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Brakiterapi Alan Serviks ve Endometrium Kanserli Hastalarda Cinsel İşlevsellik ve Etkileyen Faktörler

Sexual Function and Influencing Factors in Individuals Receiving Brachytherapy for Cervical and Endometrial Cancers

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Öz

Giriş ve Amaç: Bu araştırmanın amacı, brakiterapi alan serviks ve endometium kanserli hastalarda cinsel fonksiyonunu değerlendirmek ve cinsel fonksiyonu etkileyen faktörleri incelemektir.
Gereç ve Yöntemler: Araştırma, katitatif ve kantitatif araştırma tekniğinin kullanıldığı bir çalışmadır. Bu araştırmaya bir Üniversite Uygulama ve Araştırma Hastanesi'nin Radyasyon Onkoloji Ünitesi'nde 26.10.2018-01.03.2019 tarihleri arasında serviks ve endometrium kanseri nedeniyle brakiterapi alan ve araştırma kritelerine uygun yirmi bir hasta ile yürütülmüştür.
Bulgular: Katılımcıların Kadın Cinsel İşlev Ölçeği (FSFI) puan ortalaması 19.28±22.72 olup, %66,7'sinde cinsel işlev bozukluğu olduğu belirlenmiştir. Cinsel fonksiyonu etkileyen faktörler; hastalığa verilen tepki, cinsellik ve eşlerin yaklaşımı olmak üzere üç ana tema altında incelenmiştir. Hastalığa verilen tepki temasının altında üzüntü, çaresizlik, hastalığı kabullenme alt temaları; cinsellik ana temasında; cinsel isteksizlik, cinsel ilişkiyi red etme alt temaları; eşlerin yaklaşımı ana temasında ise; hoşgörü ve anal seks alt temaları belirlenmiştir.
Sonuç: Brakiterapi alan servikal ve endometrium kanserli hastalar cinsel fonksiyon bozukluğu yaşamakta ve buna yönelik danışmanlık hizmeti alamamaktadır.
Anahtar Kelimeler: Cinsel fonksiyon, brakiterapi, hemşirelik

Abstract

Introduction: The aim of this study was to assess sexual function in individuals receiving brachytherapy for cervical and endometrial cancer and to examine influencing factors.
Materials and Methods: Qualitative and quantitative tecniques are used in this study. It was conducted at a University Research and Application Hospital Radiation Oncology Unit. Twenty-one brachytherapy patients with cervical and endometrial cancer were included in the research in accordance with inclusion and exclusion criteria during the period October 26, 2018- March 1, 2019.
Results: The mean score of the participants on the Female Sexual Function Index was 19.28±22.72; 66.7% were found to be experiencing sexual dysfunction. The factors influencing sexual function were examined under the three main themes of the reaction given to the illness, sexuality, and the approach of the spouse. The subthemes of the reaction theme were sadness, hopelessness and acceptance of the illness. Subthemes of the sexuality main theme were lack of sexual desire, rejection of sex. Grouped under the main theme of the approach of the spouse were the subthemes of tolerance and anal sex.
Conclusion: Patients with cervical and endometrial cance receiving brachytherapy experience sexual function problems and do not receive conseling.
Keywords: Sexual function, brachytherapy, nursing

1. Introduction

Around the world, more than 400,000 cases of cervical cancer occur annually and every year, approximately 250,000 women die from this illness [1]. Turkey's statistics for 2015 show that cervical cancer is tenth among the most common gynecological cancers. At the same time, the distribution of this illness among gynecological cancers across all ages is 2,4% [2]. The incidence of endometrial cancer is 14,7 in 100,000 globally and the mortality rate is known to be 2.3 in 100,000 cases [3]. In Turkey, this disease is fourth among the malignancies observed in women and its incidence is reported to be 9.8 in 100,000 cases [4]. Brachytherapy in gynecological cancers refers to the delivery of radiation into the tumor or to an area close to the tumor [5]. The adverse effects experienced after cancer treatment have a negative impact on sexuality due to the individual's compromised perceived body image [6]. These adverse effects may manifest in the form of changes in body image, feelings of insufficiency in terms of sexual identity and the fear of using one's reproductive capacities [7,8]. Exploring the impact of brachytherapy on sexuality and sexual function will guide nurses providing care to women who undergo this treatment in understanding and solving the problems these women face and in developing new processes of care that will provide a positive influence on quality of life. The aim of this study was to assess sexual function in women receiving brachytherapy for cervical and endometrial cancer and to examine influencing factors. In brachytherapy, a very high dose of radiation loaded radioactive source directly using an intracavitary or interstitial applicator placed in cancerous tissue [5].

2. Materyal ve Method

Qualitative and quantitative tecniques are used in this study. It was conducted in the radiation oncology unit of a university research and practice hospital. The universe of the study constituted patients who were receiving brachytherapy for cervical and endometrial cancer at a University Research and Practice Hospital's Radiation Oncology Unit over the period October 26, 2018 - March 1, 2019. A total of 44 patients received brachytherapy at this unit during the course of the study. A sampling method was not used in the study; 21 participants matching the inclusion criteria were recruited into the research.

Recruitment criteria

- Receiving brachytherapy due to a diagnosis of cervical or endometrial cancer,
- Consenting to participate,
- Being older than 18 years of age.

Exclusion criteria

- Not knowing Turkish
- Not having an active sex life
- Having a psychiatric or neurological illness.

Of the 44 participants in the study population, 8 were excluded because of the absence of a sex life, 3 because they were not fluent in Turkish, and 12 because they did not consent to being included in the study. The study was conducted with 21 participants who matched the inclusion criteria. In-depth interviews were conducted with 7 of the 14 participants who were found to be suffering from sexual dysfunction.

2.1. Data collection instruments

2.1.1. Sociodemographic Questionnaire

This form contains questions on the participants' sociodemographic characteristics and illnesses.

2.1.2. Female Sexual Function Index (FSFI)

This index was developed by Rosen et al. [9] and was tested for validity and reliability in Turkey by Aygin and Eti Aslan [10]. The index consists of 19 items and 6 subscales, designed to assess female sexual function. The cut-off point for the overall index is a score of 26.55; scores of 26.55 and below indicate that the respondent has sexual function disorder. In the internal consistency analysis of the index performed by Aygin and Eti Aslan, it was found that Cronbach's alpha coefficient ranged between 0.89 - 0.98 for the overall scale [10]. The higher scores on the scale indicate good sexual function. The Cronbach alpha value for the scale in this study was found to be 0.77.

2.1.3. Individual In-depth Interview Form

This is a form that was applied to the women in a semi-structured interview that aimed at revealing the changes that came about in the women's sex lives during the course of brachytherapy. The interview form consisted to five open-ended questions: "What does having cancer mean to you?", "What does brachytherapy mean to you?", "How did brachytherapy affect your sex life, please explain", "How was your sex life before brachytherapy?" and "How is your sex life after brachytherapy?"

2.2. Data collection

The quantitative data in the study were obtained by the author through the method of face-to-face interviews. The qualitative data were collected from the data form containing information pertaining to the seven participants who consented to be interviewed in an individual in-depth meeting. A voice-recording device was used in the interview. The data collection process took an average of 30-45 minutes for each participant. The in-depth individual interviews were conducted one by one in a room in the oncology unit where the researcher and participant were alone together. Al of the dialogue was recorded with the voice recording device. Additionally, at the end of the interview, the researcher recorded her own observations on an observation sheet. One interview was made with each participant.

2.3. Ethics

Ethics Approval Code of the Study: KÜ-GOKAEK 2018/43. The written and verbal consent of the participants was also obtained.

2.4. Data Analysis

The quantitative data of the study were analyzed using an electronic statistical package program. In the analysis, besides descriptive statistical methods, in the comparison of quantitative data, the Mann-Whitney U test was used for the comparison of two groups of variables that did not display normal distribution. The authors collected the qualitative data in a written file. These qualitative data were analyzed by both the authors and by two different experts in the field using content analysis.

3. Results

Of the participants, 57.1% were in the 38-54 age group; 81.0% had an elementary school education. Of the participants, 57.1% had been diagnosed with Endometrial Cancer and 33.3% were being treated with surgery and radiotherapy. Of the participants, 57.1% had not received any education on surgical treatment and 66.7% had not received any education on chemotherapy. Sexual dysfunction was identified in 66.7% of the participants (Table 1). A group of 33,3% of the participants who had received education on surgical treatments had received this education only from a nurse; 31,2% of the participants who had received education on radiotherapy and 14,3% of those receiving education on chemotherapy had received this education only from a nurse (Table 2).

Table1. Sociodemographic characteristics of women and sexual dysfunction (n=21)

Characteristics		**n**	**%**
Age groups	38-54	12	57.1
	55-71	9	42.9
Employment Status	Employed	3	14.3
	Unemployed	18	85.7
Mother's Employment Status	Employed	14	66.7
	Unemployed	7	33.3
Educational Status	Illiterate	1	4.8
	Elementary School	17	81.0
	Middle School	2	9.4
	High School and	1	4.8
Social Security	higher	20	95.2
	Yes	1	4.8
Number of children	No	9	42.9
	0-2 children	9	42.9
	3-4 children	3	14.2
Education about surgical	5-6 children	9	42.9
treatment?	Yes	12	57.1
	No	16	76.2
Radiotherapy education?	Yes	5	23.8
	No	7	33.3
Chemotherapy education?	Yes	14	66.7
	No		
Medical diagnosis	Endometrial cancer	12	57.1
	Cervical cancer	9	42.9
FSFI Sexual Dysfunction?	Yes (< 26.6)	14	66.7
	No (> 26.6)	7	33.3
Total		21	100

Table 2. Persons from whom participants received education on surgical treatment, radiotherapy and chemotherapy

Educator	Surgical treatment		Radiotherarapy		Chemotherapy	
	n	%	n	%	n	%
Nurse	3	33.3	5	31.2	1	14.3
Doctor	2	22.2	1	6.3	2	28.6
Nurse/Doctor	4	44.5	10	62.5	4	57.1
TOTAL	**9**	**100**	**16**	**100**	**7**	**100**

The difference between the scores on the subscales of the FSFI and on the overall Index was not statistically significant in terms of the participants' age groups and medical diagnoses (p>.05) (Table 3).

3.1.Results Related to Qualitative Data

The mean age of the participants interviewed individually in depth (n: 7) was 53.57±9.84 (38 – 63) years and 71.4% (n: 5) were elementary school graduates. The qualitative data were analyzed under three themes: reaction to the illness, sexuality, and the pproach of their spouses (Table 4).

Table 3. Mean Scores on FSFI and its subscales according to Age and Medical Diagnosis

Variables	n	%	Desire		Arousal		Lubrication		Orgasm		Satisfaction		Pain		Total	
			Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age Group																
38-54	12	57.1	3.75 ± 1.71		3.58 ± 4.12		5.16 ± 6.26		2.83 ± 3.58		3.75 ± 3.74		4.33 ± 5.17		23.41 ± 22.37	
55-71	9	42.9	3.11 ± 1.36		1.66 ± 3.39		2.66 ± 5.38		1.77 ± 4.32		1.88 ± 4.13		2.66 ± 5.50		13.77 ± 23.30	
***Statistics**			U: 42.500		U: 38.500		U: 40.000		U: 40.500		U: 36.000		U: 42.500		U: 34.500	
			p: .382		p: .233		p: .254		p: .270		p: .155		p: .349		p: .160	
Medical diagnosis																
Endometrial cancer	12	57.1	3.08 ± 1.37		2.58 ± 4.07		3.83 ± 6.46		2.33 ± 4.29		2.58 ± 3.80		3.75 ± 6.01		8.16 ± 24.35	
Cervical cancer	9	42.9	4.00 ± 1.73		3.00 ± 3.77		4.44 ± 5.41		2.44 ± 3.43		3.44 ± 4.27		3.44 ± 4.36		20.77 ± 21.70	
***Statistics**			U: 37.500		U: 49.500		U: 49.000		U: 49.500		U:47.500		U: 52.000		U: 42.500	
			p: .210		p: .729		p: .684		p: .713		p: .608		p: .871		p: .408	
TOTAL			3.47±1.56		2.76 ± 3.85		4.09 ± 5.89		2.38 ± 3.85		2.95 ± 3.93		3.61 ± 5.24		19.28 ± 22.72	

n: number, SD: standart deviation, U: Mann-Whitney U test

Table 4. Factors affecting the sex life of the participants receiving brachytherapy

Themes	Sub-themes	Sub-subthemes
Reaction to the Illness	Sadness	
	Hopelessness	
	Accepting the illness	Religious belief
		Belief in the treatment
Sexuality	Lack of sexual desire	
	Rejecting sex	Fear
		Pain
		Vaginal discharge
		Lack of knowledge
Spouse's Approach	Tolerance	
	Anal sex	

Reaction to the Ilness

How patients receiving cancer therapy perceive their treatment directly affects their lives. The reactions of individuals towards brachytherapy have been reported as sadness, hopelessness and acceptance of the illness.

Sadness

Most of the participants said they felt sadness when they learned of their illness.

"…I was psychologically upset… I couldn't take it, I didn't speak, I didn't do anything…" (G 5; 60 years old, elementary school).

Hopelessness

Some of the participants said they knew that the illness could be treated because they had family members who had suffered the same illness before. A few of the participants said they had felt hopelessness because this was the first time something like this had ever happened to them.

"…It was like I had hit a tree… I felt very bad and in despair…" (G 4; 47 years old, high school).

"…but there's nothing that we can do about it…" (G 3; 46 years old, illiterate).

Accepting the illness

Most of the participants said that they accepted the illness some time after they received their diagnosis. As factors influencing acceptance of the illness, the sub-subthemes of religious beliefs and the belief that the illness could be treated emerged from the interviews.

Religious belief

Most of the participants were supported by their religious beliefs in the process of accepting the illness after receiving a diagnosis.

"…Allah gave us life and it will be Allah to take it; we don't know when we will go…" (G1; 63 years old, elementary school).

"…Allah gives us the sickness, it is Allah that will give us the cure…" (G 2; 58 years old, elementary school).

Belief in the treatment

The communication participants had with the healthcare personnel had an impact on their belief in the treatment.

"…The doctor said I could get over this…" (G 1; 63 years old, elementary school).

"…I relaxed when they told me there was a treatment for this illness…" (G 4; 47 years old, high school).

Sexuality

The treatment process affected the participants' sex life. This theme revealed the sub-themes of lack of sexual desire and rejection of sex.

Lack of sexual desire

All of the participants were suffering from lack of sexual desire.

"…You don't have the will when you have this illness… It affects my husband too. He doesn't want it either… (G 3; 46 years old, illiterate).

"…We never wanted sex… You can't even think about that…" (G 4; 47 years old, high school).

"…Sex didn't even cross my mind…" (G 5; 60 years old, elementary school).

Rejecting sex

Most of the participants' feelings pertaining to the subtheme of rejecting sex could be divided into the sub-subthemes of fear, pain, burning, vaginal discharge and lack of knowledge.

Fear

Most of the participants experienced fear with regard to sex.

"…We were afraid of having sex… Just in case, just as a precaution. I'm afraid, I really don't feel ready for it…" (G 4; 47 years old, high school).

"…Sometimes there's an ache in that area… That's why I'm afraid–I feel like something's going to happen to me down there…" (G 5; 60 years old, elementary school).

One of the participants felt that sex would be harmful to her husband.

"…I don't know… I may do harm to my husband… I'm afraid for him…" (G 7; 38 years old, elementary school).

Pain

Some of the participants did not want to have sex because of the pain they felt during the treatment period.

"…I had so much pain that it felt like I was giving childbirth…" (G 5; 60 years old, elementary school).

"…When it first happened, I had a lot of pain…" (G 7; 38 years old, elementary school).

Vaginal discharge

Only one participant said that she was uncomfortable because of her vaginal discharge.

"…I had a discharge for a long time after the operation…" (G 3; 46 years old, illiterate).

Lack of knowledge

Most of the participants said that they had not received any education regarding their sex life either before or during the treatment.

"…Nobody explained anything to me…." (G 6; 63 years old, elementary school).

"…No one gave me any information on whether or not I could have sex…" (G 7; 38 years old, elementary school).

It was discovered in the interviews with the participants that they had not been given sufficient information, especially about brachytherapy. A comment one participant made,

"…I wonder if it will hurt me inside? I kept asking myself…" (G 2; 58 years old, elementary school) typically brought this to light.

Reaction of Spouses

Most of the participants confided that their husbands were very supportive during the treatment, that they acted with understanding and tolerance, with only one participant stating that her husband engaged in anal sex with her.

Tolerance

Most of the participants said that their husbands were very supportive throughout the treatment period.

"…My husband doesn't say anything, he has treated it normally, he hasn't said a word…" (G 5; 60 years old, elementary school).

"…My husband is very eager (to have sex) but he knows I'm sick, so he doesn't say anything…" (G 7; 38 years old, elementary school).

Anal sex

Only one of the participants said that they had anal sex because of her husband's sexual desire.

"…My husband is very eager to do it… We had anal sex… He did some things to me… It was very, very hard for me… I just agreed to do what he wanted…" (G 6; 63 years ago, elementary school).

4. Discussion

Of the participants, 57.1% were in the 38-54 age group, 81.0% were elementary school graduates and 42.9% had 3-4 children. Studies on gynecological cancers reveal mean ages of 30.26±6.89 [11], 52.50 ± 10.68 [12], and 50.90±7.98 [13] years. The mean score on the FSFI in this study was 19.28±22.72. This mean is 15.77±8.71 [13] higher than the FSFI mean score of patients with endometrial and cervical cancer receiving brachytherapy in one study and 18.11 [14] higher than the FSFI mean score reported in another study conducted with women with gynecological cancer. An FSFI mean score of below 26.55 indicates sexual dysfunction in participants [9,10]. In this study, 66.7% of the participants were experiencing sexual dysfunction according to the FSFI mean score. In the study by Akkuzu and Ayhan [12], 75% of the participants had an FSFI mean score of 30 and below, while in another study, the authors reported that 80% of the participants with Stage 1 endometrial cancer had a mean score of below 26.6 [15], indicating sexual dysfunction.

In this study, most of the women, especially those being treated surgically or with chemotherapy, had not received education from healthcare professionals. The reasons for this may be patient-related or stemming from the actions of healthcare personnel. Among the patient-related reasons can be cited the patient's considering sexuality a taboo [16], being older in age, believing that they have enough to cope with and that other matters are irrelevant [17], and being ashamed to discuss worries about sexual health with peers and healthcare personnel [18]. Reasons that stem from nursing personnel may be described as the insufficiencies of the training nurses receive in this respect [19], the fact that very few nurses deal with patients' problems [20], that healthcare professionals do not think it is part of their responsibility to inform patients about matters of sexuality, that there is sometimes no chance for the nurse to talk with the patient alone in the clinical setting, and the belief that it would

be appropriate for the patients to ask questions about sexuality instead of the other way around [17].

The factors influencing sexual function in gynecological cancers were examined under the three main themes of the reaction given to the reaction of the illness, sexuality, and the approach of the spouse. Among women with gynecological cancers, 20.6% feel that something is missing from their lives as a woman [12]. Cancer is perceived to be a serious and chronic illness that encompasses feelings of hopelessness and uncertainty, one that is associated with pain and a painful death, awakening feelings of guilt and anxiety and causing panic and chaos in the individual [21]. A diagnosis of cancer creates a life-threatening situation for the individual, leading to crisis and making it harder for the individual to adapt [22]. Because of this, the reaction given to the illness is an important factor that has an impact on sexual function.

The main theme of sexuality was examined under the two sub-headings of lack of sexual desire and rejection of sex. The reasons for a lack of sexual desire can be fear, pain, vaginal discharge and lack of knowledge. Most of the participants suffered from lack of sexual desire. It has been reported that most women with a diagnosis of gynecological cancer state that they suffer from sexual dysfunction, with 26.5% saying that they have sex once or twice a month and 52.9% confiding that they have never tried to have sex at all since they received their diagnosis [12]. It has been revealed that satisfaction with sexual function in Mediterranean societies (including Turkey) is lower than in western countries and that only 37% of women perceive sexuality as an important part of their lives [23]. In 40%-60% of women being treated for gynecological cancer, interest in sex, sexual desire and frequency of relations have been found to diminish [24], while 43.4% of women do not feel as much sexual desire as before the illness [13]. It is known that radiotherapy causes a shortening and stenosis of the vagina [25] and vaginal dryness [18, 26]. The shortening of the vaginal canal, vaginal dryness and stenosis can cause dyspareunia and result in a woman's aversion to sex and a diminishing of the frequency of sexual intercourse [18, 26]. Among individuals who are sexually active, have a diagnosis of endometrial cancer, and receive intravaginal high-dose rate brachytherapy, 32% have been found to suffer from dyspareunia and 27% from vaginal dryness and vaginal discharge [27]. Furthermore, women with gynecological cancer have been known to have diminished sexual interest/desire due to the pain they experience during sexual intercourse [28].

Lack of knowledge about treatment was an important factor that was found in this study to have an impact on female sexual function. Women being treated for gynecological cancer are likely to experience anxiety about perhaps passing on the cancer to their husbands through sexual intercourse, making the illness worse or causing a relapse [16], and worry about the possible contagiousness of the disease or harming their spouses in some way [29]. Studies in this area have demonstrated that healthcare personnel do not sufficiently educate or support women with gynecological cancer [12, 30]. Women with gynecological cancer lack knowledge about sexuality [31] and have difficulty asking doctors and nurses about sexual matters [32].

Another factor causing sexual dysfunction is the reactions of the spouses of women receiving brachytherapy. Younger women with gynecological cancer experience fear that their husbands do no longer find them attractive and will abandon them. This leads women to having to choose between either fulfilling the sexual desires of their husbands to make them happy or reject having sex [33]. In this research, contrary to other studies, it was found that besides vaginal intercourse, anal sex also appeared to be a choice for couples. At the same time, most of the participants in the study stated that their husbands had been quite tolerant and understanding about sex throughout the treatment period.

The strength of the study was that it provided an opportunity to uncover, through a mixed research design, the sexual dysfunction experienced by women with cervical and endometrial cancer as well as impacting factors. The weakness of the study was that the number of participants was few. The reason for the small number of participants stemmed from the fact that sexuality is considered a taboo in Turkish culture and women are generally unwilling to talk about this matter.

5. Conclusion

Sexual dysfunction is prevalent among individuals receiving brachytherapy and the important factors that have an impact on sexuality are the way in which they perceive the cancer (sadness, hopelessness, acceptance), issues of sexuality (lack of sexual desire, rejection of sex), and the reaction of spouses (tolerance, anal sex). Most women are not educated with respect to sexuality over the course of their treatment, nor do education programs cover an evaluation of sexual function or the factors causing sexual dysfunction. The education of women with gynecological cancers should include a comprehensive evaluation of sexual function and the factors that have an impact on sexual relations, and this program of education should be continuous and accessible. Oncology nurses should consider the matter of privacy in their discussions with patients regarding sexual function and should provide women with space that is appropriate for meeting individually and for group sessions.

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