermal growth factor receptor 2 – HER2 – and gene expression – Luminal A, Luminal B, HER, and Basal-like), as well as on the overall patient health status⁽⁷⁻⁸⁾. Also, the adopted therapeutic protocol, doses, and administration route should be considered; these require attention and monitoring, since they may negatively affect the patient's functional condition due to medication toxicity and the occurrence of severe side-effects which outweigh possible benefits⁽⁷⁻⁸⁾.

The provision of chemotherapy treatment for advanced breast cancer is a multiprofessional arduous and onerous task, with an emphasis on nursing professionals. Their role is fundamental for therapy success, for they book appointments, predict and provide resources for safe implementation, provide patients and families with orientation on the proposed schema, perform individual evaluation prior to medication preparation, verify the technical aspects of prescription and adjustment discussions, administer medication, monitor and manage infusion reactions, evaluate the impact of performed actions, and propose improvements to clinical care^(6,9-11).

From this perspective, to minimize damage and evaluate tolerance to oncological treatment, predictors are used to evaluate how much disease and treatment affect patients' daily life skills and decide therapy continuation or interruption⁽¹²⁻¹³⁾. The Performance Status (PS) scale is an instrument elaborated with the Eastern Cooperative Oncology Group (ECOG)⁽¹⁴⁻¹⁵⁾ aimed at evaluating the functional status of cancer patients by identifying their capacity to carry out daily activities, presence of disease symptoms, and degree of autonomy required for routine care^(13,16). This scale can be easily applied and has been broadly employed in oncology

as a prognosis tool, offering resources for establishing the oncological treatment⁽¹³⁾.

However, few studies have monitored the functional status of breast cancer patients submitted to chemotherapy^(4,9,12,17-18). Considering the attributions of nursing in oncological care, the relevance of breast cancer in the Brazilian context, and the lack of scientific literature on the advanced disease's behavior, this study aims to evaluate the functional capacity of women with breast cancer undergoing palliative chemotherapy.

METHOD

STUDY DESIGN

Observational, cross-sectional study guided by the tool STROBE.

LOCATION

This study was developed in the chemotherapy service of a hospital unit specialized in breast cancer treatment of a national reference institute located in Rio de Janeiro city from June to September 2019.

SAMPLE DEFINITION

The sample included women with a diagnosis of locally advanced breast cancer or breast cancer with distant metastases submitted to outpatient palliative chemotherapy in 2018.

Upon consultation of the chemotherapy sector's registers, a total of 5,566 palliative chemotherapy doses administered in 2018 were identified, with a mean of 460 doses per month. Taking as a reference the monthly mean number of services, the statistical calculation estimated a sample size of 210 medical records. However, due to the end of the deadline for data collection and limited resources, consecutive non-probabilistic sampling was opted for; this was limited to the initially identified 100 medical records, regardless of whether they were active or inactive during the data collection period.

Thus, medical records of patients 18 or older with a medical diagnosis of clinical stage IV breast cancer undergoing palliative chemotherapy during the selected year were included. Exclusion from the study was due incomplete medical record regarding the administered chemotherapy.

DATA COLLECTION

The operation of data collection started with identifying via intranet the register of all patients submitted to palliative chemotherapy in 2018, followed by a request for medical records which would amount to the total of the sample for the medical file. Finally, data on the last palliative chemotherapy scheme received by patients were collected, in addition to information on treatment interruption, if relevant, and whether there was a referral to the exclusive palliative care unit. For data extraction, a structured script developed by the authors was used; it contained 27 questions grouped into three blocks.

The first block covered socioeconomic characteristics, which included age range (<40, 40 to 49, ≥50), ethnicity (white, non-white), education (illiterate/primary education, secondary education, higher education), employment status (employed,

unemployed, retired or on social assistance), family income (1 to 2 minimum wages, ≥ 3 minimum wages), marital status (single, married/domestic partnership, divorced, or widow), support network (family, others) and origin (capital, inland).

The second block included lifestyle and characteristics of previous and/or current diseases, whose variables were number of children (nulliparous, 1 to 2 children, 3 children or more), smoking status (yes or ex-smoker, no), drinking status (yes or former drinker, no), comorbidities (systemic arterial hypertension, others), histopathological tumor type (invasive ductal carcinoma, other), histological tumor grade (1 or 2, 3), hormone receptor (yes, no), HER2 gene (yes, no), tumor size (T1, T2, T3, T4), metastasis site (bone, visceral and bone + visceral).

The third block emphasized previous and current oncological treatment, including the provided curative treatment (hormone therapy, radiotherapy, surgery, monoclonal antibody therapy, neoadjuvant/adjuvant chemotherapy), start of palliative chemotherapy (1998 to 2015, 2016, 2017, 2018–19), prescribed lines of palliative chemotherapy (1 to 2, 3 to 4, 5 to 6, >6), last prescribed palliative schema (5-fluorouracil, doxorubicin, cyclophosphamide – FAC, cyclophosphamide, methotrexate, and 5-fluorouracil – CMF, Gemcitabine+Cisplatin, Docetaxel, Paclitaxel, Capecitabine, Vinorelbine, Carboplatin, Gemcitabine+Carboplatin), number of cycles in the last schema (1 to 3, 4 to 6, 7 to 9, >9), interruption of the last cycle (clinical worsening or disease progression, toxicity, death), symptoms during palliative chemotherapy (asthenia, fatigue, pain, nausea and/or vomit, inappetence, weight loss, diarrhea), complications (neuropathies, medullary compression syndrome, neutropenia), indication for exclusive palliative care (yes, no), time between indication for exclusive palliative care and death (1 to 15, 16 to 30, 31 to 90 days).

For the evaluation of the functional capacity of these patients, the performance status (PS/ECOG) score value was considered as identified in the registers of medical and nursing appointments conducted along the treatment in 2018. The PS/ECOG scale is employed worldwide in oncological clinical practice for prognosis, definition of therapeutics, and prediction of quality of survival for oncological patients; it was also adopted in the institution where the study was conducted.

This tool was officially translated into Portuguese in 2002 by a group of Brazilian researchers of the National Cancer Institute (*Instituto Nacional de Câncer – INCA*) with the objective of standardizing the prognostic evaluation and symptoms related to oncological treatment in Brazil⁽¹⁴⁾. The PS scores are classified into: score 0 (fully active), 1 (extenuating physical activity restrictions, but capable of performing light work), 2 (capable of self-care, but incapable of performing any work activities; out of the bed for more than 50% of the time), 3 (limited capacity of self-care, restricted to bed or to chair in more than 50% of awake time), 4 (fully limited, cannot perform any self-care; restricted to bed or to chair), and 5 (dead)⁽¹³⁻¹⁴⁾.

DATA TREATMENT AND ANALYSIS

The descriptive analysis of the sample's results was processed in the program Statistical Package for the Social Sciences (SPSS) version 20.0, revealing its means and absolute and relative frequencies. Subsequently, univariate analysis was carried out through chi-squared Pearson test between the outcome (Functional Capacity as per PS scale) and the other variables, considering the value $p \leq 0.005$ as the significance measure.

ETHICAL ASPECTS

This study was submitted to *Plataforma Brasil* and to the Research Ethics Committee of the proposing institution and was approved in protocol number 3.347.732 in 2019. Since the data was collected from medical records, an exemption from the Informed Consent Form was requested.

RESULTS

One hundred medical records of women with breast cancer undergoing palliative chemotherapy care were evaluated, in which mostly were 50 or older (66%), non-white (64%), Catholic (50%), married or in a domestic partnership (57%), coming from the capital (52%), unemployed (62%), with a family income of 1 to 2 minimum wages (87%), and education level lower than secondary (53%). In Table 1, no statistically significant differences were found between the socioeconomic data and the participants' performance status scores.

Table 1 – Socioeconomic profile of women with breast cancer undergoing palliative chemotherapy treatment as per Performance Status – Rio de Janeiro, RJ, Brazil, 2019.

| Socioeconomic characteristics | Performance Status | | | | | | Total n(100) | p |
|---------------------------------|--------------------|------|-------|------|-------|------|-----------------|-------|
| | 0 | | 1 | | 2 | | | |
| | n(49) | % | n(39) | % | n(12) | % | | |
| Age in years | | | | | | | | |
| <40 | 5 | 10.2 | 2 | 5.1 | 2 | 16.2 | 9 | 0.280 |
| 40 to 49 | 9 | 18.4 | 14 | 35.9 | 2 | 16.2 | 25 | |
| ≥ 50 | 35 | 71.4 | 23 | 59.0 | 8 | 66.7 | 66 | |
| Ethnicity | | | | | | | | |
| White | 17 | 34.7 | 14 | 35.9 | 5 | 41.7 | 36 | 0.903 |
| Non-white | 32 | 65.3 | 25 | 54.1 | 7 | 58.3 | 64 | |
| Education level | | | | | | | | |
| Illiterate or primary education | 23 | 46.9 | 21 | 53.8 | 9 | 75.0 | 53 | 0.074 |

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| Socioeconomic characteristics | Performance Status | | | | | | Total n(100) | P |
|---------------------------------------|--------------------|------|-------|------|-------|-------|-----------------|-------|
| | 0 | | 1 | | 2 | | | |
| | n(49) | % | n(39) | % | n(12) | % | | |
| Secondary education | 22 | 44.9 | 10 | 25.6 | 3 | 25.0 | 35 | |
| Higher education | 4 | 8.2 | 8 | 20.5 | 0 | 0.0 | 12 | |
| Employment status | | | | | | | | |
| Employed | 5 | 10.2 | 3 | 7.7 | 2 | 16.7 | 10 | 0.835 |
| Unemployed | 30 | 61.2 | 24 | 61.5 | 8 | 66.7 | 62 | |
| Retired or on social support | 14 | 28.6 | 12 | 30.8 | 2 | 16.7 | 28 | |
| Family income in minimum wages | | | | | | | | |
| 1 to 2 | 43 | 87.8 | 32 | 82.1 | 12 | 100.0 | 87 | 0.264 |
| ≥ 3 | 6 | 12.2 | 7 | 17.9 | 0 | 0.0 | 13 | |
| Marital status | | | | | | | | |
| Single | 12 | 24.5 | 10 | 25.6 | 3 | 25.0 | 25 | 0.517 |
| Married or in a domestic partnership | 27 | 55.1 | 21 | 53.8 | 9 | 75.0 | 57 | |
| Divorced or widow | 10 | 20.4 | 8 | 20.5 | 0 | 0.0 | 18 | |

In the investigation of reproductive history, 63% of participants were observed to have one or two children, 19% had three or more, and 18% were nulliparous. Smoking or having stopped smoking was informed by 28%, whereas 26% reported being drinkers or former drinkers. Around half the sample had some comorbidity (45%) and 37.8%

(17) of women with PS 0, 44.4% (20) with PS 1 and 17.8% (8) with PS 2 reported some previous disease ($p=0.109$), with systemic arterial hypertension as the most frequent (38%).

Table 2 presents the characteristics of behavior for breast cancer as per Performance Status.

Table 2 – Characteristics of breast cancer behavior in women submitted to palliative chemotherapy as per Performance Status – Rio de Janeiro, RJ, Brazil, 2019.

| Breast cancer characteristics | Performance Status | | | | | | Total n(100) | P |
|--|--------------------|------|-------|------|-------|-------|-----------------|-------|
| | 0 | | 1 | | 2 | | | |
| | n(49) | % | n(39) | % | n(12) | % | | |
| Histological tumor type | | | | | | | | |
| Invasive ductal carcinoma | 46 | 93.9 | 37 | 94.9 | 12 | 100.0 | 95 | 0.683 |
| Others | 3 | 6.1 | 2 | 5.1 | 0 | 0.0 | 5 | |
| Histological tumor grade | | | | | | | | |
| 1 or 2 | 32 | 65.3 | 19 | 48.7 | 6 | 50.0 | 57 | 0.258 |
| 3 | 17 | 34.1 | 20 | 51.3 | 6 | 50.0 | 43 | |
| Hormone receptor | | | | | | | | |
| Yes | 29 | 59.2 | 28 | 71.8 | 7 | 58.7 | 64 | 0.430 |
| Human epidermal growth factor receptor 2 gene | | | | | | | | |
| No | 22 | 44.9 | 32 | 82.1 | 9 | 75.0 | 63 | 0.001 |
| Stage of tumor size | | | | | | | | |
| T1 | 1 | 2.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.925 |
| T2 | 8 | 16.3 | 9 | 23.1 | 3 | 25.0 | 20 | |
| T3 | 11 | 22.4 | 8 | 20.5 | 3 | 25.0 | 22 | |
| T4 | 29 | 59.2 | 22 | 56.4 | 6 | 50.0 | 57 | |
| Metastasis site | | | | | | | | |
| Bone | 4 | 8.2 | 3 | 7.7 | 0 | 0.0 | 7 | 0.716 |
| Visceral | 21 | 42.9 | 18 | 46.2 | 4 | 33.3 | 43 | |
| Bone + visceral | 24 | 49.0 | 18 | 46.2 | 8 | 66.7 | 50 | |

The data in Table 2 on the characteristics of breast cancer behavior show a statistically significant difference for the absence of HER2 overexpression among women with PS 0, 1, and 2. Out of the 37 participants who had a register of HER2 overexpression, only 46% (16) had age \leq 50 years. Invasive ductal carcinoma was predominant in the group (95%), with histological grade 1 or 2 (57%) and 3 (47%), positive hormone receptor (64%), negative HER 2 gene (63%), tumor size T4 (57%), affected lymph nodes N1 (56%), with metastases mainly for bone (57%),

skin (44%), loco-regional lymph nodes (42%), liver (38%), and lung (37%).

Oncological treatment prior to palliative chemotherapy was provided to 75% of patients, especially hormone therapy (65%), radiotherapy (57%), surgery (55%), and monoclonal antibody therapy (10%). Neoadjuvant chemotherapy was applied to 38% of the sample, whereas adjuvant was provided to 87%, with no significant difference between these and PS 0, 1 and 2, which was, respectively, $p=0.800$ and $p=0.798$. Data on the palliative chemotherapy prescribed to participants are presented on Table 3.

Table 3 – Profile of palliative chemotherapy prescribed to women with breast cancer as per Performance Status – Rio de Janeiro, RJ, Brazil, 2019.

| Palliative chemotherapy | Performance Status | | | | | | Total n(100) | P |
|--|--------------------|------|-------|------|-------|------|-----------------|--------|
| | 0 | | 1 | | 2 | | | |
| | n(49) | % | n(39) | % | n(12) | % | | |
| Starting year | | | | | | | | |
| 1998 to 2015 | 6 | 12.2 | 8 | 20.5 | 4 | 33.3 | 18 | 0.506 |
| 2016 | 4 | 8.2 | 4 | 10.3 | 2 | 16.7 | 10 | |
| 2017 | 10 | 20.4 | 9 | 23.1 | 1 | 8.3 | 20 | |
| 2018–19 | 29 | 59.2 | 18 | 46.2 | 5 | 41.7 | 52 | |
| Prescribed lines | | | | | | | | |
| 1 to 2 | 23 | 46.9 | 8 | 20.5 | 4 | 33.3 | 35 | 0.0053 |
| 3 to 4 | 18 | 36.7 | 18 | 46.2 | 3 | 25.0 | 39 | |
| 5 to 6 | 6 | 12.2 | 6 | 15.4 | 4 | 33.3 | 16 | |
| > 6 | 2 | 4.1 | 7 | 17.9 | 1 | 8.3 | 10 | |
| Last prescribed schema | | | | | | | | |
| FAC* | 1 | 2.0 | 1 | 2.6 | 0 | 0.0 | 2 | 0.322 |
| CMF** | 6 | 12.2 | 5 | 12.8 | 1 | 8.3 | 12 | |
| Gemcitabine+Cisplatin | 11 | 22.4 | 10 | 25.6 | 4 | 33.3 | 25 | |
| Docetaxel | 17 | 34.7 | 7 | 17.9 | 3 | 25.0 | 27 | |
| Paclitaxel | 7 | 14.3 | 7 | 17.9 | 2 | 16.7 | 16 | |
| Capecitabine | 4 | 8.2 | 3 | 7.7 | 0 | 0.0 | 7 | |
| Vinorelbine | 2 | 4.1 | 5 | 12.8 | 0 | 0.0 | 7 | |
| Carboplatin | 1 | 2.0 | 0 | 0.0 | 2 | 16.7 | 3 | |
| Gemcitabine + Carboplatin | 0 | 0.0 | 1 | 2.6 | 0 | 0.0 | 1 | |
| Number of cycles of the last schema | | | | | | | | |
| 1 to 3 | 8 | 16.3 | 13 | 33.3 | 7 | 58.3 | 28 | 0.115 |
| 4 to 6 | 18 | 36.7 | 13 | 33.3 | 2 | 16.7 | 33 | |
| 7 to 9 | 11 | 22.4 | 5 | 12.8 | 2 | 16.7 | 18 | |
| >9 | 12 | 24.5 | 8 | 20.5 | 1 | 8.3 | 21 | |

*FAC: 5-fluorouracil, doxorubicin, cyclophosphamide; **CMF: Cyclophosphamide, methotrexate, and 5-fluorouracil

Despite the PS score registered in the medical record by service professionals, there was a 71% interruption of the last palliative chemotherapeutic cycle, especially due to clinical

worsening or disease progression (48%), toxicity (12%), and death (12%). The symptomatology and oncological emergencies during treatment are presented in Table 4.

Table 4 – Symptomatology and oncological emergencies of women with breast cancer undergoing palliative chemotherapy per Performance Status – Rio de Janeiro, RJ, Brazil, 2019.

| Clinical alterations | Performance Status | | | | | | Total n(100) | p |
|--|--------------------|------|-------|------|-------|------|-----------------|-------|
| | 0 | | 1 | | 2 | | | |
| | n(49) | % | n(39) | % | n(12) | % | | |
| Most frequent symptoms in the last schema | | | | | | | | |
| Asthenia | 29 | 59.2 | 28 | 71.8 | 11 | 91.7 | 68 | 0.078 |
| Fatigue | 22 | 44.9 | 24 | 61.5 | 9 | 75.0 | 55 | 0.099 |
| Pain | 24 | 49.0 | 22 | 56.4 | 7 | 58.3 | 53 | 0.727 |
| Nausea and vomits | 24 | 49.0 | 20 | 51.3 | 9 | 75.0 | 53 | 0.260 |
| Inappetence | 10 | 20.4 | 15 | 38.5 | 11 | 91.7 | 36 | 0.000 |
| Weight loss | 9 | 18.4 | 14 | 35.9 | 9 | 75.0 | 32 | 0.001 |
| Neuropathies | 16 | 32.7 | 12 | 33.3 | 2 | 16.7 | 31 | 0.518 |
| Diarrhea | 11 | 22.4 | 9 | 23.1 | 1 | 8.3 | 21 | 0.516 |
| Oncological emergency | | | | | | | | |
| Medullary compression syndrome | 8 | 16.3 | 8 | 20.5 | 4 | 41.7 | 21 | 0.154 |
| Neutropenia | 3 | 6.1 | 5 | 12.8 | 1 | 8.3 | 9 | 0.550 |
| Death | 7 | 14.3 | 15 | 38.5 | 6 | 50.0 | 28 | 0.008 |

Indications for exclusive palliative care were provided to 10.2% (5) of women with PS 0, 17.9% (7) with PS 1, and 16.7% (2) with PS 2. Among the 28% (28) of death outcomes in the investigated period, only 28.6% (8) were referred to exclusive palliative care in a specialized unit ($p=0.014$), for whom the mean time between referral and progression to death was 36 days, and a period of 1 to 15 days was observed for 37.5% (3) of these women, from 16 to 30 days for 37.5% (3) of them, and, for the other 25% (2), the time until death ranged from 31 to 90 days.

DISCUSSION

Data from hospital records of cancer in Brazil between 2010 and 2017 show that around 88,972 women with breast cancer received exclusive palliative chemotherapy treatment⁽²⁾. This information highlights the relevance of investigations that enable the comprehension of the profile of the population submitted to palliative chemotherapy and the factors associated to the best therapeutic outcome, as it tends to contribute with advancements in the care provided by the Brazilian Unified Health System.

Socioeconomic conditions may constitute barriers for the timely access to health services or to care continuation. In the studied sample, there was a prevalence of women over fifty who were married or in a domestic partnership, with an income of one to two minimum wages and low education. The results found match the expected profile for developing countries and findings from studies which evaluate the profile of women with breast cancer undergoing palliative therapy^(8,16,19).

Regarding education and income, the data found follow the same trend presented by other investigations, which indicate that patients with advanced stage cancer present

low education and low income^(8,16,19). Most women were not smokers or drinkers and presented systemic arterial hypertension as the main associated comorbidity. These findings were also identified in other studies^(16,19).

The socioeconomic aspects detected thus denote the need for adjusting the language employed in care to the degree of comprehension of patients, inform the possibility of involvement of the support network (spouse, children, or other relatives), and encourage overcoming expenses with travel for follow-up appointments through dialogue with the primary health care team and telephone monitoring of cases with higher clinical and/or social vulnerability.

Concerning tumor characteristics, the findings show a prevalence of invasive ductal carcinoma (IDC), tumor size stage T4, bone and visceral metastases, histological grade 1 or 2, positive hormone receptors, and absence of HER2 gene expression. Similarly, IDC was the main histopathological type identified in other studies^(16,19-20) conducted, respectively, with 1,146, 12,689, and 124 women in diverse Brazilian regions; according to INCA⁽¹⁾, this is the most common histopathological type, amounting to around 80 to 90% of the total cases.

Tumors of any dimension with direct extension to the thorax wall or to the skin (class T4) frequently occur with disease progression for bone and viscera in cases considered as palliative and, as a consequence of bone invasion, there is a vulnerability to medullary compression syndrome, as found in this study's sample. In addition, the rate of tumor metastases may lead to limitations and suffering, demanding surveillance and continuous management from the health team to extend survival.

Regarding molecular analysis of tumors, the results correspond to what is expected for women in the identified age range, since the participants presented histological grade 3,

presence of hormone receptors, and absence of HER2 gene overexpression, which, by its turn, has a statistically significant association with functional capacity. This transmembrane receptor is necessary for the proliferation and survival of normal cells and is overexpressed in around 20% of breast cancer cells, with a predominance in younger women, increasing aggressiveness and resistance to chemotherapeutic treatment^(2,19).

In the studied institution, palliative chemotherapy has been prescribed mostly for women with PS0 and PS1 and with a well-preserved functional capacity since 2017, including a mean of one to four lines of chemotherapeutics, with an emphasis on the drugs docetaxel and gemzar with cisplatin. Asthenia, fatigue, pain, nausea and vomits afflict more than half of the investigated group and neuropathy and death were the most prevalent complications.

This information suggests that most women with advanced breast cancer were multiply treated, despite still presenting preserved functional capacity, having been submitted to a long chemotherapeutic treatment, and manifesting many manageable symptoms. In addition, when comparing women with a better functional condition (PS0 and PS1) to those with a worse one (PS2), all are observed to have been submitted to a similar number of chemotherapy lines and schemes; however, participants with PS2 had higher rates for six of the seven symptoms evaluated and more deaths.

It was also noticed that 25% of the participants had received other previous oncological treatments and that few had been referred to exclusive palliative care. When comparing these data per PS, statistical significance was found for prescribed chemotherapy lines ($p=0.005$), inappetence ($p=0.000$), and weight loss ($p=0.001$).

Cytotoxic palliative chemotherapy is required for metastatic breast cancer patients because it improves quality of survival. The employed schema was nonetheless interrupted due to clinical worsening or disease progression in 48% of the sample. In a study conducted with 240 women with metastatic breast cancer, around 5-17% of patients resistant to the first line of treatment presented resistance to subsequent lines, significantly affecting mean progression-free survival, with the observation of a progression-free period of 7.6 months for patients in the first line of treatment, 5.1 months for those in the second line of treatment, and 3.6 months for the third line of treatment⁽²¹⁾. Thus, the change of therapeutic schema motivated by chemoresistance accumulates with the effects of previous treatments and leads to cumulative toxicity, a situation which is observed in this study, especially for those with PS2.

The found symptomatology and oncological complications while on a chemotherapeutic treatment present a relation with metastatic patient functional capacity and quality of life which is proven by the literature^(2,8,21-22). In this direction, mapping the most common symptoms helps planning care

and its appropriate management, improving functionality and quality of survival during palliative therapy^(5,8).

The indication of domiciliary palliative care in Brazil is noteworthy: from 2013 to 2015, 45% of care demand was generated by basic attention and around 20%, by oncological centers⁽²³⁾. For women with advanced breast cancer who were treated in the chemotherapy service of the investigated institution, the proposition of exclusive palliative care reached only a minority and there were indications of late provision, given that deaths took place between 1 and 30 days from its demand. Overcoming the suggested inefficiencies requires continuous supervision of clinical degradation to predict, mitigate, or prevent this fact's irreversibility.

The presented findings are limited to this study's location, which tend to differ from those of other services. Since the data were extracted from a secondary source, these are prone to flaws in completeness and standardization of information registers by professionals in this service.

CONCLUSION

The analysis of socioeconomic and clinical profile of breast cancer patients undergoing palliative chemotherapy reveals a predominance of women over fifty, with low education levels and low family income, and a prevalence of invasive ductal carcinoma, positive hormone receptors, and histological grade 1 and 2; 88% of women presented functional capacity 0 and 1, with no or mild restrictions of daily activities, which, by their turn, were associated to the absence of HER 2 overexpression, to the number of palliative chemotherapy lines employed, and to the symptomatology presented.

The analysis of these patients' functional capacity contributes to the comprehension of characteristics and needs which are crucial in planning and implementing care to promote extension of quality of survival. Although the identified profile consists of multiply treated women, the manifested symptoms were manageable, which favored the development of their daily activities. Other patients, nonetheless, have presented moderate to severe clinical complications during treatment, with a late progression to exclusive palliative care or death, contrary to the premise of palliation.

The acquired evidence leads to a comprehension of the socioeconomic and clinical conditions of women with advanced cancer undergoing chemotherapeutic treatment, emphasizing aspects of social vulnerability, frailties in the provided care, and factors which interfere the most in this public's functional capacity. In face of these findings, recommendations include conducting new studies which may strengthen the premise of palliation and favor changes in the work processes to meet the demand, adjusting the care flow, monitoring indicators of patients' functional capacity, and extending social support.

RESUMO

Objetivo: Avaliar a capacidade funcional de mulheres com câncer de mama em quimioterapia paliativa. **Método:** Estudo transversal, realizado a partir da análise de prontuários de mulheres com câncer de mama em quimioterapia paliativa. **Resultados:** Dos cem prontuários avaliados, a maioria registrava 50 anos ou mais (66%), nível fundamental (53%), renda de 1 a 2 salários mínimos (87%), carcinoma ductal invasivo (95%), hormônio positivo (64%) e grau histológico 1 e 2 (57%). Prevaleram *performance status* 0 (49%), 1

(39%) e 2 (12%), que implicam, respectivamente, pacientes ativos, com restrição leve e restrição moderada de atividades. Associaram-se de um a quatro esquemas quimioterápicos aos sintomas inapetência ($p=0,00$) e perda de peso ($p=0,001$). As principais complicações foram neuropatia (31%), síndrome de compressão medular (21%), neutropenia (9%) e óbito (28%). **Conclusão:** 88% das mulheres apresentaram capacidade funcional 0 e 1, sem ou com restrição leve das atividades diárias, eram politratadas e manifestaram sintomas manejáveis. Outras, no entanto, apresentaram complicações clínicas moderadas a graves em vigência de tratamento, evoluindo para cuidados paliativos exclusivos ou óbito.

DESCRITORES

Neoplasias da Mama; Cuidados Paliativos; Tratamento Farmacológico; Enfermagem Oncológica.

RESUMEN

Objetivo: Evaluar la capacidad funcional de mujeres con cáncer de mama en quimioterapia paliativa. **Método:** Estudio transversal, realizado a partir del análisis de historias clínicas de mujeres con cáncer de mama en quimioterapia paliativa. **Resultados:** De las cien historias clínicas evaluadas, la mayoría registró 50 años o más (66%), educación fundamental (53%), ingresos de 1 a 2 salarios mínimos (87%), carcinoma ductal invasivo (95%), receptor hormonal positivo (64%) y grados histológicos 1 y 2 (57%). Predominaron los *performance status* 0 (49%), 1 (39%) y 2 (12%), que implicaban, respectivamente, pacientes activos, con restricción leve y restricción moderada de la actividad. De uno a cuatro regímenes de quimioterapia se asociaron con síntomas de inapetencia ($p=0,00$) y pérdida de peso ($p=0,001$). Las principales complicaciones fueron neuropatía (31%), síndrome de compresión medular (21%), neutropenia (9%) y defunción (28%). **Conclusión:** el 88% de las mujeres tenían capacidad funcional 0 y 1, sin o con leve restricción de las actividades diarias, eran politratadas y mostraban síntomas manejables. Otros, sin embargo, presentaron complicaciones clínicas de moderadas a graves durante el tratamiento, evolucionando a cuidados paliativos exclusivos o a la defunción.

DESCRIPTORES

Neoplasias de la Mama; Cuidados Paliativos; Quimioterapia; Enfermería Oncológica.

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