

Original Research Article

Psychological impact of cancer on patients in a tertiary care centre: a prospective study

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ABSTRACT

Background: Diagnosis of cancer, although physical in nature, has far reaching emotional impact on the person. The study aimed to analyse the psychological impact of cancer on patients with a focus on levels of distress and psychiatric comorbidity.

Methods: It was a prospective study conducted on 169 consenting individuals in the department of radiation oncology, SKIMS, Jammu and Kashmir, India, in collaboration with the department of psychiatry, SKIMS medical college, Jammu and Kashmir, India, from November 2013 to January 2015. The NCCN distress thermometer was used to observe the temporal variations in the levels of distress over a period of time.

Results: Anxiety disorders (panic disorder, generalized anxiety disorder and post-traumatic stress disorder) were the most common psychiatric disorders diagnosed constituting 59%, followed by depression in 29%. About 12% patients were not diagnosed with any psychiatric ailment. One female patient with anxiety disorder developed acute psychosis. Counselling and psychotherapy provided improvement in 45% patients with cancer. In all, 86.4% required medication during the course of treatment and majority had improvement with it. A mean distress score of 7.73 was seen before, 8.29 during and 7.66 after treatment.

Conclusions: Cancer bore a significant impact on the psychological bearing of patients, ranging from anxiety disorder, post-traumatic stress disorder, depression to psychosis. Hence there is a need for monitoring psychological symptoms in cancer patients and development of appropriate psycho-oncology services.

Keywords: Anxiety, Cancer, Depression, Distress, Psychological impact

INTRODUCTION

Being diagnosed with cancer is extremely traumatic for an individual. It is not only the initial diagnosis but the

ongoing treatment and associated co-morbidities which make it even more stressful. Coping, distress, and support are crucial psychological issues facing every cancer

patient and his or her healthcare team. The diagnosis of cancer is a life altering experience for anyone.^{1,2}

A wide range and prevalence of psychiatric and psychological problems affect patients and their families before, during and after treatment. Studies in adults treated in clinics demonstrate a 40%-50% clinically relevant level of distress.^{3,4}

While treating patients with cancer, both physical and chemical modalities, in the form of chemotherapy and radiation are used but often the psychological or mental health is overlooked, which indeed plays an important role in the ongoing treatment.⁵

The various factors influencing the psychological aspect include past history of any psychiatric illness, gender, type of cancer, stage, spirituality, finances, type of treatment, and family coherence and support.⁶ The common psychiatric conditions seen are depression, anxiety disorders (panic attacks, phobias, PTSD), adjustment disorder, and acute psychosis.⁷ Often patients have mixed states or a combination of symptoms like depression and anxiety.⁸ It has been seen that approximately one third of the patients in the oncology out-patient clinics have significant levels of distress, with greater distress seen in patients with tumors having a poorer prognosis.⁹

METHODS

This prospective study was conducted on 169 consenting patients in the department of radiation oncology, SKIMS, Soura, in collaboration with the department of Psychiatry, SKIMS medical college, Bemina, from November 2013 to January 2015. All adult patients aged 18 years and above, irrespective of cancer type, site and stage, were included in the study. The diagnostic and statistical manual IV of American psychiatric association was used as a diagnostic tool and patients were reviewed by a consultant psychiatrist for diagnosis. Patients with prior history of other DSM-IV axis I or axis II disorder, substance misuse, major medical and neurological disorders, and those who did not consent, were not included. All participants were offered general counselling by the oncologist and CBT sessions by the psychiatrist. Some patients were also offered medication in the form of antidepressants and anxiolytics. Sociodemographic details were recorded using a proforma.

The NCCN (National comprehensive cancer network, distress thermometer, 2014-2015) questionnaire was used for studying the various psychological parameters.

Inclusion criteria

- All histologically proven cases of cancer, irrespective of site and stage,

- All adult patients with cancer irrespective of their gender (all individuals above 18 years).

Exclusion criteria

- All patients who were previously diagnosed with a psychiatric ailment,
- All patients who were on any previous psychiatric medication,
- Patients with previous or present cognitive ailment.

Categorical data was analyzed using Pearson's chi square test and quantitative data was analyzed using two sample independent t-test and repeated measurement of analysis of variance. A p-value of <0.05 was considered statistically significant.

RESULTS

Out of the total 169 patients, majority were in the age group of 51-60 years, with an overall age range between 21-80 years and a mean age of 55.1 years. Males (58%) outnumbered females. Most patients (45%) had received only primary education (8th grade or below) with 53% belonging to the lower middle-class socioeconomic stratum, Kuppaswamy class 3, and most (84.6%) lived in a joint family.

Anxiety disorders including panic disorder, generalized anxiety disorder, and posttraumatic stress disorder were the most common psychiatric disorders diagnosed constituting 59%, followed by depression in 29%. About 12% of the patients had no psychiatric ailment. One female patient with anxiety disorder developed acute psychosis during the course of study.

Counselling and psychotherapy provided improvement in 45% patients. About 86.4% required medications in form of anti-anxiety and anti-depressant medication during the course of treatment and most showed improvement with it. The distress scores were assessed one week before, during and two weeks after treatment. A mean score of 7.73 was seen before, 8.29 during and 7.66 after treatment. This showed that a maximum score was seen during treatment which dropped thereafter during follow up. No significant relationship was seen with gender, with males and females scoring almost equally. Most (19%) of our patients had carcinoma esophagus, followed by carcinoma lung in 17%, and carcinoma breast in 13%. Patients with stage III disease constituted 79% of the group followed by stage IV (7.7%). About 53% of the patients received trimodality treatment (i.e. surgery, chemotherapy and radiotherapy).

Figure 1 above shows the symptoms that caused maximum distress to patients. Fatigue (58%) followed by loss of appetite (28%) were two symptoms that affected the patients the most. This was followed by pain and phantom sensations as depicted above. These symptoms

decreased over the due course of time thus contributing to a decrease in distress levels eventually.

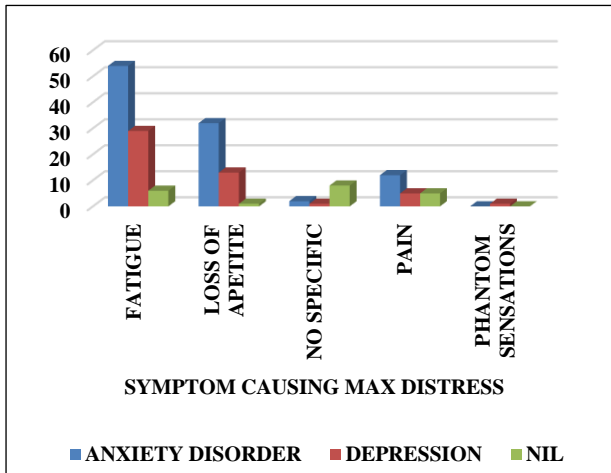


Figure 1: Symptoms causing maximum distress.

(Table 1) above shows that nearly 86.4% of the patients required medications in the form of antidepressants and

anti-anxiety drugs. Only 13.6% were treated with psychotherapy alone. The above values were statistically significant with a p value of less than 0.05.

Table 2 above shows that all the patients started on medications which were nearly 86.4% showed a positive response to medications in the form of decrease of symptoms and improvement of distress scores. Thus, depicting that medications were necessary for a majority of our patients.

Table 3 shows that maximum mean distress scores of about 8.29 were seen during treatment followed 7.73 before treatment and it eventually decreased to 7.66 after treatment, depicting that there was a significant improvement in distress after cancer treatment completion. The mean distress scores were calculated with the help of NCCN distress thermometer, with minimum values from 0 and maximum values of 10.

Table 4 above shows no statistical difference between distress scores in male versus females. The p value was above 0.05. Males and females had distress scores of around 7.5 before, 8.0 during and 7.5 after treatment.

Table 1: Table depicting the need for medications.

	Psychiatric condition diagnosed			Total	P-value
	Anxiety disorder	Depression	Nil		
Need for starting drugs	No	2 2.0%	1 2.0%	20 100.0%	≤ 0.0001
	Yes	98 98.0%	48 98.0%	0 0.0%	
	Total	100	49	20	

Table 2: Table depicting improvement with medications.

	Psychiatric condition diagnosed			Total	P-value
	Anxiety disorder	Depression	Nil		
Improvement with medical treatment	No	3	0	20	≤ 0.0001
	Yes	97	49	0	
	Total	100	49	20	

Table 3: Table depicting the distress scores before, during and after starting treatment for cancer.

	N	Mean	SD	Std. error	95% confidence interval for mean		Minimum	Maximum	P -value
					Lower bound	Upper bound			
Before	169	7.7337	1.41214	0.10863	7.5193	7.9482	4.00	10.00	
During	169	8.2959	1.45407	0.11185	8.0750	8.5167	4.00	10.00	≤ 0.0001
After	169	7.6686	1.39609	0.10739	7.4566	7.8806	4.00	10.00	
Total	507	7.8994	1.44591	0.06422	7.7732	8.0256	4.00	10.00	

Table 4: Table depicting gender-based distress scores.

	Sex	N	Mean	SD	Std. Error Mean	P-value
Distress score-before	M	98	7.57	1.385	0.140	0.079
	F	71	7.96	1.429	0.170	
Distress score-during	M	98	8.19	1.476	0.149	0.2
	F	71	8.44	1.422	0.169	
Distress score-after	M	98	7.55	1.340	0.135	0.1
	F	71	7.83	1.464	0.174	

DISCUSSION

Diagnosis of cancer is a life changing experience. It not only affects the patient but is devastating news for the family as a whole. Given the cultural connotations and stigma associated with cancer in the Kashmir valley, being diagnosed with cancer can be very isolating. The disease is often referred to as ‘that illness or horrible illnesses with a stigmatic undertone. It is often kept a secret which makes the emotional distress worse. Sometimes people are blamed for being bad to have developed cancer and patients themselves can have guilt for the same reasons. Cancer also means a death sentence to some as people often believe that cancer is not treatable irrespective of the type and severity. This can lead to further apathy and hopelessness.

To the best of our knowledge, this is the first study of this kind from our part of the world wherein emotional distress, psychiatric comorbidity and various interventions were studied in patients suffering from cancer. Seeking emotional support and psychiatric intervention is still alien in cancer patients in Kashmir, which could be due to a dearth of adequate resources, stigma, and lack of awareness, both in the general population and the health care professionals.

Most of the patients (42%) in present study were in the middle age group of 51-60 years, followed by in the age group 41-50 years (23%) with a mean age of 55.1 years, which corresponded well with the mean ages seen by Pandey M et al, from India showed a mean age of 45.4.¹⁰

Present study sample was poorly educated and belonged to the lower middle class (53%). This corresponds to the general population’s educational and social status, and their ability to seek treatment at the state-run facility as most cannot afford going to private hospitals in or outside the state. Similar results were shown by Pandey M et al. In present study, most patients were educated up to the middle school (45%) and only 15.4% were college graduates. A study from Kenya showed that most of the respondents had formal education up to the primary level constituting (35.6%); only 6.5% had university education.¹¹ Most patients lived in a joint family,

constituting 84.6% of the group which is in keeping with the sociocultural system in the Kashmir valley.

Most (19%) of our patients had carcinoma esophagus, followed by carcinoma lung (17%) and carcinoma breast (13%). A study from India showed 44.4% suffering from solid malignancies and only 17% constituted hematological malignancies. This study had more female members, while in present study men outnumbered women which can explain the different pattern of cancers. Another reason could be the geographical variation in the prevalence of different cancers.

Majority of the patients in present study had advanced disease, i.e., stage III (79%) followed by stage IV (7.7%). This could possibly suggest that patients in Kashmir seek treatment late in their illness which could be due to the stigma and lack of appropriate primary care services, failure to diagnose and refer at early stages.

The distress scores were assessed using the NCCN distress thermometer, which had a distress score ranging from 0-10. A score of ≥ 4 was considered as distress. The maximum mean distress score was seen during treatment which was 8.29 which significantly dropped to 7.66 after treatment which was the lowest (Tables 3 and 4). No significant relationship with gender was observed, with both men and women having comparable distress scores during different phases. Macvean ML et al, showed that distress scores (HADS scores) decreased significantly during follow up, which was similar to present study.¹²

Employing the DSM-IV criteria for diagnosis, most of the cases were diagnosed with anxiety disorder (including panic disorder, generalized anxiety disorder and posttraumatic stress disorder) which constituted 59% followed by depression in 29%. Only 12% patients were seen to have no psychiatric ailment. One female patient with anxiety developed acute psychosis during follow up. This was in concordance with various studies conducted world over. Saniah AR et al, conducted a study over 141 patients with breast cancer in Malaysia (2010) which showed a high prevalence of anxiety (24%) and depression (19%).¹³

Fatigue was the most common symptom causing maximum distress in 52% of the patients followed by loss of appetite in 26%. One patient with carcinoma breast had distress due to phantom sensations over the chest wall. Lueboonthavatchai P et al, showed that the most important predictors of anxiety and depression were presence of symptoms like pain and fatigue which increased the distress levels.¹⁴

All 169 patients were offered counselling by a psychiatrist during different phases of management of cancer, including ten sessions of cognitive behavior therapy. About 45.6% patients showed improvement in their distress and psychological symptoms. Most of the patients required additional treatment in the form of anti-anxiety and antidepressants medications. Nearly 86% of the patients (146) required medications during the course of their management. All 146 members who received medications showed improvement in the distress scores over a period of time. A study by Caruso R et al, has shown that anti-anxiety medications and antidepressants were an important tool for the improvement of quality of life.¹⁵

CONCLUSION

A vast spectrum of psychiatric disorders is seen in cancer patients ranging from anxiety disorder (including panic disorder, generalized anxiety disorder and posttraumatic stress disorder) constituting 59% followed by depression in 29%. Fatigue and loss of appetite most commonly caused maximum distress constituting 52 % and 27% respectively. Counselling and psychotherapy alone provided improvement in only 45% patients with cancer. majority (86.4%) of patients required medications such as anti-anxiety or anti-depressants during the course of treatment, showing significant improvement with it. Thus, there is a need for monitoring psychological symptoms in cancer patients and development of appropriate psycho-oncology service.

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