## **Original**

# Psychiatric Morbidities in Patients with Carcinoma Cervix

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#### **Abstract**

Aims and objectives: 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, improving their quality of life can be planned.

Methodology: 100 female patients of age range 31-65 years, recently diagnosed as Carcinoma cervix; were screened for psychiatric morbidity on a well 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. HARS, HAM-D, BPRS and 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 socio-economic status. Psychiatric morbidity was detected in 55% patients, majority of them having duration of cancer less than 6 months. 26% patients suffered from Major Depressive Disorder, 17% had Anxiety Disorder and 8% were detected as Adjustment.

Disorder with depressed mood. 4% 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 co-morbid 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.

Key-words: Carcinoma cervix, Mental health, Depression.

**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 the 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<sup>1</sup>.

Review of literature: 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 and

ultimately spread to other parts of the body other than the location of their origin .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 <sup>2</sup>. 60% of all cancers in Indian women found in cervix and breast. Caner of cervix is the third largest cause of cancer mortality in India<sup>3</sup>.

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)<sup>4</sup>.

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<sup>5</sup> has summed up the meaning attached to cancer as five D's – Death , Disability , Disfigurement , Dependence and Disruption of relationship. A study by Latha<sup>6</sup> has revealed that thought evoked in person, on hearing that they have cancer; are those related to fear of physical dependence (98%), fear of treatment(80%), fear of death(64%), fear of pain(62%) and fear of recurrence(62%). Cervical cancer survivors(CCS) frequently have to deal with bowel and bladder changes, sexual dysfunction, treatment related menopause, loss of fertility and relationship problems<sup>7</sup>. 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 have 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<sup>9</sup> 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<sup>10</sup>. 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<sup>11</sup>.

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 <sup>12</sup>.

<u>Methodology</u> – This study was conducted in Sir Sunder Lal hospital , Department of Psychiatry, Institute of medical sciences , Banaras Hindu University , Varanasi . Patients selected from Department of Obstetrics and Gynecology and Department of Radiation Oncology of the institute .

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 (International Federation of Gynecology and Obstetrics) classification<sup>13</sup>, American Joint Committee on Cancer. Psychiatric diagnosis was made according to DSM-IV TR <sup>14</sup> criteria and severity of illness was assessed on the basis of Hamilton Anxiety Rating Scale<sup>15</sup>, Hamilton Rating Scale for Depression<sup>16</sup>, Brief Psychiatric Rating Scale<sup>17</sup> and Yale-Brown Obsessive Compulsive (Y-BOCS)<sup>18</sup>.

Analysis of data was based on simple statistical methods using chi-square test, t-test, p-value for significance and correlation co-efficient for correlation between different

variables.

**Result:** Mean age of the females was  $54.40 \pm 9.365$  years and majorities (36%) of them were in the age group 51-60 years.

Most of the females were Hindu (98%), 80% were illiterate, 69% hailed from rural background and 79% belonged to lower socio-economic status. All the females included in the study were found to be housewives and married but 20% married females were widows.

In majority (63%) of the females duration of illness of carcinoma at the time of presentation was less than 6 months. 28% had duration >6 -12 months and mean duration of illness was  $7.34 \pm 6.231$  months. 60% females had early stage cancer (stage I+II) and 40% females had late stage cancer (stage III+IV) .

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, 8% as Adjustment Disorder with depressed mood and 4% as Insomnia only (Table3). Suicidal ideation was present in 4% patients.

In Major Depressive Disorder group patients at late stage of cancer (stage III + IV) had higher score of depression (mean  $15.53 \pm 2.81$ ) as compared to patients at early stage (stage I + II)(mean  $10.82 \pm 2.44$ ) 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.

In Anxiety Disorder group also patients at late stage of cancer had higher score of anxiety (mean  $14.25 \pm 3.07$ ) as compared to patients at early stage (mean  $10.71 \pm 3.75$ ) and the difference was statistically significant. A positive correlation was observed between duration of illness and Severity of anxiety score. Similarly a positive correlation was observed between stage of cancer and severity of anxiety.

### PSYCHIATRIC MORBIDITY IN CARCINOMA CERVIX

Variable		N=100
		%
Age	31-40 yrs.	13
	41-50 yrs.	24
	51-60 yrs.	36
	61-65 yrs.	27
Religion	Hindu	98
	Muslim	2
Education	Illiterate	80
	Upto Vth	7
	VIth-Xth	8
	Xth-XII	5
Occupation	Housewife	100
Residence	Rural	69
	Semi-urban	22
	Urban	9
Socioeconomic	Lower	79
status	Middle	21
Marital status/	Married /	100 /
widows	widows	20

Table.1. Socio-demographic profile

Variable HAM-A Score	r(Correlation coefficient)	р
Duration of cancer	+ 0.482	<.003
Stage of cancer	+ 0.541	<.001

Table 2. Duration and stage of Carcinoma Cervix

Variable	%
Duration of illness	
Upto 6 months	63
>6 – 12 months	28
>12-18 months	5
>18 – 24 months	4
Stage of Carcinoma	
Stage I + II, III +IV	60 , 40

Table 3.Prevalence of psychiatric morbidity in Carcinoma patients

**Discussion:** Life threatening diagnosis and fear of disability and death may be a contributing factor 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.

Mean age of the patients was  $54.40 \pm 9.365$  years and most of them (36%) belonged to age group 51-60 years. Rajarao P et al <sup>19</sup> in an Indian study have also reported majority of the patients between age group 65 years and above In a study by K L Lau et al. <sup>20</sup> mean age was reported as 65 years. Yi Long Yang et al <sup>21</sup> have reported mean age as 49.16 years; majority of the patients 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 socio-economic class. All the females were housewives and married but 20%, out of married women; were widows. Rajarao P et al. <sup>19</sup> have reported similar findings -57% Hindu, 80.3% illiterate, 62% from lower socio-economic status and 91.2% married.

Majority (63%) of the patients had duration of illness less than 6 months followed by 28% having duration of illness >6-12 months . 60% patients had early stage (stage I+II) and 40% patients had late stage (stageIII+IV) of cancer . K L Lau et al  $^{20}$  have reported 86% patients in early stage and Yi Long Yang et al.  $^{21}$  have reported 70.5% patients in early stage of cancer in their studies.

Psychiatric morbidity was detected in 55% patients. 26% patients had Major Depressive Disorder and 17 % had Anxiety Disorder . 8% patients were detected as Adjustment Disorder with depressed mood and 4% patients had Insomnia only . K L 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 2% respectively . In another study Kim SH et al. 22 have reported depression in 34.3% and anxiety disorder in 39.7% patients of carcinoma cervix . Evans D L et al. 23 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 (p<0.001). 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.

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#### References:

- Klee MC, Thranov I & Machin D. The patients perspective on physical symptoms after radiotherapy for cervical cancer. Gynecologic Oncology 2000; 76:14-23.
- Shanta V, Krishnamurti S, Gajalakshmi CK, Swaminathan R and Ravichandran K. Epidemiology of the cancer of cervix: global and national perspective. Journal of the Indian Medical Association 2000; 98(2): 49-52.
- 3. WHO. Information centre on Human Papilloma Virus (HPV) and related Cervical Cancer in India. Summary Report 2009.
- Sankaranarayan R & Wesley RS. A practical manual on visual screening for cervical neoplasia. International Agency for Research on Cancer, Technical paper No. 41, WHO. 2003.
- Holland JC . Principles of Psycho-Oncology. 2<sup>nd</sup> Ed. Lea and Febiger , Philadelphia . 1993;2325-2331.
- Latha PT . Psychological issues in cancer patients . In :
   Chandra PS , Chaturvedi SK & Channabasavanna SM (Eds) Lecture notes in psycho-oncology , NIMHANS , Bangalore.
   1996 .
- 7. Herzog TJ & Wright JD . The impact of cervical cancer on quality of life the components and means of management .

  Gynecologic Oncology 2007;107: 572-578.
- 8. Kim SH, Kang S, Kim YM & Kim BG et al. Prevalence and predictors of anxiety and depression among cervical cancer survivors in Korea. Int J Gynecol Cancer, 2010;20: 1017-24.
- 9. Cull A, Cowie VJ, Faruharson DI & Livingston JR et al. Early stage cervical cancer: psychosocial and sexual outcomes of

- treatment . Br J Cancer 1993; 68: 1216-1220 .
- Cerfolio N. Psychiatric Liasion to Gynecological Oncology . Psycho Oncol 1995;4:143-147.
- 11. Fang F, Fall K, Mittleman MA & Sparen P et al . Suicide and cardiovascular death after a cancer diagnosis . New Eng J Med 2012;366:1310-1318.
- 12. Fallowfield L. Counseling and communication in healthcare. London: John Wiley & Sons. 1991.
- Percorelli S. Revised FIGO staging for carcinoma of vulva, cervix and endometrium. Int J Gynaecol Obstet 2009;105:103-104.
- American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (4<sup>th</sup> ed)(DSM-IV TR). 2000.
- 15. Hamilton M. The assessment of anxiety states by rating. Br J Med Psychol 1959;32:50-55.
- 16. Hamilton M. A rating scale for depression . J Neurol Neurosurg Psych 1960; 23:56-57 .
- 17. Overall J, Gorham D. The Brief Psychiatric Rating Scale. Psychological Reports 1962;10:799-812.
- Goodman WK, Price LH & Rasmussen et al. The Yale-Brown Obsessive Compulsive Scale. Development, use and reliability. Arch Gen Psychiatry, 1989,46, 1006-1011.
- Rajarao P & Hemant Kumar B. Study of Socio-demographic Profile of Cancer Cervix Patients in Tertiary Care Hospital, Karim Nagar, Andhra Pradesh. Int J Biol Med Res 2012;3(4):2306-2310.
- 20 Lau KL, Yim PHW & Cheung EYW. Psychiatric Morbidity in Chinese Women after Cervical Cancer Treatment in a Regional Gynecology Clinic. East Asian Arch Psychiatry 2013;23:144-53.
- Yang YL, Liu L, Wang XX & Wang Y et al. Prevalence and associated positive psychological variables of depression and anxiety among Chinese cervical cancer patients: A cross sectional study. PLoS ONE, 2014, 9(4): e94804. Published online.
- 4. Kim SH, Kang S & Kim YM et al. Prevalence and predictors of anxiety and depression among Cervical Cancer Survivors in Korea. Int J Gynecol Cancer 2010;20:1017-1024.
- Evan DL, McCartney CF & Nemeroft CB et al. Depression in women treated for gynecological cancer: clinical and neuroendocrine assessment. Am J Psychiatry 1986;143:447-452.