Characterization and functional capacity in women with breast cancer, gynaecological cancer and gestational trophoblastic disease

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Caracterização e capacidade funcional de mulheres com câncer ginecológico, câncer mamário e doença trofoblástica gestacional

Caracterización y capacidad funcional de mujeres con cáncer mamario, cáncer ginecológico y enfermedad trofoblástica gestacional

Thaís Cristina Elias[a]
Lorena Campos Mendes[a]
Maurícia Brochado Oliveira Soares[a]
Sueli Riul da Silva[a]

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ABSTRACT

Objective: to describe the social, demographic and clinical profile, and functional capacity of women diagnosed with gynecological cancer, breast cancer and gestational trophoblastic disease during chemotherapy.

Method: longitudinal retrospective study that evaluated the records of women treated in hospital clinics from January 2000 to December 2012.

Results: they evaluated the records of 438 women. The analysis showed that were not able to perform their daily activities, limited to the activities of self-care. Older patients had greater functional impairment during therapy.

Conclusions: the sample was women 41 to 50 years, diagnosed with breast cancer (50.9%) and made use of anthracycline based protocols (47%); the scores of the functional capacity of the sample fell from 78.22 to 73.57. It is evident that nursing care should focus on the control of signs and symptoms that impact the functional capacity of women under chemotherapy.

Keywords: Karnofsky performance status. Activities of daily living. Drug Therapy. Women's health.

RESUMO

Objetivo: descrever o perfil sociodemográfico e clínico e a capacidade funcional de mulheres diagnosticadas com câncer ginecológico, câncer mamário e doença trofoblástica gestacional em tratamento quimioterápico.

Método: estudo longitudinal retrospectivo, que avaliou os registros de mulheres em tratamento em um hospital de clínicas no período de janeiro de 2000 a dezembro de 2012.

Resultados: foram avaliados os registros de 438 mulheres. A análise mostrou que as pacientes não eram capazes de realizar suas atividades cotidianas, limitando-se àquelas do autocuidado. As pacientes idosas sofreram maior comprometimento funcional durante a terapêutica.

Conclusões: a amostra estudada era de mulheres com 41 a 50 anos, diagnosticadas com câncer de mama (50,9%), que faziam uso de protocolos baseados em antracíclicos (47%); os escores da capacidade funcional da amostra decaíram de 78,22 para 73,57. Evidencia-se que os cuidados de enfermagem devem centrar-se no controle de sinais e sintomas que causam impacto na capacidade funcional das mulheres sob quimioterapia.

Palavras-chave: Avaliação de estado de Karnofsky. Atividades cotidianas. Quimioterapia. Saúde da mulher.

RESUMEN

Objetivo: describir el perfil socio demográfico, clínico y capacidad funcional de mujeres diagnosticadas con cáncer ginecológico, mamario y enfermedad trofoblástica gestacional en tratamiento quimioterápico.

Método: estudio longitudinal retrospectivo, que evaluó los registros de mujeres en tratamiento en un hospital de clínicas en el período de enero/2000-diciembre/2012. Resultados: fueron evaluados los registros de 438 mujeres. El análisis mostró que las pacientes no eran capaces de realizar sus actividades cotidianas, limitándose a las actividades del autocuidado. Las pacientes mayores sufrieron más comprometimiento funcional durante la terapéutica.

Conclusiones: la muestra estudiada era de mujeres con 41-50 años, diagnosticadas con cáncer de mama (50,9%) y hacían uso de protocolos basados en antracíclicos (47%); los escores de la capacidad funcional de la muestra decayeron de 78,22 para 73,57. Se evidencia que los cuidados de enfermería deben centrarse en el control de señales y síntomas que causan impacto en la capacidad funcional de las mujeres en quimioterapia.

Palabras clave: Estado de ejecución de Karnofsky. Actividades cotidianas. Quimioterapia. Salud de la mujer.

[a] Universidade Federal do Triângulo Mineiro (UFTM), Programa de Pós-Graduação stricto sensu em Atenção à Saúde. Uberaba, Minas Gerais, Brasil.

INTRODUCTION

Currently, cancer has been widely studied as a global public health problem and, in this context, the Brazilian National Cancer Institute (INCA, as per its acronym in Portuguese) identified alarming data on the estimated incidence of cancer cases in Brazil for 2014 and 2015. A total of 576,000 new cases of cancer was estimated, including non-melanoma skin cancer cases. Of this total, 190,000 will affect women[1].

In this scenario, among the several types of cancer that affect women in Brazil, breast cancer is characterized as the most prevalent and cervical cancer as the most frequent among the types of gynecological cancer[1].

Taking into account the existing prevention and early detection methods for control of these neoplasias, the lack of knowledge on such actions, lack of access to public health services and aspects related to cultural matters are crucial in the maintenance of a high incidence of cases of this type of cancer in the country[2-3].

In addition to breast cancer and cervical cancer, those developed in the ovaries, fallopian tubes, uterine body, vulva, and vagina are also classified as gynecological cancers. It is important to mention the gestational trophoblastic disease (GTD) among the gynecological cancers, given its obstetric origin and the potential for complications presented by the benign types and the aggressiveness of the malignant types of the disease. Both cases may require the use of chemotherapy[4].

Antineoplastic chemotherapy has been shown to be an effective therapy used to control breast, gynecological and GTD cancers. However, the toxicity caused by its use may potentially lead to changes in the functional capacity (FC) of patients, consequently affecting their quality of life[5-6]. Functional capacity is defined as the clinical conditions that enable individuals to perform activities of daily living. It has direct impact on quality of life, therefore the use of this treatment method by cancer patients has been leading to an increased development of studies on the FC of cancer patients during the chemotherapy treatment[7].

Considering the importance of cancer as a public health problem, the toxicity presented by the treatment and the representation of women in the social scenario, labor market and family, it is important to develop studies that can establish parameters indicating the needs presented by women with regards to the chemotherapy treatment.

In this context, nursing has been effectively participating in all initiatives for cancer control, and consistently assuming the care actions in the management of the various treatment modalities of the disease and in handling the side effects caused by them[7-8].

It is a responsibility of nursing to apply the chemotherapy treatment, therefore the nursing staff should recognize and handle the side effects of the drugs, as well as continuously evaluate the general condition and the performance of the patients in order to predict and anticipate care to minimize effects in their quality of life. Thus, the guiding questions of the present study were: What is the sociodemographic and clinical profile of women who underwent chemotherapy treatment against gynecological cancer, breast cancer and GTD at the Clinics Hospital of Universidade Federal do Triângulo Mineiro, between 2000 and 2012? and To what extent was the FC of women with gynecological cancer, breast cancer and GTD affected by the chemotherapy treatment? It is believed that based on these data, nursing professionals may work specifically in the optimization of the quality of life of cancer patients undergoing chemotherapy.

Given the above, the aim of the present research was to describe the sociodemographic and clinical profiles, as well as the FC of women diagnosed with gynecological cancer, breast cancer and GTD during the chemotherapy treatment.

METHOD

This was a longitudinal, retrospective study supported by descriptive statistics, developed in the Center of Chemotherapy of the Clinics Hospital of Universidade Federal do Triângulo Mineiro (CQT/HC/UFTM), a federal healthcare institution in the city of Uberaba, Minas Gerais, where patients undergo chemotherapy treatment. In this service, the provided nursing aid summarily refers to the admission of patients, administration of the prescribed chemotherapy treatment and control of adverse/side effects, and record of the developed procedures. This study is part of a master's thesis submitted to the Graduate Program in Health Care of Universidade Federal do Triângulo Mineiro[9].

A convenience sample consisting of the records of women treated at the gynecological oncology of CQT/HC/UFTM was used. Records of women diagnosed with gynecological cancer, breast cancer and GTD undergoing chemotherapy treatment between January and May 2014 were assessed. Records of patients that did not complete at least three cycles of the chemotherapy treatment were excluded due to the analytical unfeasibility of such data. There was no sample loss.

Data that do not correspond to the medical record of the institution were collected from the files of CQT/HC/

UFTM, thus generating the database. It is noteworthy that the instruments were routinely applied to all patients treated in the chemotherapy center.

All the files consist of instruments developed by the authors based on scientific literature with the characterization of the sociodemographic and clinical profiles (age, origin, cancer diagnosis and chemotherapy treatment adopted). The Karnofsky Performance Scale Index was used to assess functional capacity. This index consists of three major areas; each one including the scores related to functional capacity presented by the patient: the first area refers to patients who do not require special care; the second area is related to patients that sometimes require some type of care; and the third area is related to complex care, required when the patient becomes unable to self-care, requiring hospital care[7]. The assessment was continuously conducted during the chemotherapy cycles, ending at the end of treatment or death of the patient.

The collected data were entered and stored in an Excel® spreadsheet. The double entry validation technique was used to detect inconsistencies and then the data were transferred to the software Statistical Package for the Social Sciences® (SPSS), version 16.0. Statistical analysis was performed with the use of absolute (N) and relative (%) frequencies for the descriptive assessment; and Student's t-test was used for reasonable comparisons between independent groups. The adopted level of significance was 5%.

The research proposal was submitted and approved by the Human Research Ethics Committee of Universidade Federal do Triângulo Mineiro under protocol number 1698/2010.

RESULTS

Records of 438 women were assessed. A total of 62.3% were from the city of Uberaba, in the state Minas Gerais; the other patients were from other cities in the state of Minas Gerais, as the place where the study was developed serves patients from other 27 cities in this state.

Regarding the sociodemographic characteristics in relation to age, the study showed a higher number of cases of cancer among women between 41 and 50 years old; mean age of 50.62 years. In relation to the clinical aspect, the diagnosis of breast cancer was prevalent (50.9%), with the highest incidence between 41 and 50 years old (35%); 13.9% were identified in women between 21 and 40 years old.

In relation to a diagnosis related to cancers affecting the uterus, 24% was attributed to cervical cancer with prevalence between 41 and 50 years old, 1.8% to fallopian tube cancer, and 1% to uterine sarcoma, with 0.5% being uterine carcinosarcoma. Ovarian cancer accounted for 15.1% of the cases, with prevalence between 51 and 70 years old.

In relation to GTD, 4.3% presented diagnosis associated to hydatidiform mole (HM) and mean age of 27.89 years. Although with lower incidence and using the chemother-

Table 1 – Progress of mean scores of functional capacity of women with gynecological cancer, breast cancer and gestational trophoblastic disease. Uberaba, Minas Gerais, January 2000 to December 2012

Variables	N	Mean	Standard deviation	Minimum	Maximum
Score corresponding to cycle 1					
Score corresponding to cycle 2	438	78.11	9.980	30	100
Score corresponding to cycle 3	438	77.67	9.642	40	100
Score corresponding to cycle 4	390	77.28	9.556	40	100
Score corresponding to cycle 5	339	77.02	9.372	40	100
Score corresponding to cycle 6	316	76.09	9.008	40	100
Score corresponding to cycle 7	57	75.26	11.512	40	90
Score corresponding to cycle 8	45	75.78	11.380	40	90
Score corresponding to cycle 9	21	75.71	13.256	40	90
Score corresponding to cycle 10	14	73.57	12.774	40	90
Score corresponding to cycle 11	8	76.25	11.877	50	90
Score corresponding to cycle 12	4	77.50	5.000	70	80

Source: research data, 2010 to 2012

Table 2 – Student's t-test between the mean scores of functional capacity of women with gynecological cancer, breast cancer and gestational trophoblastic disease, in relation to age. Uberaba, Minas Gerais, January 2000 to December 2012

Variables	N	Mean	Standard deviation	P
Mean scores of FC between the first and third chemotherapy cycles in relation to age				
Adult	313	78.4345	10.3051	0.145
Elderly	125	76.9067	8.77002	
Mean scores of FC between the fourth and sixth chemotherapy cycles in relation to age				
Adult	283	77.4499	9.52502	0.018
Elderly	107	75.0312	8.70246	

Source: research data, 2000 to 2012

apeutic treatment, HM may develop to cases of choriocarcinoma[10]. This occurred in only 0.2% of the cases in this study. Other diagnoses related to gynecological cancers were found with lower incidence, including vaginal rhabdomyosarcoma (0.5%), vaginal cancer (0.5%), vulvar cancer (0.5%), and fallopian tube cancer (0.5%).

Regarding the protocols of choice for therapy, fluorouracil, doxorubicin, and cyclophosphamide (FAC), and doxorubicin and cyclophosphamide (AC) were the most commonly used methods (47%); these treatments are based on anthracycline chemotherapy. Additionally, among the women diagnosed with breast cancer, 93.7% used these protocols at a given time of therapy. Table 1 presents the mean scores of FC in relation to the chemotherapeutic cycles according to the Karnofsky Performance Scale Index.

The analysis of FC over a total of twelve cycles of chemotherapy showed that the mean scores among them varied from 78.22 to 73.57, with the reduction of FC in the first cycles of the treatment. A mean FC increase of 2.68 points in the 11th cycle and 3.93 points in the 12th cycle was observed. Also, a reduction of 57.1% was observed in the number of patients undergoing chemotherapy.

Table 2 shows the means of the scores presented by patients during the treatment cycles in relation to age. Due to the reduced number of studied patients, only the period between the first and sixth cycles was considered for such analysis. The following grouping was used: women between 16 and 59 years old as the adult group, and women over 59 years old as the elderly group.

The simple t-test showed that despite the fact that the elderly group started the treatment with the worst mean score of FC, the groups kept similar FC up to the third cycle. On the other hand, the subsequent cycles presented greater decline of FC in elderly patients.

DISCUSSION

The results point out that in relation to the age of women diagnosed with breast cancer, cervical cancer, and ovarian cancer, the data in this study are similar to those found in the literature. Thus, the incidence of breast and cervical cancer is common in women aged between 41 and 50 years, whereas ovarian cancer affects women aged between 60 and 65 years[11-13].

Data on the age of the patients diagnosed with HM are not consistent with studies in the area that indicate a higher incidence of HM cases in women over 40 years old, emphasizing age as an important risk factor for the development of the disease[14]. It is possible that this outcome is related to the use of permanent sterilization procedures as the most used contraceptive method among women in Brazil, as this procedure is provided by public and private health sectors.

The oncologic diagnosis evidenced that breast cancer presents a similar behavior to the most prevalent neoplasia among the studied population; cervical cancer is the most prevalent among tumors related to the uterus. These data were expected according to information disclosed by INCA[1], as well as those data found in this study about the low incidence of choriocarcinoma and vaginal, vulvar, and uterine cancers that confirmed the rarity of these cases as described in the scientific literature[3,14].

Concerning the chemotherapy protocols, it was observed that the findings corroborate the protocols described in other research, as the FAC and AC protocols are

commonly used in the treatment of breast cancer[15]. At the same time, other studies present similar data, showing that by evaluating women diagnosed with breast cancer and using chemotherapy, approximately 50% of the patients mentioned the use of the FAC and AC protocols[6,16].

With regard to the analysis of progress of FC, the mean score was 70. According to the Karnofsky Performance Status Scale this means that patients showed inability to perform activities of daily living, although they maintained their self-care capacity[7].

In this context, a cross-sectional study evidenced that nearly half of the studied patients presented significantly reduced capacity to develop professional and daily activities as a consequence of the side effects of the treatment, evidencing the functional complications after chemotherapy[17].

It was also identified that most of the participants started the anticancer treatment with a certain functional disability; this fact is possibly related to the disability caused by the disease itself. Cancer patients present reduced quality of life as a result of the reduced capacity to keep the general physical conditions, thus becoming more vulnerable[18].

Therefore, the fact that there was a reduction in the FC in the first cycles of the treatment may be securely associated with the presence of side effects caused by the use of chemotherapy. Similar results were observed in another study that showed that at the beginning of the treatment there is a loss of FC that may reach 30% of its totality, making the patient more vulnerable during the treatment[19].

In relation to the increased mean scores of FC between the last two cycles of chemotherapy, it is possible to state that this finding is possibly associated with individual factors, as there was an important reduction in the number of patients submitted to chemotherapy in that given moment. It is also noteworthy that patients included in the last two cycles and responsible for better mean scores of FC suffered from GTD and were receiving methotrexate as monotherapy, pointing out a group of patients with preserved FC in relation to the other patients.

Taking into account the assessment of FC in relation to age, it is understood that elderly patients present more complications during the treatment, as they are more vulnerable to toxicities[20]. The comorbidities presented by elderly patients also corroborate a possible functional impairment[18]. As a result, adult patients present a better FC in comparison to elderly patients.

CONCLUSION

At the end of the study, the findings showed that most of the studied women were between 41 and 50 years old, diagnosed with breast cancer, and using protocols based on anthracyclines. Data analysis showed that the FC was affected by the chemotherapy treatment, as the patients become unable to perform the activities of daily living, although they remained capable for performing self-care activities. Elderly patients suffered greater functional complications during the therapy.

The nursing staff must establish actions to manage the functional capacity of patients aiming at minimizing the side effects caused by the chemotherapy treatment, particularly in relation to patients that are more susceptible to functional impairment, as well as control of signs and symptoms of the disease.

It was evidenced that the care to preserve the FC of women undergoing chemotherapy should not be restricted to application of prescription, preparation and administration of drugs, but it should also approach the control of signs and symptoms that affect their FC. In addition, multidisciplinary actions and communication between the oncologic services and the primary care for home monitoring of these patients should be encouraged in order to ensure the continuity of care. In this perspective, there is a need for new studies that may suggest a multidisciplinary and nursing service that is appropriate to the needs of this population during the chemotherapy treatment and particularly to elderly patients that were submitted to more than three chemotherapy cycles, as these showed lower FC during the study.

The use of pertinent, consistent assessment tools by the nursing staff in the care of cancer patients enables a quality, risk-free care practice, specifically directed to handling the general conditions and inherent complications, promoting individualized and humanized care.

The fact that our focus was restricted to the physical assessment of patients undergoing chemotherapy treatment is a limitation of the study, as it is known that various aspects are involved in the quality of life of an individual. Thus, although essential, quality of life is not associated with the physical function.

Further studies based on the search for alternatives that may ensure the maintenance of FC are necessary as these contribute to expand the knowledge aiming at improving the quality of life of cancer patients.

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Author's address:
Sueli Riul da Silva
Rua Donaldo Silvestre Cicci, 665, Manoel Mendes
38082-166 Uberaba –MG
E-mail: sueliriul@terra.com.br

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