Frequency of Depression and Anxiety among cancer patients and their determinants – a study at Oncology Units of Public and Private Sector, Tertiary Care, Hospitals of District Lahore

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ABSTRACT

Objective: To assess the magnitude of anxiety and depression among cancer patients and to determine their association with age, gender and time since diagnosis.
Methods and materials: A cross-sectional study carried out on cancer patients admitted to oncology units in three tertiary care hospitals in District Lahore, Pakistan. A total of 100 cancer patients were interviewed using structured questionnaires to assess the levels of depression and anxiety among them using classification of anxiety and depression disorders in ICD – 10 laid down by WHO.
Results: In our study (n=100) the mean age is 42.05 among whom 52(52%) were males and 48(48%) females. Anxiety disorders were present in 79% patients while 86% had depressive disorders. Age with level of anxiety (p=0.0192) and time since diagnosis with levels of depression (p=0.0144) was significantly associated. The p values of age and level of depression was 0.2334 and for time since diagnosis and levels of anxiety was 0.0899.
Conclusion: Special concerns should be kept in mind while treating cancer patients in middle-aged groups and with those having a time since diagnosis of less then 6 months, because high levels of depression and anxiety are experienced in cancer patients with a shorter time since diagnosis.
Keywords: Depression, anxiety, cancer, oncology

INTRODUCTION

Cancer is a leading cause of death worldwide. From a total of 58 million deaths worldwide in 2005, cancer accounts for 7.6 million (13%) of all deaths[1]. More than 70% of all cancer deaths in 2005 occurred in low and middle-income countries. Deaths from cancer in the world are projected to continue rising, with an estimated 9 million people dying from cancer in 2015 and 11.4 million dying in 2030[2]. In 2005 cancer killed approximately 85,000 people in Pakistan among whom 53,000 of those people were underage of 70[3].

Cancer is not simply a disease, but its impact extends through all aspects of society. We should focus not just on advances in treatment, but also on active supportive measures for those who suffer. Despite biomedical progress, cancer is still often considered synonymous with death, pain and suffering[4]. It is argued that cancer is not just a single event with a certain end but a permanent condition characterized by ongoing ambiguity, potentially delayed or late effects of the disease or its treatment and concurrent psychological issues[5].

Previous studies have demonstrated an increased risk for psychiatric morbidity among cancer patients[6,7]. The prevalence of psychiatric disorders in cancer patients varies greatly among studies ranging from 9% to 60%[6,8,9], although in large studies using standardized psychiatric interviews and applying research diagnostic criteria the range narrows from 10% to 30%[10].

Depression is common, affecting about 121 million people worldwide. Depression is among the leading causes of disability worldwide and can be reliably diagnosed and treated in primary care. Fewer than 25% of those affected have access to effective treatments[11]. Barriers to effective care include the lack of resources, lack of trained providers, the social stigma associated with mental disorders including depression and the lack of early diagnosis[11].

Depressed patients (not just cancer patients) are three times more likely than non-depressed patients not to comply with treatment[12]. There is an increased frequency of depressive symptoms is seen in patients with cancer[13].

The same is the case with anxiety. People with cancer may feel anxiety at many critical times during their treatment and recovery. For most people with cancer, diagnosis and recurrence create the most anxiety and fear. Fear of treatment, doctor visits and tests may also produce apprehension[14].

Despite symptoms, the person may deny feeling anxious or depressed. So it would be an advantage to provide adequate psychological therapy to the patients of cancer. One should listen carefully to other's feelings, provide reassurance and support, helping them through counseling and support groups and using prayer or other types of spiritual support would help the cancer patients to "live"[15].

In developing countries the medical team cannot effectively address cancer patients' wishes and needs probably due to low doctor-patient ratio. As evidence suggests that sensible disclosure of diagnosis and prognosis is important and satisfaction with information giving is associated with a better quality of life[16].

METHODS AND MATERIALS

A cross-sectional study was carried out on cancer patients admitted to oncology units in three tertiary care hospitals in Lahore *(Mayo Hospital, Jinnah Hospital and Inmol Cancer Hospital).* A total of 100 cancer patients enrolled in the oncology units of the above stated hospitals were included in the study. Simple random sampling technique was used to identify the three tertiary care hospital offering cancer treatment. Than all enrolled patients admitted to oncology units at the time of study were included in the study sample till the desired sample size was completed. Cancer patients of all ages and both gender were included in the study.

Personal interviewing techniques were used. Patients interviewing time ranged form one to one and a half hours. Five teams were formulated with 1 research co-coordinator and 2 data collectors to speed up the data collection process. The data collection teams were trained in interpersonal communication skills and interviewing skills along with training in questionnaire variables, study duration ranged for a total of 4 months. Data compilation was done subsequently after the whole data was collected. Editing and cleaning of the collected data was followed by data entry using SPSS Version 10. Frequencies and/or relative frequencies and cross – tabulations were used as a tool to analyze the whole data. Chi – Square test was used as the test of statistical significance to find the association of the variables being taken into consideration. In analysis of few variables Fischer's Exact Test was also used as a test of significance.

RESULTS

In this study (n=100) the mean age is 42.05 with the confidence limit of 6.88 and standard deviation 17.32. 52(52%) were males and 48(48%) females. 79(79%) had anxiety disorders and 86 (86%) had depressive disorders. 30(34.9%) of the study subjects with depressive disorders were from the age group of 25 – 42 years and 29(36.7%) of the study subjects with anxiety disorders were from the age group of 25–42 years. According to time since diagnosis 60(69.7%) of the patients with depressive disorders were diagnosed with in the last 6 months. 53(67.1%) of the patients suffering from anxiety disorders were diagnosed with in the last 6 months. 48(55.8%) of the patients with depressive disorders and 42(53.2%) of the patients with anxiety disorders were males.

In the present study the variables of age, gender, time since diagnoses and type of malignancy were statistically analyzed using Chi square test for the association with the levels of depression and anxiety among cancer patients.

The statistical associations were highly significant in cases of age and level of anxiety (p=0.0192) and also time since diagnosis with levels of depression (p=0.0144). The p values of age and level of depression was 0.2334 and for time since diagnosis and levels of anxiety was 0.0899. The association of gender with the levels of depression (p=0.1703) and anxiety (p=0.2776) were not statistically significant. The association of prognosis of malignancy with the level of depression (p=0.092) and anxiety (p=0.430) were not statistically significant.

Age of the patient	**Depressive disorder**			**Total**	**Anxiety Disorder**			**Total**
	mild	***moderate***	***Severe***		***Mild***	***moderate***	***severe***	
Less than 25 yrs	13	2	1	16	4	4	4	12
25 to 42 yrs	16	13	1	30	9	12	8	29
43 to 60 yrs	21	6	1	28	14	8	4	26
More than 60 yrs	9	3		12	8	4		12
Total	59	24	3	86	35	28	16	79
Time since diagnosis								

Less than 6 months	46	12	2	60	27	22	4	53
6 months to 1 year	9	7	1	17	6	5	7	18
More than 1 year	4	5		9	2	1	5	8
Total	59	24	3	86	35	28	16	79
Gender								
Male	30	15	3	48	21	13	8	42
Female	29	9		38	14	15	8	37
Total	59	24	3	86	35	28	16	79

ANALYSIS:

Age of patient	**Anxiety disorder**			**Depressive disorder**		
	Mild	**Moderate to Severe**	**Total**	**Mild**	**Moderate to Severe**	**T**
Less then 43	13	28	41	29	17	
More then 43	22	16	38	30	10	
Total	35	44	79	59	27	
Time since diagnosis						
Less then 6 months	27	26	53	46	14	
More then 6 months	8	18	26	13	13	
Total	35	44	79	59	27	
Prognosis of malignancy						
Bad Prognosis	31	37	68	53	21	
Good Prognosis	4	7	11	6	6	
Total	35	44	79	59	27	
Gender						
Male	21	21	42	30	18	
Female	14	23	37	29	9	
Total	35	44	79	59	27	

DISCUSSION

The prevalence of psychological morbidity in cancer patients after diagnosis and its subsequent treatment is well documented[17,18]. Increased frequencies of depressive-type symptoms have also been observed in patients with cancer in a study conducted in Camperdown. Good rapport with the patient and an understanding of the emotional conflicts engendered in the individual are important for good management[13]. Similar studies conducted elsewhere in the world have demonstrated an increased risk for psychiatric morbidity among cancer patients[6,7].

The prevalence of psychiatric disorders in cancer patients varies greatly among studies ranging from 9% to 60%[6,8,9], although in large studies using standardized psychiatric interviews and applying research diagnostic criteria the range narrows from 10% to 30%[10].

In our descriptive cross sectional study we used standardized diagnostic criteria to assess levels of anxiety and depression among male (52%) and female (48%) cancer patients of various age groups and we have seen that with increasing age of the patient the level of depression and anxiety decreases. 86(86%) cancer patients had depressive disorders. 30(34.9%) of the study subjects with depressive disorders were from the age group of 25 – 42 years. 79(79%) had anxiety disorders. 29(36.7%) of the study subjects with anxiety disorders were from the age group of 25–42 years.

The effect of age was evaluated and it was seen that the frequency of symptoms of depressive disorder and anxiety decreased with increasing age. The maximum number of patients who showed signs of any disorder was in the 25–42 years age group. Similar trend was observed in a study conducted in Pakistan, which suggested that anxiety and depression were more prevalent among middle-aged adults[19].

A study in china demonstrates that factors such as age, gender and time since diagnosis influence the levels of disease related behavior in cancer patients. Prevalence rate of depression among their study group in communities was 24. 74% (95%cl: 23.71%-25.79%). Results from multi factor analysis showed that duration since diagnosis was the important factor. Early detection improving the curative effect and providing community health services could reduce the prevalence of depression. These results are nearly identical to our study that age, and time since diagnosis are somehow related to depression and anxiety

among cancer patients with high degree of statistical significance present between age and level of anxiety (p=0.0192) as well as time since diagnosis and depression (p=0.0144)[20].

Research conducted at Sweden showed that, patients whose cancer had been diagnosed less than 6 months before had a higher level of anxiety and/or depression. The patients' health related quality of life improved over time and the rates of disease related behavior fell considerably. Results indicate a steady increase in psychological wellbeing from the time of diagnosis. Similar findings were noted in a study conducted on survivors' of adolescent cancer. These results are all similar to ours that high levels of anxiety and depression are associated with the time since diagnosis of less then 6 months among cancer patients[21].

In cases where time since diagnosis was more than a year, only few patients suffered from a low or moderate level of anxiety and/or depression. Some studies suggest that anxiety and depression in such patients may be due to the effect of chemotherapeutic drugs rather than the disease. Our study also demonstrates that high levels of depression and anxiety are associated with the time since diagnosis among cancer patients. Chemotherapy could be the factor that decreases the level of anxiety/depression among cancer patients with increase in time since diagnosis so future research should continue to follow this development over time, to investigate if the chemotherapeutic drugs have some relation with depression/anxiety on cancer patients[22].

A study conducted at Glasgow and Iranian center of breast cancer suggested that participation in cancer support groups could have a long-term effect in reducing anxiety and depression in cancer patients. Our findings suggest that effective psychological care should be given to cancer patients especially during the first six months to one-year time after diagnosis[15].

In our study, there was no significant statistical association between gender and the level of depression /anxiety experienced by cancer patients. Similar results have been demonstrated by a study conducted in patients with gastrointestinal cancer[23].

CONCLUSION

We recommend that for future studies to include a larger sample size and also to take in considerations other factors.

Sensible disclosure of diagnosis and prognosis is important as well as satisfaction with information provided to the patient should be kept in mind while newsbreak.

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