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Research Article

**AN ANALYTICAL STUDY ON SEXUAL FUNCTION OF
PATIENTS WHO EXPERIENCED GYNECOLOGICAL
SURGERY AND RECEIVED BRACHYTHERAPY**

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Objective: The purpose of this research work is to examine the sexual function among females who experienced surgery of Gynecological cancers and received complete brachytherapy.

Methodology: This research work carried out on 118 patients in KGN Teaching Hospital Bannu for treatment of Gynecological cancers. We included only the willing participants and used the random sampling technique for the selection of these patients. All the patients were living a married life with sexual activities. They appeared with gynecologic cancer, experienced a surgical intervention and obtained brachytherapy for complete 4 months after surgery. We used Personal Identification Form and Female Sexual Function Index for the collection of the information.

Results: Mean age of the females was 50.9 ± 7.98 years. About 41.5% patients among them were present with primary school education. Approximately 60% patients were present with cervical cancer and 69.5% patients were present with total hysterectomy of abdomen in addition with bilateral Salpingo-ophorectomy. The mean scores of female sexual function index were 15.77 ± 8.71 . We discovered that 97.5% patients received less than thirty points from scale and these patients were experiencing sexual dysfunction.

Conclusions: In accordance with the results of this research work, almost all of the females who underwent surgical intervention for gynecologic cancer and obtained brachytherapy after surgery were experiencing sexual dysfunction.

KEYWORDS: Oncology, Brachytherapy, Cervical Cancer, Female Sexual Function Index, Dysfunction.

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INTRODUCTION:

Approximately 14.1 million new cancer patients and 8.20 million mortalities because of the cancer were present in the year of 2015 [1,2]. There is also high incidence of this disease among females. The most vital reasons for high rate of morbidity as well as mortality among females are gynecologic cancers after the cancer of breasts. Gynecologic cancer is the 4th most common cancer type in whole world [3, 4]. The most important poor impact of the treatment of gynecologic cancer occurs to sexual function [5]. There is application of brachytherapy and radiotherapy in the cancers related to gynecology. The therapy of pelvic radiation is the reason of ovarian failure, although severity of the complication varies depends upon the dose of radiotherapy and age of the patient.

Ovarian failure depends upon the reduction in estradiol, and the progesterone is the reason of early menopause's symptoms, libido loss and post-coital hemorrhage [6]. In addition to it, radiotherapy is the cause of damages to vagina's epithelium, vascular structures, and fibroblasts [7] and results some alterations in the wall of vagina. These alterations lead to the obstruction in vagina, elasticity loss, pain, bleeding and other issues related with intercourse [4]. In combination with the medical treatment, proper counseling is necessary and it can play a significant role to increase the Quality of Life of the patients [8]. This research work carried out to evaluate the sexual function in the patients who underwent surgical intervention because of gynecologic cancer and obtained brachytherapy as well as to assess the factors associated with this complication.

MATERIAL AND MEHTODS:

We selected 118 females with the use of random sampling procedure who participated after giving their willing among 800 females who got treatment in Oncology Department of KGN Teaching Hospital Bannu Township Bannu from June 2017 to December 2019. All the patients were living married and sexually active life and they were present with gynecologic cancer, underwent surgery and obtained brachytherapy for minimum 4 months after the surgical intervention. The ethical committee of the institute gave the permission to conduct this research and advised us to ensure the confidentiality of the participants. We used the personal identification form and female sexual function index for the collection of data about demography and other variable related to disease. There were 36 question in Personal Information Form formulated in accordance with the associated literature. It included the patients about socio-demographic traits and clinical diagnoses of females, surgery and

treatment, their sex lives and impact on their sexual lives after the completion of treatment [7, 9].

Female Sexual-Function Index contains 9 questions to examine the sexual function in females in previous 4 weeks. The cutoff scores were 30 and the highest scores were 49. There was increase of the sexual dysfunction with the decrease in pints below 30. We used this according to international prescriptions. SPSS V.22 was in use for the statistical analysis of the collected information. We presented the categorical data in averages and standard deviations. We carried out the correlation analysis for the determination of the different variables with one other. P value of less than 0.05 was the significant.

RESULTS:

Total 118 females were the participants of this research work. All included females were married, the range of their age was from 36 to 68 with an average age of 50.9 ± 7.98 years. About 41.5% (n: 49) patients were present with complete primary level education. Mean pregnancy number among females was 3.61 ± 1.69 , mean birth number was 2.89 ± 1.16 and mean living children number was 2.7 ± 1.1 . About 68.6% (n: 81) patients were present with menopause after surgical intervention. Approximately 60.2% (n: 71) patients were suffering from cervical cancer, 39.8% (n: 47) patients among them were present with endometrial carcinoma and 42.4% were in the 2nd phase of cancer classification by FIGO. 82 patients (69.5%) were present with hysterectomy of abdomen with bilateral Salpingo-Oopherectomy. 29 patients (24.8%) obtained only brachytherapy, 40.2% received brachytherapy and chemotherapy, 24 patients (20.5%) among them obtained brachytherapy plus radiotherapy and seventeen (14.5%) patients received combined treatment of brachytherapy, chemotherapy and radiotherapy after surgical intervention.

Approximately, 106 patients (89.8%) faced alterations in their sexual function after getting complete treatment, 46 patients (43.4%) among them stated that they had lost their sex desire and 39 patients (36.8%) explained they had to experience great pain during sexual intercourse. Mean scores of the patients from female sexual function index was 15.77 ± 8.71 . The associations between some characteristics of the participants and female sexual function index and its associated sub-dimensions are present in Table-1. The scores of sexual function of the patients who obtained only brachytherapy after the surgical intervention was much high as compared to the patients who obtained radiotherapy and brachytherapy (P= 0.001).

Table-I: Demographic Characteristics of Patients

Feature		No	Percent
Education	Literate	9	7.6
	Primary school graduate	49	41.5
	Middle School	15	12.7
	High school	27	22.9
	Faculty	18	15.3
Employment	Working	27	22.9
	Not working	91	77.1
Income Status	Less than \$ 500	6	5.1
	Between \$ 500-1000	28	23.7
	Over \$ 1000	84	71.2
Smoke	Smoking	24	20.3
	Non Smoking	70	59.3
Alcohol	He does not drink after his illness	24	20.4
	I've never used	91	77.1
	I rarely use	27	22.9
Menopause	Before Surgery	37	30.8
	After Surgery	81	67.5
Treatment	brachytherapy	29	24.8
	brachytherapy + chemotherapy	47	40.2
	brachytherapy+radiotherapy	24	20.5
	brachytherapy+chemotherapy+radiotherapy	18	14.5
Total		118	100

DISCUSSION:

According to the reports of WHO, the incidence of cancer increases with the advancement of age [2]. According to a published data, cancer of uterine corpus is 4th most common cancer, ovarian cancer is 4th common cancer and cervical cancer is 9th most common cancer with high rates of prevalence in most of the Asian countries [11]. In this research work, 60.2% patients were suffering from cervical cancer and 39.8% patients were suffering from endometrial carcinoma. Average female sexual function index scores was 15.77 ± 8.71 . Scores of thirty or less show that sexual dysfunction. About 97.5% patients of this current research work were present with less than thirty points. Zeng in his research work conducted in 2012 observed that 19.9% faced a lot of alteration in their sexual function, 10.3% were present with dryness of vagina, 9.6% faced issue with width of vagina, 7.7% suffered pain in the duration of intercourse and 19.9% patients faced problem regarding their intercourse frequency [12]. Radiotherapy plays a vital role for the gynecologic cancer's treatments

and it can be used in combination with brachytherapy [13].

The application of these procedures for treatment is the cause of the reduction in interest in sex, lubrication, sex satisfaction and issues in [14, 15] Radiotherapy in the initial stage of the cancer is the also the reason behind sexual issues [16]. In one research work conducted on the patients suffering from cervical cancer, brachytherapy was the cause of the low lubrication in vagina, elasticity of vagina as compared to the other methods of treatment [17]. One research study discovered that the patients getting brachytherapy after surgical intervention were present with high scores of sexual function in comparison with the patients who received combined treatment [18]. Very different from this finding, some research works concluded the brachytherapy as a main cause of increasing dysfunctions [19, 20]. The treatment methods of brachytherapy, chemotherapy and radiotherapy are the cause of various health issues affecting the body image of female, her self-respect and sexual

activeness with her mate [21, 22]. One research study stated that the sex life of the females is affected by 25% in cancers of breast and 80% in case of cancers related to gynecological issues [23]. These patients also feel hesitation to ask questions about their sexual life from doctors. Flynn stated in his research work that 69% patients of this research study never asked professionals about the issue in their sex lives [24].

CONCLUSION:

The findings of this research work concluded that majority of the patients who had experienced surgeries for gynecologic cancer and obtained brachytherapy after surgery, were experiencing abnormality in sexual functions. There should be assessment of these females regarding sexual dysfunctions. Addition with the cancer treatment, it is necessary to provide counseling and awareness to these females and their mates how to establish their perfect sex lives.

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