

A Study of Depressive Symptomatology in Cancer Patients

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This study compares the depressive symptoms in a group of cancer patients (n = 30) and a control group of psychiatric outpatients depressives (n = 16). Assessment of depression was done by the Zung self rating questionnaire. Psychiatric depressives scored significantly higher in core depressive symptoms than did the depressed cancer patients. However, the symptoms representing the anxiety dimension of depression did not differ between the 2 groups. The implications of these results are discussed and recommendations for future studies are suggested.

(Egypt.J.Psychiat., 2000, 23: 19-27).

INTRODUCTION

Nearly half of all cancer patients have a psychiatric disorder, usually an adjustment disorder with depression (Spiegel, 1996). However, the nature of depressive symptoms in cancer are still a matter of debate. Symptoms such as fatigue and insomnia may be attributed to the cancer process itself, although in fact they may be caused by psychological illness (Lewis et al., 1990). Also, the depressive features in many cancer patients may be viewed as normal or understandable consequences to a life-threatening diagnosis rather than a psychiatric disorder (Lewis et al., 1990). Accordingly, Derogatis et al. (1983) found the prevalence of major depression in cancer patients to be only 6%, while depressive-like states of chronic mild distress prevailed in 40% of their sample.

The Present Study:

El Batrawi (1990), in a study of breast cancer patients did not find a significant difference in the mean depres-

sive scores between cancer patients and normal controls according to 3 different depressive scales including the Zung self rating scale. No attempt was done in the above-mentioned work to study the nature of the individual depressive symptoms. Therefore, in the present work, we aim to study the nature of depressive symptomatology in cancer patients by a cross sectional design in which we compare the frequency of different depressive symptoms in depressed cancer patients and a comparison group of depressed.

SUBJECTS AND METHODS

32 consecutive cancer patient from the outpatient radiotherapy clinic of Kasr El Aini Hospital, Cairo University, were initially assessed. Patients with severe cachexia, delirium, fever or scoring less than 20 in the Mini-Mental State Examination (Folstien, et al., 1975) were excluded.

As regards controls, a group of 16 consecutive patients with diagnosis of depression (according to DSM-IV criteria) were taken from the out patient psychiatric clinic in Kasr Al Aini University Hospital.

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Procedure:

Zung self-rating scale for depression (ZSRS) (Zung, 1965): This scale gives a cut off score of 40 which is converted into an index score of 50% which denotes presence of depression. The higher the index score the higher is the severity of depression.

Assessment of health characteristics for cancer patients:

(A) ECOG performance status: (Eastern Cooperative Oncology Group, 1983):

Grade 0 (normal activity).

Grade 1 (restricted in strenuous activity but ambulatory and able to do light work).

Grade 2 (ambulatory and capable of self care, not able to work).

Grade 3 (limited self care).

Grade 4 (bed bound).

(B) Disease status as defined by Dugan et al., 1998:

Disease free/remission (no current evidence of cancerous tumours or cells).

Stable disease (cancerous tumours or cells present but not currently spreading).

Active disease / relapse (cancerous tumours or cells currently spreading). The disease status does not define treatment status (Dugan et al., 1998).

Statistical analysis was done by t-test and chi-square test.

RESULTS

(A) Description of Data: Data for two of the cancer patients were incomplete, so the total number of cancer patients included in the study was 30.

1- Cancer Patients:

As seen from table (1), male and female cancer patients were equally dis-

tributed with no significant differences in age ($P > 0.05$). The majority (77%) were married and illiterate (60%). As regards type of cancer, there was no predominance of a special type. Leukaemia, lymphoma, breast, as well as bronchogenic carcinoma being nearly equally distributed (10% to 13.3%).

As regards stage of disease more than half of the patients (63%) had early disease (stage I, II) while as regards disease status the majority (70%) were in partial remission (40%) or stationary (30%).

Also, as regards performance status the majority (77%) were in grade I, II while grade III accounted for 23% and none were in grade IV. As regards Zung Index score for depression, 18 (60%) scored above the threshold for depression, the majority 15 (50%) being in the mild to moderate range, while only 3 (10%) scored in the severe range of depression.

2- Control Group

As regards the depressive psychiatric group ($n = 16$), males ($n = 5$) accounted for more than 50% of the sample (male to female ratio 2.2/1).

This greater proportion of males is accounted for mainly by the presence of the majority of cases with adjustment disorder in the male group. (male = 5, female = 2). The mean age for the depressive group was 35 (+ 12.97) and 8 (50%) were married. As regards illiteracy only 2 (12.5 %) were illiterate (one male and one female). As regards diagnosis 7 (44%) were diagnosed as adjustment disorder with mixed anxiety and depression while 9 (53%) were diagnosed as major depression whether single or recurrent. The stresses encountered in the group with adjustment disorder were financial (2 patients), family problems (2 patients) and job related (3 patients).

Table 1
Demographic, Psychometric and Health Characteristics of Cancer Sample (n = 30)

Variable	No.	No.
Female	15	50%
Male	15	50%
Age:		
Mean = 43 (± 15.8)		
Male ± 41.6 years.		
P > 0.05		
Female = 44.5 years.		
Marital Status		
Married	23	77
Single, divorce, widow	7	23
Illiteracy		
- Literate	19	40
- Illiterate	18	60
Disease type		
Leukemia	4	13.3
Lymphoma	4	13.3
Breast	3	10
Osteosarcoma	3	10
Bronchogenic carcinoma	3	10
GIT Cancer	3	10
Other sites	10	33.3
Duration of complaint (in months): (*)	Mean duration	15.9 $\pm$ (24.5)
< 1 year	18	60
> 1 year	11	36.6
Stage of Disease		
Stage I	6	20
II	13	34
III	9	30
IV	2	7
Disease Status		
Complete Remission (CR)	2	7
Partial Remission (PK)	12	40
Stationary Disease (SD)	9	30
Disease Progression (DP)	7	23
ECOG Performance Status		
Grade 0	0	0
I	6	20
II	17	57
III	7	23
IV	0	0
Zung Index Score		
Not depressed < 50	12	40
Mild dep. 50-90	10	33
Moderate Dep. 59-69	5	17
Severe Dep. > 69	3	10

* Duration of complaint could not be ascertained for one patient.

Table 2
Comparison Between Number of Cancer & Depressed Patients Endorsing 3.4 point Responses on Individual Items of the Zung Self Rating Scale.

Symptoms		Cancer Patients (n = 30)		Depressed Patients (n = 16)		P. value
		No	%	No	%	
1	Depressed Mood	9	30	14	87.5	P< 0.001
2	Diurnal variation	14	46.6	11	68.75	P> 0.05
3	Crying spells	8	26.6	11	68.75	P< 0.01
4	Sleep problems	11	34.3	14	87.5	P< 0.001
5	Appetite	17	56.6	13	81.25	P> 0.05
6	Libido *					
7	Weight changes	10	33.3	8	50	P> 0.05
8	Constipation	10	33.3	5	31.25	P> 0.05
9	Tachycardia	6	20	1	6.25	P> 0.05
10	Fatiguability	8	26.6	13	81.25	P< 0.001
11	Confusion	15	50.0	14	87.5	P< 0.05
12	Psychomotor retardation	16	53.3	12	75	P> 0.05
13	Psychomotor agitation	7	23.3	9	56.25	P> 0.05
14	Hopelessness	2	6.6	14	87.5	P< 0.01
15	Irritability	10	33.3	10	62.5	P> 0.05
16	Indecisiveness	6	20	12	75	P> 0.001
17	Devaluation	1	3.3	15	93.75	P< 0.001
18	Emptiness	4	13.3	14	87.5	P< 0.001
19	Suicidal thoughts	3	10	6	37.5	P< 0.05
20	Dissatisfaction	9	30	13	81.25	P< 0.001

* Not assessed.

Table 3
Comparison Between Number of Depressed Cancer & Depressed Psychiatric Patients Endorsing Severe Grades on Core Depressive Items of the Zung Self Rating Scale.

Symptoms		Cancer Patients (n = 18)		Depressed Patients (n = 16)		P. value
		No	%	No	%	
1	Depressed Mood	7	38.8	14	87.5	P< 0.01
2	Crying spells	8	44.4	11	68.75	P> 0.05
3	Confusion	12	66.6	14	87.5	P> 0.05
4	Agitation	7	38.8	9	56.25	P> 0.05
5	Hopelessness	2	11	14	87.5	P< 0.001
6	Irritability	10	55.5	10	62.5	P< 0.05
7	Indecisiveness	6	33.3	12	75	P> 0.02
8	Devaluation	1	5.5	15	93.75	P> 0.001
9	Emptiness	4	22	14	87.5	P< 0.001
10	Suicidal thoughts	3	16.6	6	37.5	P< 0.001
11	Dissatisfaction	8	44.4	13	81.25	P< 0.05
12	Fatiguability*	6	33	13	81.25	P< 0.01

* Included for comparative purposes only

Table 4
Number and Percentage of Patients with Adjustment Disorder and Depressed
Cancer Patients Scoring 3.4 Point (Moderate to Severe) Responses on Core
Depressive Items of the Zung Self Rating Scale

Symptoms	Adjustment Disorder Patients (n = 18)		Depressed Cancer Patients (n = 16)	
	No	%	No	%
1 Depressed Mood	6	86	7	38.8
2 Crying spells	7	100	8	44.4
3 Confusion	7	100	12	66.6
4 Psychomotor Agitation	4	57	7	38.8
5 Hopelessness	6	86	2	11
6 Irritability	3	43	10	55.5
7 Indecisiveness	7	100	6	33.3
8 Devaluation	7	100	1	5.5
9 Emptiness	7	100	4	22
10 Suicidal thoughts	5	71	3	16.6
11 Dissatisfaction	7	100	8	44.4

According to the Zung index score 11 (69%) patient scored in the severe range, 2 (12.5%) in the moderate range, another 2 (12.5%) in the mild range and one scored less than the index score required to diagnose depression.

B) Analysis of Depressive Scores:

The total raw score of depression in depressed cancer patients (n = 18) and depressed psychiatric patients (n = 16) was 48 (± 7.7) and 58.3 (± 9) respectively (P < 0.05).

Table (3) shows the comparison between the frequency of cancer and depressed psychiatric patients scoring in the moderate to severe range. As seen from the table depressive symptoms were scored significantly more frequently in psychiatric than in the cancer group. These symptoms included both core depressive symptoms (depressed mood, crying spells, confusion, psychomotor agitation, hopelessness, indecisiveness, personal devaluation, emptiness, suicidal rumination and

dissatisfaction and somatic symptoms such as sleep problems and fatigability.

Since the Zung scale contains many items of somatic complaints which might falsely inflate the rates of depression in cancer patients, we compared the mean raw score of core depressive symptom (11 symptom) in the psychiatric depressives (n = 16), depressed cancer patients (n = 18) and non depressed cancer patients (n = 12). Both the psychiatric depressives (mean = 36) and the depressed cancer patients (mean = 26) scored significantly higher than the non depressed cancer patients (mean = 15). Also, the mean raw score of the psychiatric depressives was significantly higher than that of the depressed cancer patients (P < 0.01). This means that depressed cancer patients are midway between non depressed cancer patients and psychiatric depressives as regards severity of core depressive symptoms.

Table (4) shows a comparison between number of depressed cancer and

depressed psychiatric patients scoring in the severe range on core depressive symptoms of the Zung scale.

Unlike table (3), items with differences reaching statistical significance were less (6 items i

table (4) compared to 10 items in table (3). Core items not reaching statistical significance in

Table (4) include crying spells, confusion psychomotor agitation and suicidal rumination.

Unexpectedly fatigue was found to be endorsed significantly more in the psychiatric depressives (81%) than in the depressed cancer patients (33%) ($P < 0.05$).

Although psychiatric depressed patients with adjustment disorder were very few ($n = 7$) and could not permit statistical analysis yet due to the importance of this group as a comparison to depressed cancer patients we have put their results in table (5).

Table (5) Number and Percentage of patients with Adjustment Disorder and Depressed cancer patients scoring 3,4 point (moderate to severe) responses on core depressive items of the Zung Self Rating Scale.

As seen from table (5) all patients with adjustment disorder in the psychiatric group scored in the severe range for depression in 7 core items of the Zung scale (crying spells, confusion, indecisiveness, devaluation, emptiness and dissatisfaction). Given the fact that the percentage of depressed cancer patients scoring in the severe range in the same items, was much less frequent, we can see that patients with adjustment disorder in the psychiatric category endorse depressive symptoms as being more severe much more frequently than depressed patients adjusting to the stress of cancer.

As regards gender differences there were no significant differences between male and female cancer patients as regards raw score of depression (mean = 36.9 and 43.6 respectively, $P > 0.05$).

DISCUSSION

This study shows that depressed cancer patients suffer from depressive symptoms in the severe range significantly less than depressed outpatient psychiatric patients. This finding is both interesting and unexpected since the impact of cancer is expected to be a major stressful event causing a big amount of distress on those it afflicts. However, since cancer patients were interviewed several months after diagnosis and treatment has begun, it is likely that they have become largely adapted to their new situation using various defense mechanisms with denial as one of their main strategies (El-Batrawi, 1990; Fouad, 1999). Also, since the psychiatric patients used as controls were collected from outpatient clinics, their depressive scores are expected to be higher than if they were gathered from the community (Costello, 1990).

In fact, depression encountered in the community compared with clinic depression is characterized also in addition of being less severe, by being shorter in duration, has fewer and more different symptoms, is less incapacitating and more environmentally than biologically caused (Costello, 1990). Also, community depressives according to Costello, (1990) are more responsive to psychological than to pharmacological intervention. This latter point is important as recent research has shown the utility of a special psychological treatment called adjuvant psychological therapy (APT) (Moorey and Greer, 1989) in improving the mental adjustment of cancer patients.

However, although differences other than severity of symptoms between community and clinic depression were not directly compared in this study, it seems that depression in cancer patients resembles community depression in being an important area for both the studying of predictors of depression (i.e., primary prevention) (Harrison et al., 1994; Brown and Harris, 1978) and for developing efficient screening methods for early detection of cases (i.e., secondary prevention), (Harrison et al., 1994, WPA, 1997).

However, although depressed outpatients were significantly more depressed than depressed cancer patients yet comparing the symptoms endorsed as severe in both groups, we find significant differences only in one set of symptoms and not in the other. Depressed mood, hopelessness, undecivness, devaluation and anhedonia were endorsed as severe significantly more frequently in depressed outpatients than depressed cancer patients. These symptoms constitute a set which is considered by some as a cognitive dimension of depression (Lustman et al., 1997) and by others as the core of depression (Hamdi et al., 1997).

However, other symptoms did not differ significantly between both groups. These were crying spells, confusion, suicidal rumination and psychomotor agitation. These are considered as forming an "anxiety component" of depression (Hamdi et al., 1997). These latter symptoms being the same in both depressed controls and depressed cancer patients confirm the importance of anxiety in the diagnosis of adjustment disorder with mixed anxiety and depression which was the predominant pathological category in our sample.

Therefore, from the above mentioned, it seems that cancer patients who are known to use denial as a frequent de-

fense mechanism (Fouad et al., 1999) do not tend to experience core depression as severely as psychiatric depressives. Instead they manifest mainly by a rather mixed picture of dysphoria and anxiety.

This finding has a therapeutic implication which is reflected mainly in the need of cancer patients especially those who are depressed for a type of supportive expressive therapy (Spiegel, 1996). This kind of therapy is especially helpful in patients faced with overwhelming emotions as it helps in organizing their dysphoria by providing both time and place to deal with it effectively (Spiegel, 1996).

As regards somatic symptoms, we have concentrated mainly on fatigue, as it is the most frequent somatic symptom reported and mentioned in the literature (Smets et al., 1993).

However, contrary to our expectation it was found that fatigue was experienced in its severe range less frequently in depressed cancer patients than depressed psychiatric outpatients. However, this finding could be explained by the method used in our study to assess fatigue. As a single item in the Zung scale, fatigue was probably perceived by the patients as a variant of anhedonia which as mentioned before was not perceived as severe enough in depressed cancer patients when compared to the depressed controls.

Therefore, to study the phenomenon of fatigue more comprehensively in cancer patients, scales which probe the phenomenon in a multi-dimensional way (e.g., the Multidimensional Fatigue Inventory, Smets et al., 1995), are recommended for use in future studies.

It is hoped that this study has been able to shed more light on the differential aspects of cancer symptomatology, and to attract attention to the need de-

pressed cancer patients have to be listened to by their attending staff. Also, future studies are needed with cancer patients of more high educational standard to see if the pattern of symptoms is the same as found with the less educated.

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دراسة عن الأعراض الاكتئابية في مرضى السرطان

طُبِقَ هذا البحث على ٣٠ مريضاً بالسرطان، و١٦ مريضاً بالاكتئاب النفسى، كعينة ضابطة، وذلك بهدف الاستدلال على نوعية الأعراض الاكتئابية فى مرضى السرطان، وقد أظهر اختبار زونج لقياس الاكتئاب أن مرضى السرطان يعانون بدرجة ذات دلالة إحصائية أقل فيما يتعلق بالأعراض الاكتئابية الأساسية من مرضى الاكتئاب النفسى، ولكنهم يعانون بنفس الدرجة فيما يتعلق بأعراض الاكتئاب الدالة على القلق.

وقد تناول البحث هذه النتائج بالتحليل، ويتقدم الرأى والتوصيات على ضوء هذه النتائج.