

Research Article

A Prospective Study on the Prevalence of Major Depression, Anxiety and Stress among Various Cancer Patients

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ABSTRACT

Background: Cancer is one of the major leading causes of morbidity and mortality worldwide. It is one of the most stressful events when a person is diagnosed with it and this stress is often a triggering factor for depression and anxiety. Untreated psychological disorders with any other medical condition may worsen the individuals' quality life. In this study we made an attempt to assess the prevalence of depression, anxiety and stress and their severity among various cancer patients.

Methods: This was a prospective observational study involving different types of cancer patients who were undergoing different treatment procedures for a period of 6 months. Patients of both genders who are above 18 years were included in the study and all types of cancers which are available in the hospital were taken into consideration for assessing depression, anxiety and stress. Patients with past history of psychological disorders were excluded from study. Data was collected by using Depression, Anxiety and Stress Scale (DASS).

Results: During the study period, a sample of 232 cancer patients were interviewed and screened for depression, anxiety and stress. A total of 74 (31.9%) patients were observed with depression/anxiety/stress or in combination. According to age wise categorization, majority of the cancer patients with any kind of disorder (depression/anxiety/stress alone or in combination) were found between the age group of 41 to 50 years (28.4%), followed by the age group of 51 to 60 years (25.7%). Out of the 74 cancer patients with abnormal mental health, 29(39.2%) were observed with depression alone, 16(21.6%) were observed with anxiety alone, 17(23%) were observed with depression associated with anxiety, 1(1.4%) was observed with depression associated with stress, 4(5.4%) were observed with anxiety associated with stress and 7(9.4%) were observed with depression associated with both anxiety and stress.

Conclusion: Psychological conditions like depression, anxiety and stress are more prevalent in chronic medical conditions like cancer. In our study 31.9% of the patients were observed with depression alone or anxiety alone or in combination associated with stress. Females are more prone to depression and males are more prone to anxiety. The prevalence of depression alone was observed to be high when compared to the remaining disorders. Our results revealed that patients with breast cancer and gynaecological cancers have the highest prevalence of depression and anxiety (often associated with stress) among all the cancers.

Keywords: Anxiety, Cancer, Depression, Stress

INTRODUCTION

Cancer is one of the major leading causes of morbidity and mortality worldwide. It is distressing for both patients and their care takers¹. Patients have to deal with the emotional impact of their illness and poor prognosis, in addition to their suffering². Cancer is one of the most stressful events when a person is diagnosed with it and this stress is often a triggering factor for depression and anxiety³. Fear of death, change in social role & life style and interruption in their life plans are some of the important issues encountered by the cancer patients⁴. Oncologists should play a significant role in recognizing the above psychological conditions and should refer to the psychiatrists for better patient care⁵. Untreated psychological disorders with any other medical condition may worsen the individuals' quality life⁶. Studies from

India were very limited in the aspect of depression, anxiety and stress among cancer patients. Hence in this study we made an attempt to assess the prevalence of depression, anxiety and stress and their severity among various cancer patients.

MATERIALS AND METHODS

This was a prospective observational study involving different types of cancer patients who were undergoing different treatment procedures at Ganni Subba Lakshmi Trust Cancer Hospital and Research Centre, Rajahmundry for a period of 6 months. Patients of both genders who are above 18 years were included in the study and all types of cancers which are available in the

Table 1: DASS Scores For The Assessment Of Depression, Anxiety And Stress

Severity	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Very severe	28+	20+	34+

Table 2: Gender wise categorization of the cancer patients included in the study

Gender	Normal	Patients with any kind of disorder (Depression / Anxiety/ Stress Or In combination)	
			Total (%)
Males	56	17	73(31.5)
Females	102	57	159(68.5)
Total (%)	158(68.1%)	74(31.9%)	232(100)

Table 3: Age wise categorization of all the cancer patients with depression/anxiety/stress alone or depression associated with anxiety/stress or stress associated with anxiety and depression associated with both stress and anxiety

Age	Male	Female	Total	Percentage
≤20 Years	2	0	2	2.7%
21 – 30 Years	2	0	2	2.7%
31 – 40 Years	2	12	14	19%
41 – 50 Years	5	16	21	28.4%
51 – 60 Years	4	15	19	25.7%
61 – 70 Years	2	11	13	17.5%
>70 Years	0	3	3	4%
Total	17	57	74	100%

depression, anxiety and stress. Patients with past history of psychological disorders were excluded from study. Data was collected by using Depression, Anxiety and Stress Scale (DASS). Table 1 represents the severity scores of depression, anxiety and stress according to DASS.

Statistical analysis

SPSS 21.0 was used to perform the statistical analysis, odds ratio was done to obtain the interventions and conclusions about the effects of the events (depression/anxiety/stress).

Table 4: Distribution of disorders among cancer patients with depression/anxiety/stress or in combination

Disorder	Male	Female	Total (%)
Depression alone	7	22	29(39.2)
Anxiety alone	6	10	16(21.6)
Stress alone	0	0	0
Depression associated with Anxiety Stress	1	16	17(23)
Depression associated with Anxiety Stress associated with Depression	0	1	1(1.4)
Stress associated with Anxiety Stress associated with Depression and Anxiety	1	3	4(5.4)
Stress associated with Depression and Anxiety	2	5	7(9.4)
Total	17	57	74(100)

Table 5: various types of cancers included in our study for screening the depression, anxiety and stress.

S. No	Diagnosis	Total	Percentage
1.	Breast cancer	26	35.2%
2.	Gynaecological cancers	14	19%
3.	GI cancers	11	14.8%
4.	Cancers of Respiratory system	5	6.8%
5.	Male genitourinary tract cancers	3	4%
6.	Head and neck	7	9.4%
8.	Hematological cancers	3	4%
9.	Others	5	6.8%
10.	Total	74	100%

RESULTS

During the study period, a sample of 232 cancer patients were interviewed and screened for depression, anxiety and stress. Out of these 73 (31.5%) were males and 159 (68.5%) were females. A total of 74 (31.9%) patients were observed with depression/anxiety/stress or in combination. Among them, 57 (77%) were found to be females and 17 (23%) were found to be males. Table 2 represents the gender wise categorization of the cancer patients included in the study. According to age wise categorization, majority of the cancer patients with any kind of disorder (depression/anxiety/stress alone or in combination) were found between the age group of 41 to 50 years (28.4%), followed by the age group of 51 to 60 years (25.7%). Table 3 represents the age wise categorization of all the cancer patients with depression/ anxiety/ stress alone or depression associated with anxiety/stress or stress

Table 6: Gender wise categorization of cancer patients with depression alone

Gender	Males (%)	Females (%)	Total (%)	Odds ratio	p-value
Depression observed	7(3)	22(9.5)	29(12.5)	0.66	0.36
Depression not observed	66(28.4)	137(59.1)	203(87.5)		
Total	73(31.5)	159(68.5)	232(100)		

Table 7: Gender wise categorization of the cancer patients with anxiety alone

Gender	Males (%)	Females (%)	Total (%)	Odds ratio	p-value
Anxiety observed	6(2.6)	10(4.3)	16(6.9)	1.33	0.59
Anxiety not observed	67(28.9)	149(64.2)	216(93.1)		
Total	73(31.5)	159(68.5)	232(100)		

Table 8: Severity of depression among the cancer patients diagnosed with depression alone

Severity	Male	Female	Total	Percentage
Mild	4	17	21	72.4%
Moderate	3	5	8	27.6%
Severe	0	0	0	0%
Very Severe	0	0	0	0%
Total	7	22	29	100%

Table 9: Severity of anxiety among the cancer patients diagnosed with anxiety alone

Severity	Male	Female	Total	Percentage
Mild	3	3	6	37.5%
Moderate	3	5	8	50%
Severe	0	0	0	0%
Very Severe	0	2	2	12.5%
Total	6	10	16	100%

associated with anxiety and depression associated with both stress and anxiety. Out of the 74 cancer patients with abnormal mental health, 29(39.2%) were observed with depression alone, 16(21.6%) were observed with anxiety alone, 17(23%) were observed with depression associated with anxiety, 1(1.4%) was observed with depression associated with stress, 4(5.4%) were observed with anxiety associated with stress and 7(9.4%) were observed with depression associated with both anxiety and stress. Table 4 represents the distribution of disorders among cancer patients with depression/anxiety/stress or in combination. Table 5 represents the various types of cancers included in our study for screening the depression, anxiety and stress. Majority of the patients were observed with breast cancer followed by gynaecological cancers. Among the 74 cancer patients with abnormal mental health 29(12.5%) were observed with depression alone and 16 (6.9%) were observed with anxiety alone.

Table 6 represents the gender wise categorization of cancer patients with depression alone and table 7 represents the gender wise categorization of cancer patients with anxiety alone. The severity of depression among the cancer patients diagnosed with depression alone and the severity of anxiety among the cancer patients diagnosed with anxiety alone were represented in table 8 and 9 respectively. Out of 29 depressed cancer patients 21(74.2%) were found to be mildly depressed, 8 (27.6%) were found to be moderately depressed and no patient was found to be severely or very severely depressed. And among the 16 cancer patients with anxiety, 6 (37.5%) were found to be with mild anxiety, 8 (50%) were found to be with moderate anxiety, 2 (12.5%) were found to be with extremely severe anxiety and no patients were found to be with severe anxiety. Among the 232 cancer patients, no patients were found to be with stress alone. Stress among the cancer patients was

associated either with depression or with anxiety or with both depression and anxiety.

Type of cancer therapy taking

Out of 74 cancer patients with abnormal mental health 46 (62.2%) were observed to be on chemotherapy, 25 (33.8%) were found to be on radiation and 3 (4%) have completed their treatment and they are coming for follow up. Table 10 represents the Present treatment of the cancer patients with depression/anxiety/stress alone or with depression associated with anxiety/stress or anxiety associated with stress or depression associated with both anxiety and stress.

DISCUSSION

In our study 12.5% of the patients with various cancers were suffering from depression alone and 6.9% of the cancer patients were suffering with anxiety alone. Most of the patients were found to be in middle age either suffering with a psychological disorder alone or in combination. Among the psychological disorders in our study depression alone was found to be more prevalent followed by depression associated with anxiety disorder. In our study the severity of depression was found to be mild (72.4%) and the severity of anxiety was found to be moderate (50%). No patients were observed with stress alone. It is associated with either depression or anxiety or with both depression and anxiety. In our study majority of the persons with depression alone or anxiety alone or in combination were observed with breast cancer (35.2%) followed by gynaecological cancers. In case of breast cancer most of the patients were observed with depression associated with anxiety and in case of gynaecological cancers most of the patients observed with depression alone.

Table 10: Present treatment of the cancer patients with depression/anxiety/stress alone or with depression associated with anxiety/stress or anxiety associated with stress or depression associated with both anxiety and stress

Disorder	Chemotherapy	Radiation	Completed	Total (%)
Depression	17	12	0	29(39.2)
Anxiety	11	3	2	16(21.6)
Stress	0	0	0	0
Depression associated with anxiety	11	6	0	17(23)
Depression associated with stress	1	0	0	1(1.3)
Anxiety associated with stress	1	3	0	4(5.4)
Depression associated with both anxiety and stress	5	1	1	7(9.5)
Total(%)	46(62.2)	25(33.8)	3(4)	74(100)

CONCLUSION

Psychological conditions like depression, anxiety and stress are more prevalent in chronic medical conditions like cancer. In our study 31.9% of the patients were observed with depression alone or anxiety alone or in combination associated with stress. Females are more prone to depression and males are more prone to anxiety. Majority of the middle aged persons were involved with at least one of the above psychological conditions. The prevalence of depression alone was observed to be high when compared to the remaining disorders. Our results revealed that patients with breast cancer and gynaecological cancers have the highest prevalence of depression and anxiety (often associated with stress) among all the cancers. It is the responsibility of all the health care professionals to create awareness regarding the psychological disorders among various chronic medical conditions in order to improve the quality of life.

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