

Research Article

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## Drug Interaction in Psycho-Oncology: A Retrospective Glance over the Polymedication and Comorbidities in a Portuguese Psycho-Oncology Service

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### Abstract

**Introduction:** The evaluation and prescription of psychotropic drugs in oncologic setting is of particular importance because of cancer patient's susceptibility to drug interactions.

**Objectives:** Describe the frequency and type of comorbidities and the standard prescription of pharmaceuticals in a sample of cancer patients. Secondly, reflect on the importance of clinical pharmacological interactions in this context, particularly in the prescription of psychotropic drugs. **Material/methods:** Descriptive study of a sample of patients referred for the first time to the Psycho-Oncology Unit of IPOCFG, between October and December 2011. A retrospective collection of the socio-demographic and clinical variables was made by consulting the clinical processes.

**Results:** From the sample of 60 patients included for analysis, 48,3% of the patients were on antineoplastic medication, 46,7% had prior psychiatric history and 70% were on psychotropic drugs; 75% presented other comorbidities. Only 8,3% of patients were free of medication and, from those under it, 63,6% consumed three or more distinct pharmacological classes.

**Conclusions:** There is a high frequency of co-morbidities and co-prescription of several classes of drugs which pose cancer patients at risk of interactions. It is important that physicians are able to predict these phenomena to prevent the loss of efficiency and minimize the adverse effects, particularly of antineoplastic.

**Keywords:** Psycho-Oncology; Comorbidities; Polimedication; Drug interactions

### Introduction

Psychiatric morbidity is increasingly recognized and valued in oncology as a source of anguish and suffering and also because cancer patients who receive adequate treatment of their mental health are more compliant with chemotherapy, in addition to experiencing improved quality of life [1]. Reports also suggest that depression is associated with increased morbidity in cancer patients [2]. The mourning of current and anticipated losses, the fear of death, concerns with the loved ones, the effect of some chemotherapeutics in mood and biological characteristics of the tumor [1] have been implicated in the genesis of this suffering. According to the literature, about 50% of these patients are people with mental illness, mainly adjustment disorders (4-35%) followed by major depressive disorder (3-36%) [3,4-6] and, for some authors, delirium [7]. However, only 30% of the clinical psychiatric syndromes associated with cancer are identified by their doctors [8].

Depression is associated with lower quality of life, increased subjective perception of pain, suicidal thoughts, wish for hastened death and a worse prognosis [3, 9-11].

In addition to the psychiatric context, psychoactive drugs are known to have a multiplicity of actions that can play a key role in the care of patients with cancer (e.g. in the control of anorexia, nausea, vomiting and pain management) [12]. However, drug interactions can lead to increased toxicity or loss of effectiveness when certain medications are prescribed at the same time [3]. Drugs such as antihypertensives, corticosteroids and/or antineoplastic agents (procarbazine, vincristine, L-asparaginase, interferon, tamoxifen) have been considered in several

studies as medical risk factors for depression in patients with cancer [7,13].

Cancer patients are a physically vulnerable population, usually, taking several drugs and, therefore, in particular risk of drug interactions. It is particularly important to carefully evaluate and orientate psychopharmacologic treatment of these patients.

In the literature there are few studies with patient samples considering the importance of interactions and psychiatric comorbidities in cancer patients.

### Material and Methods

We made a descriptive analysis of a sample of patients referred for the first time to Psycho-Oncology Unit of the Portuguese Institute of Oncology Francisco Gentil in Coimbra, between October and December 2011. This is a pilot study where all the patients observed during this period, outpatient or inpatient care, were included. We looked for socio-demographic and clinical variables: psychiatric and

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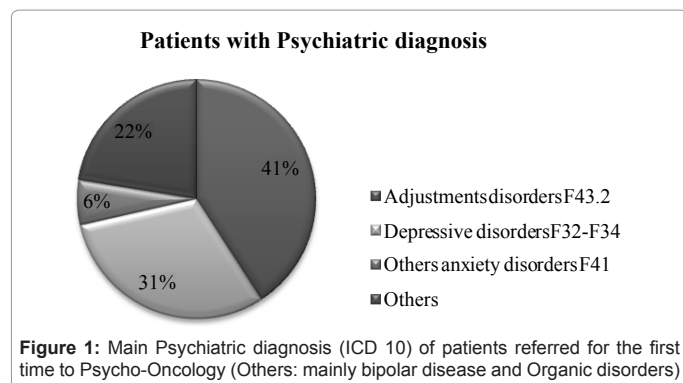
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Comorbidities		Other pharmacologic classes (number)
Psychiatric <b>51,7%</b>	Cardiac disease 10,3%	< 3classes: 27,6%
Hypertension <b>34,5%</b>	Hepatic disease 3,4%	3 - 6 classes: <b>65,1%</b>
Dyslipidaemia <b>34,5%</b>	Others * 27,6%	> 6 classes: 6,9%
Endocrine pathology 13,8%	No 27,6%	

\* Respiratory disease, benign prostatic hypertrophy, anemia, glaucoma, chronic renal failure, autoimmune pathology, stroke, fibromyalgia, chronic constipation

**Table 1:** Comorbidities and pharmacological drugs prescribed to patients treated with some antineoplastic drugs, 48% (n=29).



medical comorbidities, nature and treatment of the disease cancer, psychiatric diagnosis and the categories of drugs taken by patients at the date of evaluation.

## Results

Of the 73 first queries recorded during the period in which the study took place, 13 clinical processes were excluded due to the absence of Oncologic pathology, because it was not the patient's first contact with the unit or because the process was not available at the time of data collection. Thus, the final sample included 60 clinical cases (n = 60).

The sample was composed by 57% of female patients, with a mean age of 57,4 years; in about half of the cases (51,7%) the patients were referred to the Psychiatry Unit through the Oncologic service where a program of psychiatric morbidity screening is implemented using the Distress Thermometer [14]. On average, 22,7 months had lapsed between the diagnosis and the date of the first psychiatric consultation. Breast cancer was the most frequent diagnosis (36,7%), followed by the digestive system and genito-urinary tract cancer, both at 18,3% of cases. In most cases (70%) no remote metastases were detected. Concerning the disease stage, 36,7% of patients were in remission, 30% at initial treatment and 15% were under palliative care.

We found that 48% of patients were treated with some anticancer agent and 28% were still not treated with antineoplastic agents, however, an important portion could be medicated briefly, since 10% were in the process of exploration and study of its cancer disease. Of the total sample, only 8,3% of patients were not taking any pharmacological medication and, from the ones on medication, 63,6% were taking drugs from three or more distinct pharmacological classes.

In addition to the psychiatric pathology and cancer, hypertension, cardiac pathology, dyslipidemia, endocrine and liver diseases stand out as comorbidities (Table 1).

A history of prior psychiatric follow-up was found in 46,7% of

patients and 70% of them were already on some class of psychoactive drugs.

A proportion of patients (18,3%) lacked psychiatric diagnosis, presenting symptoms considered to be adaptive and without causing significant emotional distress or functional deficits (examples: fear about the future, anxiety, death-related concerns with members of the family). Psychiatric pathology was present on 81,7% of patients, mainly, adjustment disorders (40,8%) and depressive disorders (30,6%) as shown in Figure 1 [diagnoses according to International Classification of Diseases, version 10 (ICD-10)] [15]. Of these patients, 27 (54%), reported history of psychiatric follow-up and 23 (46%) had no prior coverage.

## Discussion and Conclusions

Approximately half of the cases referred had pre-existing psychiatric pathology and more than two thirds had a psychiatric diagnosis at the moment of evaluation. Adaptation disorders and depression were the most common. As shown by our results, the Distress Thermometer was a useful tool implicated in the reference of patients assisted in Psychiatry Unit. Half of the patients were on antineoplastic treatment and more than half were taking more than three drug classes prescribed simultaneously including psychoactive drugs.

Given the increased vulnerability of these patients and the known adverse effects of some interactions, it is important that doctors know the rationale underlying mechanisms of biotransformation of drugs they prescribe as well as the possible interactions with other classes and iatrogenic effects of medication.

It is also important to consider the screening and treatments for distress in cancer setting other than psychopharmacologic drugs.

These results outline the importance of promoting the development of scientific research on drug interactions, crossing information from different therapeutic classes to provide adequate psychiatric treatment for patients with cancer.

## Limitations

Both the little sample size and the unicentric methodology used compromises the external validity of the study. The use of descriptive statistical methods limits the projection of the conclusions.

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