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ASSESSMENT OF DISEASE ORIENTED DEPRESSION IN BREAST CANCER PATIENT<br>Manoharan Preeth, John Shobana*<br>${ }^{1}$ Department of Hospital and Clinical Pharmacy, Bharat Institute of Technology - Pharmacy, Mangalpally (V) Ibrahimpatnam, Rangareddy Dist, A.P, India<br>${ }^{2}$ Department of Pharmacology, JKK Muniyaraja Medical Research Foundation - College of Pharmacy, Namakkal Dist, Tamilnadu, India

*Shobana John, Email: john.shobana@gmail.com
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#### Abstract

Depression is a common symptom in cancer patients, which is difficult to be detected and consequently to be treated. It deteriorates over the course of cancer treatment, persists long after the end of therapy and influences negatively the quality of life. The aim of this study was to examine the prevalence rate and level anxiety and depression in breast cancer patient using HAD scale.

The study was conducted on 94 female patients suffering from various stages of breast cancer. Patients included who were in the age group between 18-65yrs, estimated survival time more than six months, ability to speak and patients were excluded if they were affected by known mental disorder and metastasis in brain. Demographic data was collected from each patient's medical record e.g. cancer type, date of cancer diagnosis, extension of the diseases, sites of metastasis, estimated life time. Levels of anxiety and depression were self rated by HADS (hospital anxiety and depression scale)

Out of 94 patients twenty patients ( $21 \%$ ) were reported as mild depression (mean score 8.93) and $23(24 \%)$ patients as mild anxiety (mean score 9.42) likewise five_Patients were reported as (positive cases) chronic depression (mean score is 12.23) and six patients as chronic anxiety.(mean score is 12.23) The results of this present study clearly demonstrated that prevalence of anxiety and depression rates depended on the patients' educational level, age, occupation, menopause and diagnosis period.

Our study found that the depression and anxiety were common in most of the patients affected with breast cancer is also there was no relation between the anxiety and depression and stages of diseases. We think that this study needs to be extended in the future to involve more patient is may be further be tested to evaluate the same sample again, after psychiatric intervention is carried out.


KEYWORDS: Depression, anxiety, HADS, Metastatic breast cancer

## INTRODUCTION

World-wide, the incidence of cancer is rapidly increasing and nowadays it consist a major cause of morbidity and mortality. Approximately, 500.000 people irrespectively of age and sex, die each year of cancer in the USA. In Europe, cancer is the second leading cause of death, while it is growing into the major cause of death in the elderly. ${ }^{1}$ Out of that, the breast cancer is a serious illness that affects a large number of women in the Western world, a majority of whom are beyond the age of menopause. ${ }^{2}$ Psychosocial distress is common at points along the illness trajectory. For some, the distress can initiate disabling psychological symptoms; it can also exacerbate underlying mental illness.
Depression, anxiety, and cognitive impairments can be serious consequences of the illness and its treatments. Emotional stress is a common difficulty for women with breast cancer. The interactions between distress, cancer, and psychiatric illness need to be understood and addressed within the context of the physical and psychosocial challenges inherent to the illness experience. ${ }^{3}$ Prevalence rates of specific psychiatric diagnoses among patients with breast cancer vary widely; for example, the prevalence
of significant depression ranges from 1.5 percent $^{4}$ to 57 percent $^{5}$. This large variation is likely due to differences in study populations-for example, age range, socioeconomic status, stage of cancer, definitions of depression, and assessment instruments used-which can all have an impact on prevalence estimates.

Although some recent studies have attempted to better define cohorts and diagnostic criteria ${ }^{6}$, many studies of patients with breast cancer measure distress in terms of quality of life, which can yield an indirect assessment of depression and other psychological symptoms. Anxiety symptoms also are relatively common. For example, an estimated 20 percent of women with breast cancer have anxiety symptoms from unresolved distressing cancer-related experiences ${ }^{7}$. Moreover, treatments for breast cancer can directly affect psychological and cognitive function. In a cross sectional study of 303women with early stage breast cancer, $45 \%$ of the women had a psychiatric disorder, $42 \%$ had depression or anxiety or both there was also minor depression and anxiety ${ }^{8}$. There was greater anxiety in women adopting a cognitive confrontational response. Younger women may be more likely to view breast cancer as a greater threat to their lives than older women ${ }^{9}$ and they may show higher anxiety and greater worry in facing a potential diagnosis of malignancy ${ }^{10}$

The purpose of our study was to assess the prevalence rate and level of Anxiety and Depression in breast cancer patients

## PATIENTS AND METHODS

This study was carried out in the oncology department at Meenakshi Mission hospital (500 bed hospital Madurai, Tamilnadu). Subjects were the oncology patients attending the outpatient clinic for their routine follow-up with pre-arranged appointment. The study was approved by the institutional review board (IRB) at Medical oncology center, Meenakshi Mission Hospital, with regular renewal, and all patients signed a written informed consent before randomization. We have selected the patients based out inclusion and exclusion criteria. Tamil translation of the HAD scale was adopted and it was prepared by us. We conducted interview for patient and their close relatives regarding patient character before and after the breast cancer diagnosis, and directly we asked questions to patients regarding their problem phasing in the society and family and with their close relatives.

A samples consisted of Ninety four patients and they all are agreed to participate and were asked to complete the HAD scale questionnaire straight forward which was easy to complete. The following information was retrieved from each patient's medical record i.e. Cancer type, data of cancer diagnosis, extension of the disease, sites of metastasis, estimated lifetime and Demographic data. The following inclusion criteria has followed in our study like age between 18-65 years, estimated survival time should be more than six months, patient should be able to speak, patient should be managed at home with their family and also the health care professionals those who have known, Patients excluded from our study those who have known mental disorder and metastasis in brain. Levels of anxiety and depression were self rated by HADS and it is a reliable method for early assessment of a patient's psychological state.

HAD scale was developed by Ligmond and Snaith (1983) ${ }^{11}$, HADS consists of 14 items. Seven on the depression sub-scale (HADS-D) and seven on the anxiety sub-scale (HADS-A), each item is scored on a four-point scale from 0 (Not present) - 3 (considerable) and the items scores are added giving HADS-D and HADS-A scores from zero (minimum symptom load) to 21 (maximum symptom lead). It is a brief assessment (approximately 5-10 minutes to complete) of anxiety and depression. Individual scoring $>11$ on either subscale were indicate case of depression or a case of clinical anxiety, while subscale scores in 8-10 range represented borderline cases.

## RESULTS AND DISCUSSION

## Prevalence of depression and anxiety

The sample consisted of 94 females aged 18-65. None of these patients was known to suffer from any psychiatric illness. $93.61 \%$ patients were married, $4.25 \%$ was singles and $2.12 \%$ was widows. High level depression and anxiety were seen in married women than singles and widows (the main reason which is mentioned by them was children and their future). All 94 patients were Indian citizens. All were attending for more than 4 visits to the outpatient clinic. Twenty patients were in first stage of disease and 43, 28, 3
patients were in II, III, and IV stages respectively. There was no relationship were found out between stages of diseases and level of depression and anxiety. In case of menopausal status $40.42 \%$ of patients were in premenopausal stage and $59.57 \%$ was in Postmenopausal state. Out of that, high level of depression and anxiety were associated with postmenopausal women ( $28.57 \%$ ) than premenopausal women. (Table 4) Rijken M, et al., findings were consistent with our findings, depression in postmenopausal women with breast cancer has been shown to be closely associated with a high level of health complaints ${ }^{12}$. According to the age of the patients, percentage of $15.95 \%$ was younger than 25 years old, $13.82 \%$ was $26-35,10.63 \%$ was $36-45,13.82 \%$ was $46-55$ and $45.74 \%$ older than 55 years. The results showed that as age increases, the level of depression and anxiety increases, as well. At the same time the age less than 25 years old patients were reported with high number of both mild depression ( $13.33 \%$ ) and anxiety ( $26.6 \%$ ) than the middle age group. (Table 1)

According to the educational status, $50 \%$ was uneducated, $15.95 \%$ was of lower primary education, $17.02 \%$ was higher primary education, $11.70 \%$ of secondary education and $5.31 \%$ of higher/university education. Uneducated patients and Patients of primary education experienced higher level of depression compared to those of secondary and higher/university education. (Table 2) In regard to occupational status, $10.63 \%$ was Government employees, $14.89 \%$ was private employees, $15.95 \%$ pensioners and $58.51 \%$ was occupied in domestic duties. Pensioners and those of domestic duties experienced higher levels of depression and anxiety. (Table 3) $56.38 \%$ of patients were diagnosed recently, $19.14 \%$ and $24.46 \%$ were diagnosed with cancer in 6 months ago, and one year back respectively. Our results revealed that the prevalence rate anxiety and depression was high in who has been diagnosed recently than others. Out of 88 married females 20 were reported as mild depression and 23 were in mild anxiety, 5 and 6 patients were reported with chronic depression and anxiety respectively. Giedre Bulotiene et al, also found, the anxiety and depression rates depended on the patients' educational level, occupation and marital status. ${ }^{13}$

## Level of depression and anxiety

Twenty subjects out of the total sample population (40.42 \%) have scored more than $8.93 / 21$ on the depression subscale which is indicative of a diagnosis of mild clinical depression, at the same time 5 patients (15.95\%) were reported with chronic depression (Mean score -11.8/21) The age range of the depressed patients was 46-65 years. It was commonly associated with Postmenopausal women, house wives, pensioner and who has been diagnosed recently. On the other hand 23 subjects of the total sample studied scored more than 7 on the anxiety subscale was ( $44.68 \%$ ) with the mean score of $9.42 / 21$, six patients have scored more than 10 on the Anxiety subscale with the mean score of $12.23 / 21$ which is indicative of a diagnosis of Chronic clinical Anxiety. (Table -5) The results of this present study clearly demonstrated that prevalence of anxiety and depression rates depended on the patients' educational level, age, occupation, menopause and diagnosis period.

## CONCLUSION

Breast cancer is the most common type of cancer among women. Major depression and depressive symptoms, although commonly encountered in patients with medical i8llnesses are frequently under diagnosed and under treated in women with breast cancer ${ }^{11}$. The results of the research indicated clinically significant depression and anxiety during the treatment, it was identified most vulnerable groups of the patients. The highest level of anxiety and depression was experienced by uneducated, house wives, Pensioner, postmenopausal and recently diagnosed women. Out of 94 patients 20, 23 patients were affected with mild depression and anxiety respectively and 5,6 patients were affected with chronic depression and anxiety according to HAD scale. Overall $57.44 \%$ of women were affected with diseases oriented anxiety and depression in breast cancer. The present study was restricted only for a period of 9 months so therefore we couldn't able to do in large no of patients, so this study needs to be extended in the future to involve more patients and it may further be tested to evaluate the same sample again after psychiatric intervention is carried out.

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Table 1: Prevalence of Depression and Anxiety based on age

| S.No | Age | No. of <br> patients | Depression |  | Anxiety |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | Mild | Chronic | Mild | Chronic |
| 1 | $18-25$ | 15 | $2(13.33)$ | - | $4(26.6)$ | $1(6.66)$ |
| 2 | $26-35$ | 13 | $1(7.69)$ | - | $2(15.38)$ | $1(7.69)$ |
| 3 | $36-45$ | 10 | $2(20)$ | - | $2(20)$ | - |
| 4 | $46-55$ | 13 | $3(23.07)$ | $1(7.69)$ | $5(38.46)$ | - |
| 5 | $56-65$ | 43 | $12(27.90)$ | $4(9.30)$ | $10(23.25)$ | $4(9.30)$ |
|  | Total | 94 | 20 | 05 | 23 | 06 |

Table 2: Prevalence of Depression and Anxiety based on Education

| S.No | Occupation | N | Depression |  | Anxiety |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | Mild | Chronic | Mild | Chronic |
| 1 | Govern. Employee | 10 | $2(20)$ | - | $03(30)$ | $1(10)$ |
| 2 | Private employee | 14 | $2(14.25)$ | - | $02(14.28)$ | $1(7.14)$ |
| 3 | Pensioner | 15 | $5(33.33)$ | $01(6.66)$ | $03(20)$ | $1(6.66)$ |
| 4 | Domestic duties | 55 | $11(20)$ | $04(7.27)$ | $15(27.27)$ | $03(5.45)$ |
|  | Total | 94 | 20 | 05 | 23 | 06 |

Table 3: Prevalence of Depression and Anxiety based on Occupation

| S.No | Other <br> demographics | N | Depression |  | Anxiety |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | Mild | Chronic | Mild | Chronic |
| 1 | Diagnosis |  |  |  |  |  |
|  | Recently | 53 | $13(24.52)$ | $03(5.66)$ | $16(30.18)$ | $03(5.66)$ |
|  | 6 months ago | 18 | $05(27.77)$ | $01(5.55)$ | $05(27.77)$ | $02(11.11)$ |
|  | 1 year back | 23 | $02(8.69)$ | $01(4.34)$ | $02(8.69)$ | $01(4.34)$ |
|  |  |  |  |  |  |  |
| 2 | Menopausal state |  |  |  |  |  |
|  | Premenopausal | 38 | $04(10.52)$ | $02(5.26)$ | $04(10.52)$ | $02(5.26)$ |
|  | Postmenopausal | 56 | $16(28.57)$ | $03(5.35)$ | $19(33.92)$ | $04(7.14)$ |

Table 4: Prevalence of Depression and Anxiety based on other demographics

| S.No | Educational <br> status | N | Depression |  | Anxiety |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | Mild | Chronic | Mild | Chronic |
| 1 | Illiterates | 47 | $16(21.27)$ | $03(4.25)$ | $12(25.53)$ | $04(8.51)$ |
| 2 | Lower primary | 15 | $02(26.66)$ | $02(13.33)$ | $05(33.33)$ | $02(13.33)$ |
| 3 | Higher primary | 16 | $01(12.5)$ | 0 | $2(12.5)$ | - |
| 4 | Secondary | 11 | $01(18.18)$ | - | $2(18.18)$ | - |
| 5 | Degree | 05 | 0 | - | $1(20)$ | - |
|  | Total | 94 | 20 | 05 | 23 | 06 |

Table 5: Levels of Anxiety and Depression

| S.No | Conditions | No of patients $(n=94)$ |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | Depression | $\%$ | Mean score | Anxiety | $\%$ | Mean <br> score |
| 1 | Mild (8-10) | 20 | 21.27 | 8.93 | 23 | 24.46 | 9.42 |
| 2 | Chronic (>11) | 05 | 5.31 | 12.23 | 06 | 6.38 | 12.23 |
| 3 | Total | 25 | 26.59 |  | 29 | 27.65 |  |

