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Psychological problem of cervical cancer patients after radiotherapy Do treatment modalities, disease stages influence outcome?

Anujavenkatesh and Neelakandan
Department of psychology, Annamalai University.

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ABSTRACT
The impact of cancer and associated treatment like radiotherapy and chemo radiation cause psychological illness such as anxiety, depression and distress. The present study evaluated whether radiotherapy and disease stages influence the psychological problem among cervical cancer patient. Eighty cervical cancer patients randomly selected from various hospital in Chennai. Each individual assessed with Hamilton anxiety scale (HAM-A), Hamilton depression scale (HAM-D). Data were analyzed by t –test. The results indicated that anxiety and depression were significantly difference among treatment modalities but anxiety and depression were not influence the disease stages. Psychological problems affect the cancer patient in aspects of family, social, emotional and total quality of life. With consideration of patients psychological intervention is necessary throughout and beyond radiotherapy for cervical cancer patients.

Introduction

Cancer as severe illness creates a stressful situation for the entire family and affects each family member. Patients may become highly psychologically distressed and may perceive a low quality of life resulting from the fear of dying, a worsening physical condition, painful treatments, and side effects of such treatments. Although it s well recognized that the diagnosis of cancer and exhausting treatment are extremely stressful events and emotional burdens for the patient, it is only the last decade or two that the specific characteristic of psychosocial problems secondary to cancer have been studied in more detail (Grassi et al. 2000). Psychologist addresses 1. Psychological reactions to cancer among patients, members of family and care givers. Quality of relationship between physician and patient significantly effects on patients at each appointments with physician, at all levels of care, at all stages of cancer and during all methods of treatment. 2) Psychological, behavioural, biological and social factors that affect risk occurrence of cancer, its detection, treatment and survival. Numerous psycho neuro immunological mechanisms have been investigated and their possible relationship with psychological and biological aspects of genesis and course of disease. Especially, the way that cytokines affect “disease behaviour” this might represent the biological basis for symptoms for fatigue, depression, anxiety, weakness and cognitive change among oncology patients (Cleeland et al. 2003).

Psychological consequences of cancer diagnostics and treatment can be very significant. On the physical level, cancer can cause great changes in body image and in the way patients perceive their body. Oncology patients have various psychological problems such as emotional ability, changes in future perspectives, feelings of solitude, abandonment, marginalization, stigmatization, interpersonal problems, an all these problems can occur during different disease stages and during treatment with variety of psychological consequences (Braš 2008). The role of liaison psychiatrist on oncology departments consists of two components: helping patient from the diagnosis till the end of treatment and collaborating with medical team (Bloch & Kissane 2000). Assignment of medical stuff is to identify negative emotions and overcoming it and openly showing it among colleagues and consequently reducing feelings of guilt and discussion on uniting all the actions that insure patients' better psychological and somatic state (Fawzy et al. 2003).

Radiotherapy plays an important role in cervical cancer patients. Previous studies have indicated that different treatment modalities affect the lives of surviving women to varying degrees in physical, sexual, and psychosocial functioning. Maintaining the QOL of gynecologic cancer survivors after radiotherapy requires careful consideration of all domains that affect the patient. One of the concerns is related to combination treatment regimens, such as surgery or chemotherapy, as they may increase complications and thereby negatively affect the QOL. According to a Cochrane review of acute and late toxicity after concomitant chemo radiotherapy, late effects of treatment have not been well reported, and therefore, the impact of concomitant chemo radiotherapy on these effects could not be determined. Regarding physical and psychosocial concerns among cervical cancer survivors, it has been difficult to draw definite conclusions, and many previous studies lacked information about the patients’ disease stages and treatment modalities.

Objectives of the study

1. Evaluate whether radiotherapy and disease stages influence the psychological problem among cervical cancer patient

Hypothesis

1. Anxiety and Depression were significantly differ among treatment modalities

Tele:
E-mail address: anujaanuja78@yahoo.com

Table 1. Shows Mean, SD, F value for Anxiety on the basis of Stages of Cancer.

Variables	Stages of Cancer	N	Mean	Standard Deviation	F Value	Level of Significance
Anxiety	I	23	24.48	3.449	0.242	0.785 (NS)
	II	27	24.00	3.4321		
	III	30	24.50	2.013		

NS – Not Significant at 0.05 level

Table 2. Shows Mean, SD, F value for Depression on the basis of Stages of Cancer.

Variables	Stages of Cancer	N	Mean	Standard Deviation	F Value	Level of Significance
Depression	I	23	26.48	1.563	1.164	0.318 (NS)
	II	27	26.59	1.647		
	III	30	26.00	1.462		

NS – Not Significant at 0.05 level

2. There is no significant difference in respondent's level of anxiety and depression based on stages.

Methodology

Procedure

This study implemented survey method the self reported questionnaires were used to collected the data for two variables of the study along with the personal data sheet. The selected cancer patients of (N=80) were given the standardized questionnaire under personal supervision. The sample consists of women with cervical cancer from various hospital in Chennai. Convenient sample technique was been employed. The sample was classified in terms of age (30-40), (41-50) and (51 & above) education, type of family, occupation, marital status as socio demographic factors and age at marriage, age at first pregnancy, total number of abortion, total number of pregnancy and age at menopause as clinical factors.

Inclusion and exclusion criteria: female age group between 30yrs to 50yrs above, they were diagnosed cancer stage 1, 2, and 3 and widower, and individual underwent radiotherapy these are inclusion criteria. Below 30, and stage 4,, chemotherapy and except cervical cancer others cancer type are come under exclusion criteria. According to geographical extend selection of sampling refer researcher.

Tools description

HAM-D

Hamilton depression rating scale abbreviated HAM-D. It is multiple item question used to provide an indication of depression. Max Hamilton originally published the scale in 1960 later it was revised in the year 1980. It consist of 21 item generally takes 15-20 minutes eight item are scored on a 5 points scale ranging from 0-not present , 4- severe. Nine items score from 0-2. 0-7 normal, 8-13 mild, 14-18 moderate, 19 above severe. Correlation coefficient for Ham-D was 0.61 and 0.63.

HAM- A:

The Hamilton Anxiety Rating Scale (HAM-A) is a widely used and well-validated tool for measuring the severity of a patient's anxiety. It was developed by Dr. M. Hamilton in 1959. The HAM-A probes 14 parameters and takes 15-20 minutes to complete the interview and score the results. Each item is scored on a 5-point scale, ranging from 0=not present to 4=severe. The major value of HAM-A is to assess the patient's response to a course of treatment, rather than as a diagnostic or screening tool. By administering the scale serially, a clinician can document the results of drug treatment or psychotherapy. Sum the scores from all 14 parameters.14-17 = Mild Anxiety, 18-24 = Moderate Anxiety 25-30 = Severe Anxiety.

Results and discussion

It is observed from the table 1 detail about degree of anxiety based on the stages of cancer (Stages I, II, III). The obtained mean value is (24.48, 24.00, 24.00) is respectively.

This mean difference is statistically proved by the obtained F ratio (0.242) which is not significant at ($P < 0.005$) level. Hence the hypothesis that anxiety is not the significant factor to influence the stages of cancer.

The above table 2 the exhibits detail about the level of depression based on the stages of cancer (Stage I, II, III). The obtained mean value is (26.48, 26.59, 26.00) is respectively. This mean difference is statistically proved by the obtained F ratio (1.164) which is not significant at ($P < 0.05$) level. Hence the hypothesis that depression is not the significant factor to influence the stages of cancer. Hence null hypothesis accepted alternate hypothesis is rejected.

It is observed from the table 3 that the level of depression among the respondents based on the modalities (more than 10 times) group obtained high mean score is (27.13) compared with other groups those who attend radiotherapy treatment less than 5 times (26.64) and 5 to 10 times (25.55). This mean difference is statistically proved by obtained F value (7.326) which is significant at ($p<0.001$) level. Hence hypothesis that number of treatment modalities is the significant factor to influence the level of depression.

Table 3. Shows Mean, SD, F value for Depression on the basis of Treatment Modalities of Radiotherapy .

Variables	Modalities of Radiotherapy	N	Mean	Standard Deviation	F Value	Level of Significance
Depression	I	36	26.64	1.588	7.326	0.001 (S)
	II	29	25.55	1.325		
	III	30	27.13	1.302		

S –Significant at 0.05 level

Table 4.Shows Mean, SD, F value for Anxiety on the basis of Treatment Modalities of Radiotherapy .

Variables	Modalities of Radiotherapy	N	Mean	Standard Deviation	F Value	Level of Significance
Anxiety	I	36	23.47	3.402	3.609	0.032 (NS)
	II	29	24.66	2.143		
	III	30	25.73	2.631		

NS – Not Significant at 0.05 level

The above table 4 exhibits the details about the level of anxiety among the respondents based on the modalities (more than 10 times). It is observed from the obtained mean score, more than 10 times of applying radiotherapy group have high level of anxiety (25.73) compared with other group less than 5 times (23.40) and 5 to 10 times (24.66). This mean difference is statistically proved by the obtained F value (3.609) which is significant at ($P < 0.05$) level. Hence the hypothesis that no. of times attending radiotherapy treatment modalities is the significant factor to influence the level of anxiety.

Discussion

The result of the present study indicates that difference in psychological problem such as anxiety and depression and treatment modalities were significant. Cutell (1993) specifically focused on anxiety and depression among cervical cancer because treatment modalities that may influence psychological problems among cervical cancer patients. A few studies examined depression and anxiety in gynecologic cancer, indicating level of anxiety and depression during treatment was influence the psychical health. According to Nay et al., (2006) examined 2 concomitant chemo radiotherapy regimens in quality of life. Patients who had more radiation therapy had more psychosocial and sexual problems. In addition patients treated by multiple treatment modalities reported significantly lower in quality of life. Bradely (2006) concluded that quality of life was not related to diseases characteristic including treatment modalities or stages of disease. The present study also failed to show any significant difference in anxiety and depression according to diseases stages.

Conclusion

The research findings indicate that psychosocial assessment and support are necessary beyond cervical cancer treatment regardless of the type of radiotherapy and stages of disease. Cancer treatment revealed few differences in psychological problems among different treatment modalities. The most common reactions reported by patients were anxiety and depression during the course of radiotherapy. Various modalities of radiotherapy influence the anxiety and depression. Therefore study revealed that cancer patients face psychological problems during cancer treatment. Psychosocial intervention should carry out among cancer patients to support during their medical treatment process and it alleviates psychological problems among cervical cancer patients.

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