ORIGINAL ARTICLE

SEXUAL FUNCTIONING & QUALITY OF LIFE IN CERVICAL CANCER SURVIVORS AFTER SURGERY AND RADIOTHERAPY

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ABSTRACT

Introduction: Radiotherapy is the main modality in the management of cervix cancer. Sexual functions are affected due to post radiotherapy vaginal stenosis and reduced mucosal secretion after radiotherapy.

Purpose of the study was to compare Sexual functioning and quality of life in cervical cancer survivors treated with either surgery or radiotherapy.

Methods: Women coming to department of radiotherapy from September 2011 to march 2013 were interviewed at least 1 year after initial treatment for cervical cancer. Eligible women had squamous cell tumors FIGO I&II at diagnosis, were currently disease-free, and had either undergone surgery or radiotherapy, but not both. The two treatment groups were then compared using univariate analysis and multivariate linear regression with a control group of age- and race-matched women with no history of cancer. Total 105 women were selected, Patients consent &institutional approval was taken

Results: Total 105 women (35 surgeries, 35 radiotherapies, 35 controls) were included for analysis. When compared using EORTC QLQ-CX24 Questionnaire with surgery patients and controls, radiation patients had significantly poorer scores on standardized questionnaires measuring health-related quality of life (physical and mental health), and sexual functioning. The disparity in sexual function remained significant in radiation patients. There were no significant differences between radical hysterectomy patients and controls on outcome measures.

Conclusion: Cervical cancer survivors treated with radiotherapy had worse sexual functioning than did those treated with radical hysterectomy and lymph node dissection. Appropriate measures like Pelvic exercises, Yoga, vaginal dilators, vaginal cream should be used to decrease radiotherapy related side effects on sexual functioning. Cervical cancer survivors treated with surgery alone can expect overall quality of life and sexual function not unlike that of peers without a history of cancer.

Keywords: Carcinoma cervix, radiotherapy, quality of life.

INTRODUCTION

Most common cancer in Indian females, with1.82 lakh new cases are detected every year, and nearly 73,000 women are dying of cervical cancer every year[1].India represents 26.4 per cent of all women dying of cervical cancer globally[2]. Radiotherapy is the main modality in the management . Surgery is effective in earlier stages of ca cervix, but in India usually patients come in late stages when surgical intervention is not possible, at that time patients are treated by radiotherapy.[3]

Radiotherapy- EBRT 50 Gy in 25 fractions followed by brachytherapy 700cGy/fractions/Week Brachytherapy (BT) Complications of RT include

1. Small bowel complications (obstruction, bleeding, stricture, fistulae, perforation)
2. Urinary complications (hematuria, ureteralstenosis, vesicovaginal fistula)
3. Vaginal atrophy, shortening, vaginal stenosis and reduced mucosal secretion
4. Uterine perforation(rarely in brachytherapy) [4,5]

Surgery includes Radical hysterectomy and bilateral lymph node dissection with accompanying oophorectomy. Complications includes blood loss, febrile morbidity, deep vein thrombosis and pulmonary embolism.[6,7,8,9]

Traditionally, oncologists have focused their efforts on maximizing the overall survival of their patients. Although many oncologists acknowledge that QOL after cancer therapy is an important aspect of patient care, it is often not the main consideration when recommending cancer treatment.

OBJECTIVES

The objective of the study was to compare Sexual functioning & Quality of life in cervical cancer survivors treated with either surgery or radiotherapy

METHODS

Women coming to department of radiotherapy from September 2011 to march 2013 were selected for study at least 1 year after initial treatment for cervical cancer. Total 105 women were selected for the study; 35 women after surgery, 35 women after radiotherapy and 35 normal women with no history of cancer. Patient consent was taken and approval of institutional ethical committee was taken.

Inclusion criteria for subject was include Squamous cell tumors, FIGO I & IIa at diagnosis, Currently disease-free, 25 to 48 yrs of Age and had either undergone surgery or radiotherapy, but not both.

Exclusion criteria for subject was includes Histology other than Squamous cell ca.; Age more than 48 yrs; No follow up; FIGO stage IIb, III, IV; Concurrent chemo-radiotherpy; Recurrent disease; and if treated by both radiotherapy and surgery.

Women with FIGO stage I & II A tumors are equally good candidates for either surgical management or radiotherapy (Table 1). In these situations, the clinical decision is often based on patient or provider preference

The two treatment groups were then compared with a control group of age and race matched women with no history of cancer. Women coming with patients as attendees were selected for control group.

'The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 30' (EORTC QLQ-C30) was the instrument used to measure the quality of life of cancer patients. This includes the scales of Physical, Emotional and Social health of wide scale of cancer patients. This questionnaire includes five functional scales, three symptom scales.[10]

Table 1: Characteristics of Patients participated in the study

	Radical Hyst (n = 35)	Radiation (n = 35)
Stage		
Ia1	7	0
Ia2	11	1
Ib1	14	16
Ib2	2	10
IIa	1	8
Histology		
Well Diff Squamous	18	20
Mod Diff Squamous	14	12
Poor Diff Squamous	3	3
Grade		
1	20	20
2	14	13
3	1	2

EORTC QLQ-Cx 24- Questionnaire, for cervical cancer patients was used only as a supplement to EORTCQLQ-C30. It includes 24 questions regarding the symptoms related to urinary tract, gastro-intestinal tract, vaginal problems and sexual activity of patients.

RESULTS

Patients were surveyed with the questionnaires for the assessment of the quality of Life. Patients answered the questions in the questionnaire after surgery and radiotherapy. The answers were scored by student paired t test and after processing they were objectified in the form of results

Table 2: Quality of Life Questionnaires and it's comparison among study groups.

QOL scales (EORTCQOLCX24&C30)	RADIATION (n= 35 Patients)	SURGERY (n=35 Patients)	CONTROLS (n=35 patients)	p value
Sexual /vaginal function Impairment	92	17	17	<0.0001(a) 0.06 (b)
Sexual worry	55	39	36	<0.0001(a) 0.2628(b)
lymphedema	51	32	29	0.0001(a) 0.35(b)
Menopause	59	51	37	<0.0001(a) <0.0001(b)
Peripheral neuropathy	48	46	45	NS
Sexual activity	33	52	60	<0.0001(a) 0.1173(b)
Sexual enjoyment	32	55	60	<0.0001(a) 0.42(b)
Physical function	44	53	53	0.03(a) 1(b)
Emotional function	41	51	53	0.009(a) 0.644(b)
Body Image	25	23	24	NS

a =Difference between RT and control; b =Difference between Surgery and control.; NS =Non significant

The general results of(Table 2) QLQ-QOL CX24 for the patients after surgery and radiotherapy. Sexual and vaginal function impairment was more in Radiotherapy arm(92v/s17, p<0.0001). Sexual worry was more in radiotherapy arm (55 v/s 36,<0.0001).Sexual activity and Sexual enjoyment decreased significantly in radiotherapy group (33 vs60,p<0.0001)(32v/s60,p<0.0001) compared to control and surgery group. Lymphedema (p=0.0001)was significantly more in RT group. Menopause was significant in both RT(p<0.0001) and Surgery (p<0.0009).Physical function (p=0.03)and emotional function (p=0.009)significantly decreased in RT group compared to surgery and control. Peripheral neuropathy and body image disturbance was not significant in both arms.

DISCUSSION

Irradiated patients had significantly more sexual dysfunction than women in the other two groups. These findings agree with the previous studies done by Jensen et al[11].Chronic fibrotic changes in pelvic tissue after radiotherapy create persistent, or even worsening vaginal atrophy[12].Patients with radical hysterectomy did not differ in sexual functioning from age- and race-matched control. This finding is in accord with a previous study by Jensen et al, who also found no significant difference in overall sexual function between women post hysterectomy and healthy controls. Pelvic exercises, virginals intercourse after treatment, yoga strengthen the pelvic floor and flexibility can be very helpful, vaginal dilators and vibrators, Vaginal cream, Moisturizer cream, K-Y jelly[13] coating of natural oils like vitamin E or safflower, coconut or olive oil three or four times a day for a month should be used to decrease radiotherapy related side effects on sexual functioning.

CONCLUSION

Cervical cancer survivors treated with radiotherapy had worse sexual functioning than did those treated with radical hysterectomy and lymph node dissection. Measures required to improve vaginal functions. Future research is needed to improve quality of life and sexual functioning by improving radiation delivery techniques and reducing radiation exposure to normal structures.

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