# Psychiatric morbidities in patients of carcinoma cervix

## Abstract

**Aims and objective:** The common psychological and emotional responses to cancer arise from knowledge of life threatening diagnosis, its prognostic uncertainty, and fear about death and dying. Carcinoma cervix (cervical cancer) is one of the major life threatening conditions in females and carries a risk of high mortality. This study was carried out with the aim to find out psychiatric morbidities in patients of carcinoma cervix so that a proper evaluation of their mental health and comprehensive management, and improving their quality of life can be planned. **Methodology:** One hundred female patients of age range between 31-65 years, recently diagnosed as carcinoma cervix were screened for psychiatric morbidity on a structured proforma containing socio-demographic details. The diagnosis and staging of carcinoma cervix was based on revised FIGO (International Federation of Gynecology and Obstetrics) and psychiatric diagnosis was made as per DSM-IV-TR. Hamilton Anxiety Rating Scale (HARS), Hamilton Rating Scale for Depression (HAM-D), Brief Psychiatric Rating Scale (BPRS), and Yale-Brown Obsessive Compulsive (Y-BOCS) were used to assess the severity of the psychiatric illness. **Result:** Majority of the patients belonged to age group 51-60 years. Most of them were Hindu, housewives, and belonged to lower socioeconomic status. Psychiatric morbidity was detected in 55% patients; majority of them having duration of cancer for less than six months. Twenty six per cent patients suffered from major depressive disorder, 17% had anxiety disorder, and eight per cent were detected as adjustment disorder with depressed mood while four per cent patients had only insomnia. Patients presenting in late stage of cancer had more severe psychiatric disturbances as compared to patients in early stage of cancer. **Conclusion:** Significant comorbid psychiatric illness was detected in patients of carcinoma cervix. The proper evaluation, identification, and management of associated psychiatric illness will improve the mental health and quality of life of patients suffering from carcinoma cervix.

**Keywords:** Gynaecology. Cancer. Mental Health. Depression.

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## Introduction

Psycho-oncology is an upcoming area of interest which deals with psychiatric, psychological, and social aspects of malignancies. The common psychological and emotional responses to cancer arise from knowledge of life threatening diagnosis, its prognostic uncertainty, and fear about death and dying. The emotional responses are also due to physical symptoms – pain, nausea, lymphoedema, distressing symptoms of the disease, and unwanted effects of medical, surgical, and radiation treatment. The stigma associated with cancer and its consequences adds to negative reaction to the disease.

Carcinoma cervix (cervical cancer) is one of the most prevalent cancers that affects women and leads to death worldwide. Apart from its fatal nature, it attacks the most important body part of the female, i.e. genitalia. It has been observed that compared to general population patients with carcinoma cervix have a high risk of developing psychological distress that requires intervention.[1]

According to the definition by National Institute of Cancer (2009), cancer refers to a class of diseases in which a cell or a group of cells divide and replicate uncontrollably, intrude into adjacent cells and tissues (invasion), and ultimately spread to other parts of the body than the location at which they arose (metastasis).[2] In carcinoma cervix, cancer develops in the

tissues of the cervix which is a part of the female reproductive system.

India has a disproportionately high burden of carcinoma cervix.[3] Among Indian women cancer of cervix and breast account for nearly 60% of all cancers. Cancer of cervix is the third largest cause of cancer mortality in India.[4]

Cervical cancer begins with the development of precancerous benign lesion in cervical area. According to WHO classification the first stage of development is mild dysplasia which can progress to moderate to severe dysplasia and then carcinoma in situ or invasive cervical cancer. Once the invasive cancer develops it is further classified into various stages as per International Federation of Gynecology and Obstetrics (FIGO).[5]

The diagnosis of cancer is the cause of stress on any individual which relates both to symptoms of the disease and psychological meaning attached to cancer. Holland and Wiesel[6] has summed up the meaning attached to cancer as five D's – Death, Disability, Disfigurement, Dependence, and Disruption of relationship. Cervical cancer survivors (CCS) frequently have to deal with bowel and bladder changes, sexual dysfunction, treatment related menopause, loss of fertility, and relationship problems.[7] The treatment of cervical cancer may permanently impair sexual function and reproductive ability. Sexual inactivity was found to be a significant predictor of depression and anxiety in CCS in a large scale Korean study.[8]

Psychiatric disorders in women with carcinoma cervix has been relatively neglected. Women are especially prone to develop anxiety and depression due to involvement of reproductive hormones. Few studies have focused on the assessment of anxiety and depression in early stage cervical cancer. Cull *et al*.[9] found that these women had significantly higher state anxiety as compared to normal and one third met the criteria for depression. Studies also found that more than half of the advanced cervical carcinoma patients had adjustment disorder, primarily depressed or mixed type.[10] In another large cohort study, patients who had recently received a cancer diagnosis had an increased risk for both suicide and death from cardiovascular causes as compared with control.[11]

Many of the patients who suffer from cancer related psychiatric problems do not receive any professional help. Even though intervention outcome depends on the stage of the disease, patient's emotional strength, and the undergoing treatment, women benefit from psychosocial intervention. Their self-image is enhanced and there is less sexual dysfunction.[12]

## Methodology

This study was conducted in Department of Psychiatry, Sir Sunder Lal Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India. Patients were collected from Department of Obstetrics and Gynecology and Department of Radiation Oncology of the institute. The methodology was approved by Departmental Research Committee and ethical clearance was given by Institutional Ethics Committee.

Female patients of 31-65 years of age were screened randomly and 100 recently detected cases of carcinoma cervix who had not received any treatment for cancer were included in the study. Females below 31 years and above 65 years of age, with presence of any other significant comorbid physical illness, and past history of psychiatric illness were not included in the study. A written informed consent was taken from all cases explaining the nature of the study.

The evaluation of the patients was done on the basis of structured proforma containing socio-demographic details, details of physical and mental status examination, and diagnostic criteria for carcinoma cervix and psychiatric morbidity. The diagnosis and staging of carcinoma cervix was based on revised FIGO classification.[13] Psychiatric diagnosis was made according to DSM-IV-TR criteria,[14] and severity of illness was assessed on the basis of Hamilton Anxiety Rating Scale,[15] Hamilton Rating Scale for Depression,[16] Brief Psychiatric Rating Scale,[17] and Yale-Brown Obsessive Compulsive (Y-BOCS).[18]

Analysis of data was based on statistical methods using chi-square test, t-test, p-value for significance, and correlation coefficient for correlation between different variables.

## Result

Mean age of the females was 54.40±9.365 years and majority (36%) of them were in the age group of 51-60 years. Most of the females were Hindu (98%), 80% were illiterate, 69% hailed from rural background, and 79% belonged to lower socioeconomic status. All the females included in the study were found to be housewives and married but 20% married females were widows (Table 1).

In majority (63%) of the females duration of illness of carcinoma at the time of presentation was less than six months. A figure of 28% had a duration of six to 12 months and mean duration of illness was 7.34±6.231 months whereas 60% females had early stage cancer (stage I+II) and 40% females had late stage cancer (stage III+IV) (Table 2).

Psychiatric morbidity was detected in 55% of females diagnosed as carcinoma cervix. Majority of them (26%) were diagnosed as major depressive disorder, 17% as anxiety disorder, eight per cent as adjustment disorder with depressed mood, and four per cent as insomnia only (Table 3). Suicidal ideation was present in four per cent patients.

In major depressive disorder group patients at late stage of cancer (stage III+IV) had higher score of depression (mean 15.53±2.81) as compared to patients at early stage (stage I+II) (mean 10.82±2.44) and the difference was significant. A positive correlation was observed between duration of illness and severity of depression. Similarly a positive correlation was observed between stage of cancer and severity of depression (Table 4).

In anxiety disorder group also patients at late stage of cancer had higher score of anxiety (mean 14.25±3.07) as compared to patients at early stage (mean 10.71±3.75) and the difference was statistically significant. A positive correlation was observed between duration of illness and severity of

**Table 1:** Socio-demographic profile (N=100)

| Variable | % |
|---|---|
| Age (in years) | |
| 31-40 | 13 |
| 41-50 | 24 |
| 51-60 | 36 |
| 61-65 | 27 |
| Religion | |
| Hindu | 98 |
| Muslim | 2 |
| Education | |
| Illiterate | 80 |
| Up to V | 7 |
| VI-X | 8 |
| XI-XII | 5 |
| Occupation | |
| Housewife | 100 |
| Residence | |
| Rural | 69 |
| Semi-urban | 22 |
| Urban | 9 |
| Socioeconomic status | |
| Lower | 79 |
| Middle | 21 |
| Marital status | |
| Married | 100 |
| Widow | 20 |

**Table 2:** Duration and stage of carcinoma cervix

| Variable | % |
|---|---|
| Duration of illness (in months) | |
| Up to 6 | 63 |
| >6-12 | 28 |
| >12-18 | 5 |
| >18-24 | 4 |
| Stage of carcinoma | |
| I+II | 60 |
| III+IV | 40 |

anxiety score. Similarly a positive correlation was observed between stage of cancer and severity of anxiety (Table 5).

## Discussion

Life threatening diagnosis, and fear of disability and death may be contributing factors for psychiatric disturbances in patients of carcinoma cervix. The present study was an attempt to find out the presence of psychiatric morbidities in these patients for a better comprehensive care.

**Table 3:** Prevalence of psychiatric morbidity in carcinoma cervix patients (N=100)

| Psychiatric diagnosis | % |
|---|---|
| Major depressive disorder | 26 |
| Anxiety disorder | 17 |
| Adjustment disorder with depressed mood | 8 |
| Insomnia | 4 |
| No psychiatric disturbance | 45 |

**Table 4:** Correlation between major depressive disorder (HAM-D score) and different variables (duration and stage of cancer)

| Variable (HAM-D score) | r (correlation coefficient) | p |
|---|---|---|
| Duration of cancer | +0.384 | <0.021 |
| Stage of cancer | +0.68 | <0.001 |

HAM-D=Hamilton rating scale for depression

**Table 5:** Correlation between anxiety disorder (HAM-A score) and different variables (duration and stage of cancer)

| Variable (HAM-A score) | r (correlation coefficient) | p |
|---|---|---|
| Duration of cancer | +0.482 | <0.003 |
| Stage of cancer | +0.541 | <0.001 |

HAM-A=Hamilton anxiety rating scale

Mean age of the patients was 54.40±9.365 years and most of them (36%) belonged to age group of 51-60 years. Rajarao and Hemanth Kumar[19] in an Indian study have also reported majority of the patients between age group 65 years and above. In a study by Lau et al.,[20] mean age was reported as 65 years. Yang et al.[21] have reported mean age as 49.16 years; majority of the patients were above 46 years of age.

In present study majority of the females were Hindu (98%), 80% were illiterate, 69% hailed from rural area, and 79% belonged to lower socioeconomic class. All the females were housewives and married but 20%, out of married women, were widows. Rajarao and Hemanth Kumar[19] have reported similar findings, which is 57% Hindu, 80.3% illiterate, 62% from lower socioeconomic status, and 91.2% married. Majority (63%) of the patients had duration of illness less than six months followed by 28% having a duration of illness for six to 12 months. A figure of 60% patients had early stage (stage I+II) and 40% patients had late stage (stage III+IV) of cancer. Lau et al,[20] have reported 86% patients in early stage and Yang et al.[21] have reported 70.5% patients in early stage of cancer in their studies.

Psychiatric morbidity was detected in 55% patients. Twenty six per cent patients had major depressive disorder, 17% had anxiety disorder, while eight per cent patients were detected as adjustment disorder with depressed mood, and four per cent patients had insomnia only. Lau et al.[20] examined 113 cancer cervix patients and found prevalence of psychiatric disorder as 37%; point prevalence of depression, anxiety, and schizophrenia was 31%, 16%, and two per cent respectively. In another study Kim et al.[8] have reported depression in 34.3% and anxiety disorder in 39.7% patients of carcinoma cervix. Evans et al.[22] have reported prevalence of depressive disorder in 23% patients of cancer cervix.

A significant positive correlation was observed between duration of illness and severity of depression, and also stage of cancer and severity of depression. In anxiety disorder group, significant positive correlation was found between duration of illness and severity of anxiety, as well as stage of cancer and severity of anxiety score.

## Conclusion

The findings of our study revealed that more than half of the patients of carcinoma cervix were suffering from psychiatric morbidity. All of these cases were undiagnosed and untreated. Undiagnosed and untreated psychiatric morbidity may affect the treatment compliance and result in overall poor quality of life. The proper and timely evaluation of patients of carcinoma cervix for comorbid psychiatric illness will help in better management of mental health of these patients and improvement in their quality of life. Antidepressants can be effective in treatment of patients with cancer.[23]

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