Antineoplastic Oral Therapy in Patients of an Outpatient Unit: The Impact of Pharmaceutical Care

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Abstract

Objective: To analyze the use of oral antineoplastic therapy in patients from an outpatient unit of an oncology center in Pernambuco, Brazil.

Methods: This is a prospective, descriptive, exploratory, quantitative study based on the application of a pharmacotherapeutic follow-up form.

Results: Of the 27 patients evaluated, 10 patients met the inclusion criteria. There was a greater predominance of the age group of 61 to 70 years (40%), female (70%) and incomplete elementary school (60%). The most frequent carcinoma was breast carcinoma (30%). Previous treatments were chemotherapy, hormone therapy, surgery and radiotherapy. Regarding adherence to treatment, the majority did not achieve satisfactory adherence, presenting a score lower than 4 in the Morysk and Green test (80%).

Conclusion: The results showed that the mean age of the patients is 59 years, mostly female, low level of education, all performed previous treatments such as surgery, chemotherapy, radiotherapy and hormone therapy, as well as all presented adverse reactions to the drugs presented, evidencing the importance of pharmaceutical care.

Keywords: Cancer; Antineoplastic; Pharmaceutical attention; Oncology

Introduction

Cancer is a public health problem. In Brazil, it is the second leading cause of death, followed by cardiovascular diseases. Among the main treatments for cancer are the surgical process, radiotherapy and chemotherapy, in most cases, these treatments are done in an associated way, with the curative or even palliative purpose [1].

Innovations in the forms of cancer treatment have been beneficial to patients, culminating in their improvement in quality of life, one of these is the availability in the market of oral antineoplastic drugs for outpatient use, with consequent reduction of invasive procedures, time spent in treatment, greater convenience and greater sense of independence during therapy. However, with this autonomy given to the patient, significant problems arise to be faced by the multidisciplinary team in oncology, such as safety problems and mainly adherence to treatment [2].

Knowing the factors that interfere with patient adherence is an important tool for professionals who follow the evolution of the chronic patient. One of the professionals qualified to minimize the possible problems of adherence is the pharmacist who has an excellent tool for this medium: Pharmaceutical care, which through a pharmacotherapeutic follow-up can identify and treat the negative outcomes associated with medication (NOM), thus promoting improvements in the clinical picture of the assisted patient, besides impacting on their quality of life [3-5].

Within this context, this article demonstrates the need to understand the profile of the oncological patient who uses oral antineoplastic medication, assisted by the multidisciplinary team in order to improve the patient's therapy and quality of life, through the reduction of possible NOM. Therefore, the article aimed to analyze the use of oral antineoplastic therapy in patients of an outpatient unit of an oncology center in the countryside of Pernambuco, Brazil.

Methods

Type of study

This is a prospective, descriptive, exploratory, quantitative study based on the application of pharmacotherapeutic follow-up form adapted from Machuca, Fernández-Llimós and Faus [6].

Study location

Patients who were using oral antineoplastic drugs treated at an Oncology Center of Agreste Pernambucano during the period from July to September 2017 were selected.

Data collection

The study was carried out through pharmacotherapeutic follow-up forms applied monthly, totaling three meetings.

From the pharmacotherapeutic follow-up forms, sociodemographic variables were analyzed, including age group, gender, education level and residential area; raised clinical variables, such as neoplasms, comorbidities and treatments performed; adverse reactions and drug interactions.

In the first meeting, the patient's data were collected, the consent form was signed and the initial interview was explaining the objective of the study and the identification of the main complaints of the patient regarding oral antineoplastic treatment. All patients were initially instructed in the correct form of drug administration, appropriate times for administration and the main care according to each drug.

In the second meeting, it was analyzed whether the patients' complaints maintained or decreased after the orientations, whether new complaints and doubts related to treatment arose.

In the third meeting, the possible adverse reactions related to drugs and drug interactions between drugs in outpatient use were collected.

Regarding pharmacotherapeutic adherence, the Morysk and Green test was used to identify attitudes and behaviors regarding the use of medications, observing patients who adhered or did not adhere to treatment. It is considered that adherence to treatment was obtained when the patient has as score the maximum score, which corresponds to 4 points, when the score has a score of 3 or lower, characterizes the non-adherence on the part of the patient [7].

Inclusion and exclusion criteria

The study included patients undergoing oral antineoplastic drugs such as capecitabine, chlorambucil, abiraterone, megestrol, sunitinib and imatinib were included in the study; 18 years of age or older; and who were treated with oral antineoplastic drugs for a period of three months or more, patients who had treatment suspended or who died during follow-up were excluded from the study.

Approval of the ethics committee

The study was only conducted after approval by the Ethics Committee on Research with Human Beings of the Tabosa de Almeida University Center - Asces-Unita (no. 2,074,686).

Data analysis

For the analysis of the collected data, statistical treatment was calculated and received treatment using the GraphPad Prism 8 program, being presented in percentage frequency (%), as well as in figures and tables.

Table 1: Sociodemographic profile.

VARIABLE	%
Sex	
Female	70
Male	30
TOTAL	**100**
Age	
18 to 30 years	10
31 to 40 years	10
41 to 50 years	10
51 to 60 years	20
61 to 70 years	40
71 or more	10
TOTAL	**100**
Degreeofeducation	
Illiterate	10
Incomplete fundamental	60
Complete fundamental	10
Complete high school	20
TOTAL	**100**
Area	
Urban	80
Rural	20
TOTAL	**100**
Occupation	
Retired	60
Farmer	10
Administrativeassistant	10
Teacher	10
Does notwork	10
TOTAL	**100**
Limitation	
No	80
Yes	20
TOTAL	**100**
Caregiver	
No	70
Yes	30
TOTAL	**100**
Covenants	
SUS*	70
Health Plan	30
TOTAL	**100**

*SUS: Sistema Único de Saúde

Results

In the period in which the study was conducted there were 27 patients using oral antineoplastic therapy, of these 02 died, 06 had the treatment suspended, 06 used the treatment less than three months ago and with 03 it was not possible to carry out three consecutive

interviews.

The study consisted of 10 patients of both sexes with a mean age of 59 years and higher prevalence (40%) in the age group of 61 to 70 years, who underwent treatment with oral antineoplastic chemotherapy drugs such as capecitabine, chlorambucil, abiraterone, megestrol, sunitinib and imatinib during the data collection period.

Regarding the sociodemographic profile, it is important to point out that 70% of the patients followed in the study are female, 60% with incomplete elementary school, 60% are retired, 80% of them come from the urban area and 70% have their health costs performed by the Sistema Único de Saúde (SUS) according to Table 1.

Regarding the clinical history of the patients, it was observed that the majority (70%) presented preexisting comorbidities such as diabetes mellitus (40%) and systemic arterial hypertension (30%). It was also evidenced that 40% of them used alcoholic beverages and that 10% of them were smokers. As for previous treatments: 70% of them had surgery, 50% of them underwent chemotherapy, as well as hormone therapy and 40% radiotherapy (Table 2).

It was also identified that the majority had breast cancer (30%) and prostate (20%), and were in IV staging (50%). Noting that equal number of patients (20%) it uses the following megestrol,

Table 2: Clinical history.

VARIABLE	%
Cormobities	
Diabetes	40
Hypertension	30
Labyrinthitis	20
Depression	10
SenileCataract	10
None	30
Alcoholicbeverages	
Alcoholic	40
Non-alcoholic	40
Teetotaler <10 years	10
Teetotaler >10 years	10
TOTAL	100
Tobacco	
Non-smoker	30
Formersmoker <10 years	30
Formersmoker >10 years	30
Smoker	10
TOTAL	100
Physicalexercise	
Active	60
Sedentary	40
TOTAL	100
Prior Treatment	
Surgery	70
Hormonetherap	50
Chemotherapy	50
Radiotherapy	40

Table 3: Adverse reactions presented by the study patients.

Medication	Adverse reactionreported
Megestrol	Headache; Polacuria; Myalgia; Nausea
Chlorambucil	Skin Rash; Pruritus; Intestinal constipation
Capecitabine	Fatigue
Abiraterone	Myalgia; Somnolence
Sunitinib	Headache; Fatigue
Imatinib	Insomnia; Diarrhea; Urinary incontinence; Myalgia; Mood disorder; Urinary dysfunction

Table 4: Treatment adherence - Morisky and Green test.

Questions	Answer (%)		Total (%)
	Yes	No	
Do you ever forget to take your medicine?	40	60	**100**
Are you sometimes careless about the time to take your medicine?	70	30	**100**
When you feel good, do you ever stop taking the medicine?	10	90	**100**
When you feel bad about the medicine, do you sometimes stop taking it?.	30	70	**100**
TOTAL (SCORE): 0 1 2 3 4			
10% 10% 20% 40% 20%			
In the event of at least one answer yes, apply the following question:			
Knowledge	Yes (%)	No (%)	
Have you been informed about the importance and benefit of using the medication?	80	20	

chlorambucil, imatinib and abiraterone antineoplastic, divided according to the representation of Figure 1.

All patients in the study (100%) reported signs and symptoms of adverse reactions after the initiation of oral oncological therapy, as described in Table 3.

Regarding the evaluation of drug interactions, it was exposed that in 60% of the patients no interactions were identified between the drugs used by them, while the remainder has interactions between the drugs in moderate and severe degree, of which only a severe interaction occurs between abiraterone, oral antineoplastic drug, and fluoxetine, used for the treatment of depression, the others are related to the interaction between drugs used in comorbidities and adjuvant drugs to cancer therapy. Regarding self-medication, 60% of them indicated that they perform, it was also reported that most of them do not present drug allergy (80%), as shown in Figure 2.

When evaluating adherence to treatment, we can verify that 70% report that they are careless about the time of taking their medication and that 90% of them do not stop taking the medication when they feel well, so it was verified that score 3 (40%) represents the majority of patients assisted by the study, highlighting that 80% of them showed that they were informed about the importance and benefit of using the drug (Table 4).

Discussion

This study found a mean age of patients under pharmacotherapeutic follow-up of 59 years, being of both sexes with a majority of females (70%), a result similar to that found by a study conducted in the state of Ceará, by Mesquita et al. [8], which observed the sociodemographic characteristics of patients on therapy with oral antineoplastic drugs in an outpatient unit in Ceará, Brazil. Showing an average age of 60 years, as well as a majority of females (68%).

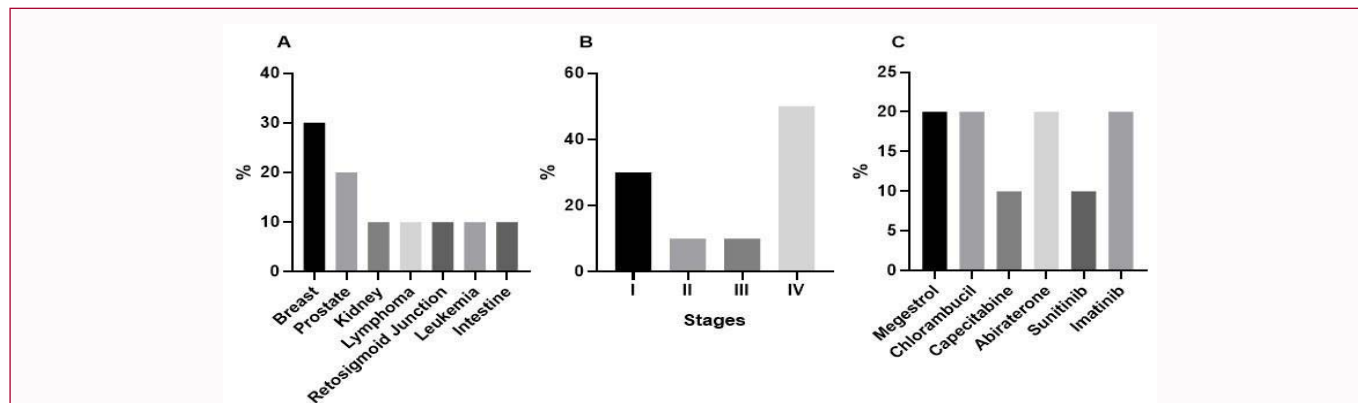Regarding the level of education, it was presented that the

Figure 1: Distribution of patients by type of neoplasm (A), staging (B) and oral antineoplastic (C) drugs used.
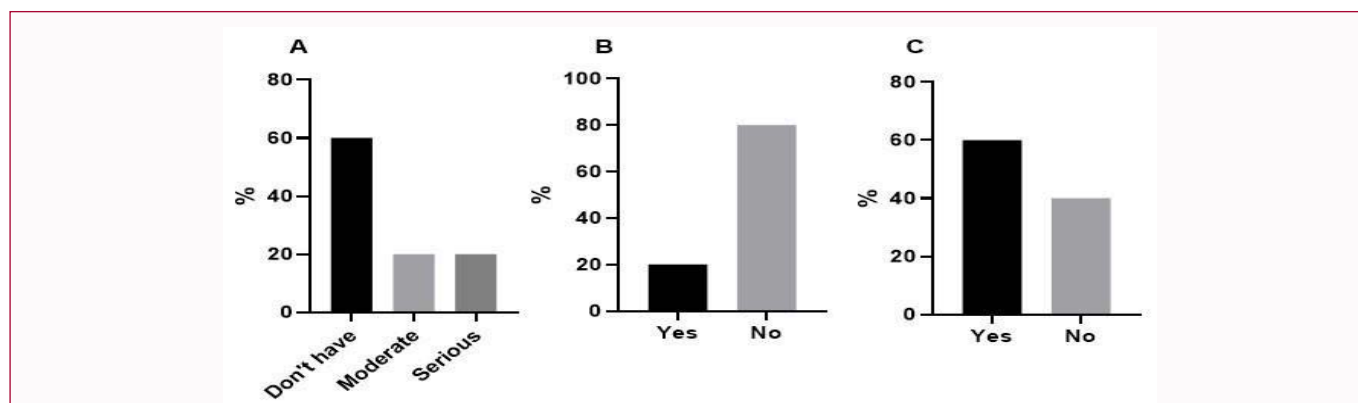

Figure 2: Distribution of patients by type of drug interactions (A), drug allergy (B) and self-medication (C).

majority indicated that they had incomplete elementary school (60%) and only 20% completed high school, which was also evidenced in the study presented by Oliveira and Queiroz [9], which raised the profile of onco-hematological patients undergoing chemotherapy in which they found that 42% of the patients had incomplete elementary school and that only 15% completed high school.

It was analyzed that 80% of the patients come from urban areas and that 70% of them are not performing paid functions. As also observed in the study Souza et al. [10] in which 78% of the patients live in urban areas and that 94% of them were not working.

Regarding the clinical history, it was observed that most patients underwent associated treatments such as surgery, radiotherapy, chemotherapy and hormone therapy (Table 2), of these 70% reported having had surgery and 50% chemotherapy and hormone therapy, equivalent to that studied by Marques and Pierin [11] by characterizing the factors associated with adherence to oral antineoplastic treatment, in which 70% underwent surgery and 72% used chemotherapy.

It was also identified that of the neoplasms found in the study 30% relate to breast cancer, followed by prostate cancer (20%) contrary to the study conducted by Marques and Pierin [11], addressing gastrointestinal cancer as the one with the highest incidence (34%), while breast cancer comes in second with 27%.

It is important to point out that breast cancer is the most relevant neoplasm among women worldwide, whether in developed countries or not. Its risk factors range from lifestyle to genetic mutations and its main treatments are radiotherapy, chemotherapy, surgery and hormone therapy [12,13].

Regarding the chemotherapy drugs used, it was analyzed that the most prevalent drugs were megestrol, chlorambucil, imatinib and abiraterone corresponding to 20% of all patients. According to Silva et al. [14], these antineoplastic drugs have the same efficacy as intravenous chemotherapy, but with some singularities such as the frequency and longer time of use and the administration of the patient's own responsibility at his home. Highlighting some challenges for the multidisciplinary oncology team such as adverse drug reactions, drug interactions, self-medication and treatment adherence.

The adverse reactions mentioned by the patients in the study are described in the legal health document of the drugs used in therapy; various signs and symptoms described after the initiation of oral antineoplastic therapy may be related to adverse reactions of medications used in treated comorbidities and/or be associated with the clinical picture of cancer itself. These reactions are expected, however, without being able to prevent them in view of their pharmacological effect [15].

It was found that in 60% of the cases they do not have interactions with the drugs they use; however, 40% of them have moderate and severe interactions. In this aspect, it is important to stimulate regular follow-up of the multidisciplinary team aiming at guidance about the medication, avoiding interactions harmful to therapy, self-medication and seeking to minimize side effects [14].

Regarding adherence, we found that most patients had difficulties in satisfactorily adhering to therapy, there are several factors that can interfere with oral antineoplastic therapy, on the part of the patient,

such as sociodemographic aspects, other treatment-specific aspects and characteristics of the disease [2,16].

Therefore, we observed through the Morisky and Green test that 70% of patients reported that they are careless about the time of taking the drug and that 90% of them do not stop taking the drug. Different from what was presented by Marques and Pierin [11], in which 7% reported that they did not neglect the time of the medication and that 98% of them do not stop taking the medication.

Therefore, it was observed in the study that there was no adherence by most patients (80%) differently from what was exposed by Silva et al. [14], when evaluating the adherence of patients to oral antineoplastic treatment in which the patients obtained as a result a high rate of adherence (96%), patients were evaluated over a period of 6 months and in addition to the Morisky and Green test, the Questionnaire on Factors that can Influence Treatment Adherence (FIAT) was used as an evaluation method.

However, the study shows that it is important for the multidisciplinary team to perform better adherence to treatment and that an important tool is pharmaceutical care [9], which comprises pharmacotherapeutic follow-up performed by the pharmacist who seeks to guide and direct the patient by reducing rates of non-adherence to treatment, as well as self-medications, interactions, among other pharmacotherapeutic aspects, aiming at a more efficient treatment [17-19].

Conclusion

This study demonstrated that patients using oral antineoplastic drugs are mostly female, with a mean age of 59 years, with preexisting comorbidities, all had previous treatments such as surgery, chemotherapy, radiotherapy and hormone therapy, as well as all had adverse reactions to these drugs, drug interactions appeared in considerable numbers in the study and it was found that most patients did not obtain satisfactory adherence to oral treatment.

According to the above in the study, it is clear the importance of monitoring the pharmacist with patients in oral antineoplastic pharmacotherapy, in order to minimize problems related to therapy such as possible adverse reactions, drug interactions and self-medication, in addition to improving adherence to the proposed pharmacological treatment, ensuring the rational use of medications that this professional goes through. Also emphasizing that the pharmaceutical professional has a fundamental role in the health education of patients and a multidisciplinary team, technically guiding the particularities of this type of treatment.

Acknowledgment

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