

Results of a Cross-Sectional Overview for Psychopathology in Cancer Patients at a University Hospital in Italy

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ABSTRACT

Background: The prevalence rates of psychopathology during the course of cancer have been long researched but surveys are commonly impaired by biases. The aim of our study was to investigate the prevalence of psychopathology taking into account biases.

Methods: A cross-sectional study was conducted over a period of 24 consecutive months. Two groups of cancer patients were enrolled, the first one composed of all the subjects sent to the Unit of Psycho-Oncology for a psychological evaluation and the second one of cancer patients that agreed to be subject to the same psycho-diagnostic assessment.

Results: 744 cancer patients (first arm=530, second arm=214) were enrolled. The rate of psychiatric conditions amounted to 24.9% and it was very significantly correlated with the first way of admission (χ^2 : 224.15, $p < 0.001$). Differently, psychopathological 'sub-threshold' conditions amounted to 41.5% and trended significantly to increase along the course of illness (χ^2 : 23.64, $p < 0.001$).

Conclusion: Evaluating the rate of psychiatric conditions is challenging owing to the relevance of different ways of admission to surveys and of healthcare framework. Conversely, the prevalence of psychological sub-threshold conditions seems to be close to that of the psychological distress of cancer patients.

Keywords: Cancer, Psychiatry, Prevalence, Sub-threshold

INTRODUCTION

The rate of survival for cancer has been constantly increasing in Italy since the 1990s. This positive increase of survival rate has had, however, psychosocial implications such as psychological distress and impairment in quality of life affecting the patient. The epidemiological matter of psychosocial issues in Oncology has been long researched. In early studies, almost 50% of cancer patients resulted affected by some forms of psychopathology. In more recent surveys, this percentage is lower; such surveys are based on different records of screening procedures (structured clinical interviews vs. rating scales), tumors, illness phases and treatment. Moreover, the surveys result to be affected by several diagnostic procedures-related biases, particularly an unclear distinction between psychiatric disorders and the presence of simple psychopathological symptoms [1,2]. The aim of our study was to investigate the prevalence rate of psychopathology and its relationships with clinical features

in cancer patients enrolled from within the totality of patients under the Department of Oncology (DO) of a large University Hospital in Italy (Azienda Ospedaliero-Universitaria Careggi - AOUC) over a two-year period. The endpoints of the survey were [3,4]:

- To evaluate the prevalence rate of psychopathology comparing the estimated rates from two groups of cancer patients among whom requirements and/or

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expectations could be different (primary endpoints);

- To point out the domain rates and relationships elicited by the Incidence Correlations and Indicators of Psychopathology Interconnected to Tumors (INCIPIT) Survey protocol (secondary endpoints).

METHODS

A cross-sectional “two-arm” survey was performed. The diagnostic assessment (IN.C.I.P.I.T. survey protocol) was made up of domains including demographic, clinical, psychopathological and related to tumor features. The first arm was composed of the patients, excluding terminal ones, sent to the Unit of Psycho-Oncology (UPO) that is a part of DO, for a psychological evaluation and/or support during the period from July 1 2011 (T_0) to June 30 2013 (T_e). The second arm was composed of another group of cancer patients under the DO during the same period, not sent to UPO previously, who agreed to be subject to the same assessment. According to the DSM IV TR criteria 32, psycho-diagnosis (caseness) was performed if all of these criteria were fulfilled [5]. If not, ‘sub-threshold’ diagnoses (non-caseness) have had to be set. Statistical analysis for categorical variables was performed by Chi-square test or Fisher’s exact test. The level of statistical significance was set at $P < 0.05$ [6].

RESULTS

As widely described in our previous paper [1], from the totality of the cancer patients under the DO from T_0 to T_e ($n=19432$), the final size of the total sample was 744 subjects, with the first arm consisting of 530 patients and the second arm consisting of 214 patients. The most common cancer sites were the breast ($n=187$; 25.1%) and digestive/gastrointestinal tract ($n=184$; 24.7%). There is a wide majority (52.7%) of tumors in non-metastatic/metastatic not progressive stage and an evident minority of patients not undergoing anti-cancer therapy (11.8%) or with comorbidities (7.1%). As to the healthcare framework, inpatients were 463 (62.2% of the total sample), 262 of whom from the first arm and 201 from the second, whereas outpatients were 281 (37.8% of the total sample), 268 of whom from the first arm and 13 from the second. The caseness patients (**Tables 1 and 2**) numbered 185 (24.9% of the total sample), with a majority of psychiatric conditions that were supposed to be due to cancer (Trauma and Stress-related Disorders^a + psycho-organic ones: $n=97$; 52, 4-13.0% of the total sample) [7]. Anxiety Disorders numbered 38 (20, 5-5.1% of the total sample). A relevant minority of depression diagnoses was noticed ($n=21$; 11, 3-2.8% of the total sample). The non-caseness patients numbered 309 (41.5% of the total sample), with a wide majority of patients suffering from anxiety and depressive symptoms. The first arm showed a significant majority by comparison with the

second arm as to prevalence rates both psychiatric diagnoses and sub threshold conditions (**Table 3**). Moreover, a highly significant majority of psychiatric conditions was noticed in outpatients vs. inpatients ($n=109$, 58.9%). Finally, sub-threshold conditions increase significantly along the course of illness (34.6% in the early stage, 39.3% in the stable stage and 51.8% in the advanced/progressive stage). Psychiatric disorders increase similarly, though with a less linear trend (18.9%, 28.4% and 22.5%, respectively) [8].

DISCUSSION AND CONCLUSION

In our sample of cancer patients in a severe and advanced stage, different ways of admission to the survey and healthcare framework seem to have a central role as to the rate of psychopathological conditions, in terms of wide majority of psychiatric diagnoses in the patients sent to the UPO for psychological assessment and/or support, as expected and in outpatients respectively. The second issue stressed within the results of our study is a lower prevalence of psychiatric conditions than the rates reported by the current psycho-oncological literature. Conversely, in our sample psychopathological sub threshold conditions seem to recall the extent and even the prevalence rate (up to 50%) of the phenomenon of psychological disadvantage among cancer patients as already established by the research, codified as distress by NCCN. This epidemiological relevance could suppose the existence of an overlapping between clinical impairment due to cancer and the presence of psychopathological symptoms that could be representative of a common psychological reaction to cancer. All these issues suggest, in our opinion, the presence of various biases within epidemiological surveys in Psycho-Oncology: different ways of admission, healthcare frameworks, diagnostic procedures and criteria, clinical conditions and different motivations to undergo psychological assessment by cancer patients. In this sense, in our opinion, the group of patients, not sent to UPO, whom accepted to be included in the survey, may be quite representative of the psychopathology within the whole oncological population. Moreover, these patients not sent to UPO seem to have a total amount of psychopathological conditions (caseness+non-caseness) which is absolutely comparable to the prevalence of psychopathology in the general population in Italy [9].

Finally, the results of our survey suggest that epidemiological surveys in Psycho-Oncology have to be evaluated considering the constant likelihood of biases or inconclusive items. So, estimating the prevalence of psychopathology in Oncology continues to be challenging. Conversely, the phenomenon of psychological distress represents a well-established issue in cancer patients [10].

^a Adjustment, Acute Stress, Post Traumatic Stress Disorders

Table 1. Psychopathological issues within sub-clusters (n, %).

	None	Caseness	Sub-Threshold	P (value-p)
TOTAL	250 (33.6)	185 (24.9)	309 (41.5)	
1 st arm	93 (17.6)	180 (33.9)	257 (48.5)	224.15
2 nd arm	157 (73.4)	5 (2.3)	52 (24.3)	<0.001
Inpatients	201 (43.4)	76 (16.4)	186 (40.2)	70.87
Outpatients	49 (17.4)	109 (38.8)	123 (43.8)	<0.001
Early stage	74 (46.5)	30 (18.9)	55 (34.6)	23.645
Stable stage	127 (32.2)	112 (28.4)	155 (39.3)	<0.001
Adv. progr. stage	49 (25.6)	43 (22.5)	99 (51.8)	

Table 2. Psychopathological diagnosis within psychiatric and sub-threshold sub-clusters (n, % relative to the total sample - % relative to the sub-cluster).

Diagnosis	Psychiatric (Caseness)	Sub-Threshold Conditions (Non-Caseness)
TOTAL	185 (24.9-100)	
‘Reactive’	64 (8.6-34.6)	309 (41.5-100)
Adjustment D.	59 (7.9-31.9)	
Acute Stress D.	1 (0.1-0.5)	
Post-Traumatic Stress D.	4 (0.5-2.2)	
Anxiety	38 (5.1-20.5)	152 (20.4-49.2)
Generalized Anxiety D.	25 (3.4-13.5)	
Panic D.	10 (1.3-5.4)	
others	3 (0.4-1.6)	
Organic cancer-related	31 (4.2-16.8)	0
Depressive	21 (2.8-11.3)	121 (16.3-39.2)
Major Depression D.	8 (1.1-4.3)	
Dysthymic D.	13 (1.7-7.0)	
Bipolar	8 (1.1-4.3)	12 (1.6-3.9)
Personality	8 (1.1-4.3)	21 (2.8-6.8)
Substance/Addictive	8 (1.1-4.3)	2 (0.3-0.6)
Psychotic	2 (0.3-1.1)	1 (0.1-0.3)
Organic not cancer-related	2 (0.3-1.1)	0
Others	3 (0.4-1.6)	0

Table 3. Correlations among sub-clusters.

	1 st arm (n=530)				2 nd arm (n=214)			
	None n (%)	Psych. n (%)	Sub-Th. n (%)	P value p	None n (%)	Psych. n (%)	Sub-Th. n (%)	P value p
TOTAL	93 (17.5)	180 (34.0)	257 (48.5)		157 (73.4)	5 (2.3)	52 (24.3)	
Inpatients	51 (19.5)	72 (27.5)	139 (53.0)	9.72 0.008	150 (74.6)	4 (2.0)	47 (23.4)	0.104*
Outpatients	42 (15.7)	108 (40.3)	118 (44.0)		7 (53.8)	1 (7.7)	5 (38.5)	
Early stage	29 (26.1)	29 (26.1)	53 (47.7)	15.106 0.004	45 (93.7)	1 (2.1)	2 (4.2)	20.475 <0.001
stable stage	38 (13.9)	110 (40.3)	125 (45.8)		89 (73.5)	2 (1.6)	30 (24.8)	
Adv. progr. stage	25 (17.1)	41 (28.1)	80 (54.8)		24 (53.3)	2 (4.4)	19 (42.2)	

*Fisher's Exact Test

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