Psychosocial Morbidities: A rising trend in breast cancer patients. An explorative study in an Indian setting

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Abstract- AIM: The present study was aimed to assess psychiatric morbidity among post mastectomy patients attending cancer OPD in a tertiary care centre in Northern India.

METHODS: A descriptive non experimental research design was used to conduct the cross-sectional survey in 50 patients. All patients who were diagnosed of breast cancer and were post-mastectomy patients were scheduled for a interview based on SCL-80 tool to analyze body image disturbance and the incidence of psychosocial abnormalities.

RESULTS: More than 60% of the study subjects had partially whereas 18% patients had fully disturbed body image as assessed by the SCL-80 protocol. Anger hostility and phobic anxiety were found to be strongly related to higher stages of breast cancer with p-value < 0.5. Other criterias like depression, anxiety and somatization although not statistically significant but demonstrated a rise in incidence with stage II followed by a slight decrease in stage III. Other morbidities included were moderate somatization in 28% patients, interpersonal sensitivity in 68% patients whereas anger ranging from severe to mild form was seen in 66%.

CONCLUSION: This study emphasized the importance for initiating mental health services from a professional point of view in early phase of treatment in order to enhance the quality of life and to increase compliance towards treatment.

Index Terms- body image, breast cancer, post mastectomy, psychiatric morbidity

I. INTRODUCTION

For several serious reasons, breast cancer is especially important among women malignancies. According to Parkins DM et al, the breast cancer pivotal aspects include having a high prevalence and being the second cause of cancer death among women (1). Ferlay J, affirmed that breast cancer is by far the most frequent cancer among women with an estimated 1.38 million new cancer cases diagnosed in 2008 (23% of all cancers), and ranks second overall (10.9% of all cancers). It is now the most common cancer both in developed and developing regions with 690,000 new cases estimated in each region (population ratio 1:4 (2). In India, Saxena et al confirmed that the mean age of diagnosis of breast cancer was 47.8 years, average being 13-82 years of patients. Breast cancer has specific challenges for women due to its impact as a life threatening disease, its intensive surgical and medical treatments, and also changes in sexuality, femininity, body image and maternal issues after mastectomy (3). According to Glanz et al, women may face psychiatric co-morbidity with this new life situation (4). In an observation by Oktay JS, over the past 20 years, an increase in the number of survivors due to the advances in treatment and early detection, scientific attention has turned to considerations of the patients' quality of life and their psychological functioning during and after treatment, rather than solely to the issues of disease-free and overall survival (5). Many researchers including Devita VT and colleagues have reported that six mental disorders occur more frequently in cancer patients to warrant a detailed assessment and clinical intervention. Three represent direct reaction to illness; adjustment disorder, major depression and delirium while the others, primarily anxiety disorders, personality disorders and major depressive illness are pre-existing conditions often exacerbated by the illness (7). It has been seen in different studies by Bloom JR(2001), Coates A(1990) and Omne-Ponten M (1992) that demographic factors such as age, and marital status and biological variables such as disease stage, type of treatment and surgical removal of the breast may affect the patients' psychological symptoms. (8,9,10) Due to small number of studies in this field and some specific aspects of breast cancer operational in the North-Western part of India such as younger age of presentation, advanced stage at presentation and different cultural background of patients, we conducted this study to investigate the frequency of various psychosocial morbidities resulting during the course of treatment of breast cancer.

Materials and Methods:

A descriptive non experimental research study was conducted at the department of Radiotherapy and Oncology at Guru Gobind Singh Medical College & Hospital Faridkot, Punjab in 2016. The patients (n=50) were biopsy proven cases of breast cancer. All patients from stage I to stage III were included in the study. The follow-up period ranged from three to eight months. The purpose and contents of the study were explained to the patients in detail and after obtaining a written consent, demographic information including age, age at onset of disease, marital status, education, number of children, and past medical history were collected through a personal interview.

The stage of disease, lymph nodes involved, histological grade, tumor size and type of surgery either modified radical mastectomy or breast conservative surgery (MRM/BCS) along

with other such biological factors were derived from the patients' records. To eliminate any bias in selection, the patients' with specific life events in the preceding year such as bereavement, those with any psychotic illness or substance abuse, age over 70 years at the time of study, any other chronic illness, (e.g. irritable bowel disease, thyroid disease, hypertension etc.) or cancer were excluded.

Convenient sampling technique was used to assess body image and psychiatric morbidity. An interview schedule was carried out by using self structured body image scale to assess body image disturbances and SCL-80 tool for psychiatric morbidity among patients. The method consisted a series of scheduled interviews in which the role of the interviewer was to facilitate the free speech in women, making possible the unrestricted communication of their illness experience at its different stages. The SCL -80 tool is attached in the appendix. The sociodemographic data like age, sex, income of the family, residence and type of family was recorded in a semi structured method. The categories of coding procedures were formed as body image and psychosocial concerns, anxiety features and distress, depressive symptoms and coping strategies. Responses of the patients were analyzed using content analysis. After screening the patients who were found to have positive psychological stress, a follow-up interview was scheduled and those needing specialist care were referred to the psychiatry department.

II.   RESULTS AND ANALYSIS

1. A total of 50 patients were enrolled in our study. Their age at the time of study varied from 26 years to 65 years. The most common age-group was 46 to 55 years (32%) followed by (30%) in the age group of 56 to 65 years and the minimum were in 26 to 35 years (8%) age group.

2. The majority of patients were illiterate or primary school pass 21 (42%), followed by middle school or intermediate pass 18(36%), and very few had completed post graduation studies 11 (22%).

3. Forty five patients (90%) were married and five patients (10%) were unmarried.

4. In the study, 21 patients (40.3%) were advanced cancer patients suffering from stage III, whereas 18 (34.6%) were stage II and 13 patients (25%) were stage I.(Figure 1)

5. SCL-80 Tool was used scores are shown in the separate table (Table 2). It indicates the number and percentage of patient responses regarding body image and psychosocial concerns. From the table it is evident that the major concerns of the patients who are undergoing mastectomy and subsequent treatments were about their body image.(Table 1) The study revealed that more than 60% of the study subjects had partially and 18% had fully disturbed body image as assessed by the SCL-80 protocol. Moderate depression was seen in 22% of patients.

6. Generalised anxiety disorder was seen 66% of patients. Other psychiatric morbidities observed were moderate somatization in 28%, interpersonal sensitivity 68%

whereas anger ranging from severe to mild form was seen in 66%. During the study 48% patients opted for breast reconstruction.

7. We tried to establish a correlation between different stages of presentation with various components of this psychological study. And it was observed that all the components were more commonly observed in stage III as compared in stage I and stage II.

8. Depression: Grade II was seen as the most common grade 26 (52%) patients amongst all stages. Whereas about 11(22%) patients showed evidence of grade 3 depression and were started on appropriate medication. Correlation between various grades of depression and stages of disease were however nonsignificant.

9. Anxiety: Majority of the patients belonged to the grade 2 anxiety group 23 (46%) patients, followed by grade 1 in 17 (34%) patients and grade 3 in 10 (5%) patients. However , nothing was proved statistically significant.

10. Somatization: Majority of the patients 26 (52%) showed grade II somatization and mostly were in stage III. It was followed by 13 (26%) patients in grade I. Grade III somatization was found in 11(22%) patients. There was no statistically significant correlation found to be associated between somatization and clinical staging.

11. Phobic Anxiety: Most common grade of phobic anxity observed in breast cancer patients were grade II. It was seen in about 35 (70%) patients. It was followed by grade I seen in 13 (26%) patients. However, grade 3 and 4 were seen only in 1 patient each. Stage II disease showed a statistically significant correlation with phobic anxiety with a p-value of 0.01. Similarly stage III was also tested for any significance in relation with phobic anxiety and it was found to be highly significant with p-value of <0.001.

12. Anger Hostility: majority of the patients 30(60%) were reported to have grade II anger hostility. It was followed by grade I in 17(34%) patients. Grade III and grade IV had one and two patients respectively. Statistical analysis highlighted that stage II and stage III had highly significant correlation with anger hostility with p-values of 0.006 and 0.008 respectively.

13. The eagerness for a complete body was evident with number of patients who opted for breast reconstruction. Out of the total 50 patients about 24 (48%) wanted to undergo breast reconstruction which was statistically significant with a p-value of 0.027. Amongst the various age-groups the majority who opted for breast reconstruction were between 36-45 years emphasizing the younger population favoring the surgery.

Table 1: Breast cancer patients' demographic variables.

Demographic Variables	Patients (n)
Age, years(Mean±SD)	48.6(9.16)
Educational level(%)	21(42%)
Primary education or illiterate intermediate	18(36%)
High school or post graduate	11(22%)
Marital status(%)	
Married	45(90%)
Single	5(10%)

Table 2. Distribution ofvarious clinical variables and their correlation.

Clinical Variables	Frequency (%)
	-
Stage	-
I	12(24%)
II	18(36%)
II	20(40%)
Missing	None
Type of Operation	
MRM	38(76%)
BCS	12(24%)
Histological Grade	
I	12(24%)
II	25(50%)
III	4(8%)
Missing	9(18%)

Table 3. Statistical correlation of different clinical variables
and stage of disease presentation.

		Stages		
		I (13)	II (18)	III (19)
Depression	1	4	5	4
	2	7	8	11
	3	2	5	4
Chi Square		2.932	1.000	5.158
P value		0.232	0.607	0.076
Sig.		NS	NS	NS
Anxiety	1	7	5	5
	2	4	9	10
	3	2	4	4
Chi Square		2.932	2.333	3.263
P value		0.232	0.311	0.196
Sig.		NS	NS	NS
Somatization	1	5	8	4
	2	6	4	9
	3	2	6	6
Chi Square		2.000	1.333	2.000
P value		0.368	0.513	0.368
Sig.		NS	NS	NS
phobic anxiety	1	7	4	2
	2	6	14	15
	3	0	0	1
	4	0	0	1
Chi Square		0.077	5.556	29.632
P value		0.782	0.018	<0.001
Sig.		NS	S	HS
anger hostility	1	6	5	6
	2	6	12	12
	3	1	0	0
	4	0	1	1
Chi Square		3.846	10.333	9.579
P value		0.146	0.006	0.008
Sig.		NS	HS	HS

III. DISCUSSION

In our study, majority of patients (32%) belonged to 46-55 years of age, which is slightly lower than the age reported in earlier studies, for eg, by K McPherson et al, which stated that the incidence is increasing particularly among women aged 50-64, probably because of breast scre ening in this age group.(11). It was the age specific incidence rates increase rapidly with age until about 45-50 years, after which they continue to increase but at a slower rate. (12) In the present study, no significant correlation was found in prevalence rate of psychiatric disorders and the occupation of the patients as most of the patients were housewives, however, Ogce F et al in 2007, found out that unemployed breast cancer patients significantly had more psychological distress than employed patients. (13). Simpson JSA et al in 2002, in their study on breast cancer patients found that there was clear evidence of a cross-sectional relationship between social support and psychiatric morbidity at each time point, as those women with DSM-IIIR diagnosis had significantly less social support.(14) In our study, no significant correlation was found in prevalence rate of psychiatric disorders and the marital status of the patients, it could be due to the constitution of the sample as our study had 97% of married participants.

It was affirmed by Burgess C and colleagues that lack of intimate confiding support also predicted more protracted episodes of depression and anxiety.(15) Ogce F et al also supported the idea, with their observation on Turkish breast cancer patients that the women with high social support scores had assistance provided by family, a special person or a friend. (13). These women had low psychiatric morbidity as compared to women with no support. In our study patients living in nuclear families had more psychiatric morbidity due to lack of intimate confiding support which was similar in above mentioned studies.

In the study done by Shandilya et al in 2015 it was observed that 45% patients met DSM IV criteria for diagnosis of psychiatric disorders 16(59.25%) patients were of Adjustment Disorder, 6(22.22%) of Major Depressive Disorder, 4(14.8%)

patients of Generalised Anxiety Disorder and 1(3.7%) patient of Somatoform Pain Disorder(17). Similar findings were revealed in the present study that more than 60% of the study subjects had partially and 18% had fully disturbed body image as assessed by the SCL-80 protocol. Moderate depression was seen in 22% of patients. Generalised anxiety disorder was seen 66% of patients. Other psychiatric morbidities observed were moderate somatization in 28%, interpersonal sensitivity 68% whereas anger ranging from severe to mild form was seen in 66%. It was also supported by studies done by El-Hadidy MA et al in 2012 which found that 38.8%, 29.6% and 9.2% of the patients had major depressive disorder, generalized anxiety disorder, and panic disorder respectively (18) and in the study by Grabsch B et al in 2006 which found that 42% of the women (97/227) had a psychiatric disorder, 35.7%(81) of these had depression or anxiety both. Specific diagnoses were minor depression in 58 women (25.6%), major depression in 16 (7%), anxiety disorder in 14(6.2%), and phobic disorder in 9 (4%) and 17 (7.5%) women had more than one disorder (19)

We took a step further with our study and tried to correlate the various stages of disease presentation with the psychiatric co-morbidities and found that as the stage advances the probability of various psychiatric co-morbidities also increases. Especially in cases with phobic anxiety and anger hostility the relationship with advanced stages were highly significant whereas on the other hand, anger and depression did not show any statistically significant correlation.

IV. CONCLUSION

Analyzing the findings of our study, it was quite evident that a significant number of patients do suffer from psychiatric co-morbidities right from the time of initial presentation. There is an urgent need to detect the incidence and treat these co-morbidites with all possible measures at an early level. There is also a growing importance to conduct large scale surveys of psychiatric disorders in these patients to evaluate the nature and extent of prevailing disease and to trace its temporal profile and also study its psychosocial determinants which are known to contribute to psychiatric disorders. Body image is an important issue in women irrespective of age status, and receiving treatment tailored accordingly to suit the appearance serves as an important tool in improving long-term mental health outcomes. It was also seen that all the patients cannot be considered as having clinically significant psychological problems. Therefore, a detailed evaluation of patients is necessary to understand who all wants intense psychological treatment. Our study also highlights the dominant role of a supporting hand to the patient, from family or friends to assist in the new adjusting phase of life and to maintain homeostasis for both patient as well as the family members.

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