Depression in Cancer Patients attending Outpatients Department of Tertiary Care Hospitals of Karachi

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Abstract

Objective: To find out the frequency of depression and associated socio demographic factors in cancer patients of Karachi.

Methods: A descriptive cross sectional study was conducted during July-August 2013. Through convenient sampling method, one hundred diagnosed cancer patients were selected from outpatient department (OPD) of a private and a public sector teaching hospital. Patients of both gender, 18 years of age and above and who were diagnosed with cancer at least one month before the interview were included. Depression was assessed by Patient Health Questionnaire (PHQ-9). The questionnaire includes all nine criteria for diagnosis of cancer as described by Diagnostic and Statisical Manual of Mental Disorders IV (DSM-IV). Data was analyzed by SPSS version 20. Chi square test was applied for categorical data at a significance level of p<.05.

Results: Mean age of participants was 45.46 ± 13.8 SD years (range: 18 - 85 years). Fifty three percent were males; Seventy eight percent were currently married. Mean income was 13262 ± 9107 SD Pakistani rupees (range: 4500 - 45,000 Rs). Seventy four percent patients were permanent residents of Karachi. In females breast cancer while in males oral cavity cancer were the leading type of cancers. Sixty five percent patients had current depression ranging from mild to severe. Seventy percent patients had financial problems in terms of treatment cost. Chemotherapy, fatigue and financial problems were positively associated with depression (p<0.05).

Conclusion: Frequency of depression in cancer patients is very high. Majority of the patients were married and had financial constraints in terms of treatment cost.

Keywords: Depression, Cancer, Karachi, Pakistan (AASH & KMDC 18(2):101;2013).

Introduction

Cancer is an important cause of morbidity and mortality. Globally 14.1 million new cancer cases and 8.2 million deaths due to cancer were reported in 2012¹. Being diagnosed with cancer is a life challenging experience for most patients and leads to a variety of symptoms like, shock, disbelief, anger, fear, anxiety, guilt, grief and even depression². The rate of depression in cancer patients is estimated to be four times that of the general popula-

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Correspondence: Dr. Syed Ishtiaq Ahmed A-19, Block 15, Gulistan-e-Johar, Karachi. Email:sishtiaqahmed59@gmail.com tion³ but it is highly variable, as in Iran 50% while in china up to 67 % cancer patients have been reported to suffer from depression^{7,8}. Globally, most community based studies have reported 10 to 25% prevalence of clinical depression in cancer patients^{4,5} as compared to 3.3 to 21.4% in general population⁶. Fears of death, disruption of key relationship, dependence, disability, disfigurement are some of the psychosocial factors related to the frequency of depression in cancer patients. Cancer stage, effects of treatment and cancer site are other factors positively correlated with depression in a significant number of cancer patients⁹. Depression adversely affects cancer patients quality of life, compliance with treatment, and relationship with their caretakers9. The coexistence of cancer and depression is also associated with a significantly increased risk of death^{10,11}. In order to improve quality

of life and survival, routine screening for depression and referrals to psychiatrist is recommended for all cancer patients^{11,12}.

In Pakistan, 148,000 new cases of cancer (all types) were reported in 2012¹. Depression is reported to be 6 % in general population ¹³ and up to 66% among Pakistani cancer patients¹⁴. This study was conducted in Karachi because in Pakistan depression in general population is reported to be highest in urban Sindh¹³ and Karachi famously known as "Mini Pakistan" is the largest city of urban Sind as well as of Pakistan. It inhabits people from all ethnic and linguistic cultures. City also provides services to patients from all parts of Sindh, both urban and rural. The present study was conducted to find out the current frequency and associated socio-demographic factors of depression in cancer patients

Patients and Methods

After the approval by Ethical Review Committee of Hamdard University, this descriptive cross sectional study was conducted during July-August 2013. One hundred diagnosed cancer patients irrespective of the site of cancer were selected by convenient sampling method. After permission from concerned hospital authorities, fifty patients were sampled from a public and fifty patients from a private sector teaching hospital. Samples were taken from both private and public sector hospitals because generally in Karachi, patients with a better socioeconomic condition utilizes services from private hospital while those with low socioeconomic status goes to public hospitals. Patients were recruited from OPDs. Patients of both genders18 years or more and were diagnosed with cancer at least one month before the date of interview were included. Patients with impaired cognition and dementia were excluded.

Each study participant was approached by the researcher themselves, objectives of the study explained and verbal consent was obtained. They were interviewed and their responses were directly entered in pre-tested questionnaire. Pretesting was conducted on twenty five patients, in outpatient department of a private hospital.

Study instrument was urdu version of Patient Health Questionnaire (PHQ-9)¹⁵ Questionnaire included all of the nine Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) symptoms for diagnosis of depression. The symptoms are depressed mood, markedly diminished interest or pleasure in most of day to day activities, significant weight loss (or poor appetite) or weight gain, insomnia or hypersomnia, psychomotor retardation, fatigue or loss of energy, feelings of worthlessness or excessive/inappropriate guilt, diminished ability to think or concentrate, or indecisiveness and recurrent thoughts of death. As per DSM-IV criteria for diagnosis of current depression, the symptoms should be present at least for the last two weeks. Each of the nine symptoms was scored from 0 to 3. Score zero was given if symptoms were not present at all, score "1" if symptoms were present up to seven days, score "2" if symptoms were present for more than seven days, score "3" if symptoms were present nearly every day, during last two weeks. PHQ-9 scores of 5-9, 10-14, 15-19, and 20-27 represented mild, moderate, moderately severe, and severe depression respectively. Score 15 or greater (moderately severe and severe depression) signifies major depression.

Data was analyzed by SPSS Version 20. Frequencies were calculated for all variables and Chisquare test was applied for categorical data. p-value<0.05 was taken as significant.

Results

Study population comprised 100 cancer patients. Mean age of participants was 45.46 ± 13.8 SD (range: 18-85 years). Fifty three percent were males; 78% were currently married. Mean income was 13262 \pm 9107SD, Pakistani rupees (range: 4,500-45,000 rupees). Sixty two percent had a nuclear family. Seventy four percent were permanent residents of Karachi while remaining belonged to other parts of Sindh. Twenty two percent patients had no formal school education Seventy percent pa-

Table 1: Socio-demographic profile of cancer patients from outpatient department of private and government hospitals of Karachi (n=100)

Variable	Frequency
	%
Age (in years)	
Less than 40	33
40 to 64	57
> than 65	10
Educational status	
No school education	22
Under graduate	66
Graduates	12
Occupation/Profession	
House wives	41
Self employed	17
Service	29
Unemployed	13
Monthly income in Pakistani rupees	
Less than 10,000	44
10,000 to 20,000	46
More than 20,000	10
Self-rated family support	
Very supportive	41
Supportive	53
Did not answer	06
Self-rated religiousness	
Very religious	33
Religious to some extent	57
Did not answer	10

Figure 1: Frequency and severity of depression in cancer patients from outpatient department of private and government hospitals of Karachi



Table 2: Cancer related profile of patients from outpatient department of private and government hospitals of Karachi (n=100)

Variable	Frequency	Frequency	Total
	Males	Females	
	%	%	
Site of cancer			
Breast	Nil	28	28
Oral cavity	21	06	27
Gastrointestinal	11	07	18
Genitourinary	06	04	10
Lung	06	Nil	06
All Others	09	02	11
Total	53	47	100
Duration of cancer diagnosis			
1 to 3 month	19	14	33
4 to 6 month	16	13	29
7 to 12 month	13	11	24
> 1 year	05	09	14
Total	53	47	100
Current treatment			
Chemotherapy	28	20	48
Radiotherapy	25	27	52
Total	53	47	100

Figure 2: Frequency of PHQ - 9 depressive symptoms in cancer patients from outpatient department of private and government hospitals of Karachi (More than one response were recorded)



tients were facing financial problems to meet treatment cost (Table 1).

In females breast cancer was the leading cancer followed by cancer of gastrointestinal tract (GIT) and oral cavity. Among males, oral cavity cancer was the leading cancer followed by cancer of GIT, lung and genitourinary tract (Table 2).

Depression from mild to severe was present in 65% patients (Fig 1). Fatigue was the most frequently reported symptom followed by lack of sleep (Fig 2). Financial problems to meet the cost of treatment, chemotherapy and fatigue were positively associated with depression (p<0.05). There was no significant association of depression with hospital type, age, gender, marital status, education, family support, family system, self-rated religiousness, and cancer site

Discussion

In this study breast cancer in females and oral cavity cancers in males were the leading cancers. Globocan report 2012¹ and Bile KM et al.¹⁶ also reported similar pattern of oral cancers in Pakistan. Bile KM also reported highest frequency of oral cancer among Urdu speakers ethnic group in Pakistan¹⁶. Although the ethnicity in present study population was not explored, Karachi is predominantly inhabited by Urdu speaking community. Sixty five percent of our study population had mild to severe depression. These results are consistent with earlier an study in Pakistan where 66% cancer patients were reported to have depression¹⁴ and in China where 67% cancer patients were reported to have depression⁸. Prevalence of depression in general population of urban areas of Sindh is reported to be 16%¹³. Studies in past have reported that depression in cancer patients is four times higher than in general population³. Based on this fact estimated prevalence of depression in cancer patients would be upto 64%. Frequency of depression in our study population is in consistent with this estimation. A part of cancer diagnosis, there are other factors responsible for depression in cancer patients. In our study most of the patients who were facing

financial problems to manage treatment cost had depression (p<0.05), such a relationship was also reported in an earlier study¹⁷. These findings provide rationale for initiatives, by Non governmental organizations (NGOs) and social welfare department, to alleviate the financial burden of cancer patients by providing free treatment and financial assistance to all needy patients. In present study fatigue and chemotherapy were statistically significant risk factor for depression (p<0.05). Association of fatigue and depression was also reported in earlier studies^{17,18}. Positive association of depression with chemotherapy was also reported by Rashid YA et al¹⁹. Association of fatigue with depression in cancer patients is to be interpreted very cautiously because fatigue is a common complaint of cancer, depression as well as the side effect of both chemoand radiotherapy²⁰. Since therapy somatic symptoms of fatigue, consistently attributed to cancer, its treatment and depression, so few researchers recommend excluding these symptoms for diagnosis of depression in cancer patients²¹. In this study no association of depression was found with gender, educational status, site of cancer, family type, support and self-rated religiousness. In general population female gender is a strong risk factor for depression but in cancer patients such association is variably reported. An earlier study in Pakistan also did not find gender association with occurrence of depression in cancer patients³.

Due to limited resources, convenient sampling and small sample size is the main limitation of our study. However frequency of depression in cancer patients attending hospitals for treatment is high. To improve quality of life and survival of patients, every cancer treatment facility must have the services of psychologist and psychiatrist.

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