Sexual Dysfunction in Breast Cancer Survivors

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ABSTRACT

Background: Approximately 12.3 percent of women will be diagnosed with breast cancer at some point during their lifetime. Breast cancer is accompanied by alternation in body image and worries about sexual attractiveness. Thus, sexual life of breast cancer survivor's needs special attention. This study aimed to evaluate the effects of breast cancer on women's sexual function.

Methods: In this case-control study, 30 women who referred to surgical departments of breast cancer and 30 healthy women in Shiraz, Iran were selected through purposive sampling. These women underwent treatment during two months. The study data were gathered using a demographic questionnaire and a researcher-made questionnaire based on DSM-IV Diagnostic Criteria which evaluated the women's sexual dysfunctions. Then, the data were entered into the SPSS statistical software (version 16) and were analyzed using descriptive statistics, chi-square, Mann-Whitney, and Kruskal-Wallis tests.

Results: Two groups were matched according to age, education level, occupation, number of treatments for breast cancer, types of treatment and menopausal age. The results indicated that sexual desire disorder, sexual arousal disorder, and orgasmic disorder were more prevalent in the case group compared to the control group ($P<0.05$). In contrast, sexual pain disorder and aversion disorder were similar in the two groups. Moreover, a significant difference was found between the two groups concerning the sex-related imagination and fantasizing ($P=0.007$), lubrication, orgasm, and remaining aroused ($P<0.05$). The study results revealed no significant relationship between type of surgery and sexual dysfunction. Whereas, a significant relationship was observed between years after treatment and sexual dysfunction.

Conclusion: Our findings showed that breast cancer adversely affects women's sexual function. It is highly recommended to pay attention to the sexual aspect of the women with breast cancer using couple therapy.

Keywords:
Breast cancer, Sexual function, Health

1. Background

Breast in different cultures has been proposed as a sexual identity and any change in breasts, especially in case a woman loses all or part of her breast due to cancer treatment, results in mental problems and different disorders, such as sexual dysfunction (Anllo 2000). Breast cancer is one of the most common diseases which affects a large number of women each year. About 1 in 8 U.S. women (just under 12%) will develop invasive breast cancer over the course of her lifetime (Giti et al. 2002). The prevalence of breast cancer has been reported to be 22.5% in Iran (Mousavi et al. 2007). The impact of breast cancer diagnosis, invasive diagnostic methods, surgery, chemotherapy, radiotherapy,

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change in breast appearance followed by development of an impaired body image, fear of recurrence, and spending time and money could all be threatening for a person and could result in significant difficulties with sexual function and sexual life (Sundyquist & Yee 2003). These problems will sometimes continue up to five years after the end of the treatment (Anllo 2000). Sexual disorder is defined as the inability to have sexual contact with the opposite sex as a person wish to have (Ohadi 2001). These disorders consist of sexual desire disorder, sexual aversion disorder, sexual arousal disorder, orgasm disorder, and sexual pain disorder (Graziottin & Rovei 2007).

Sexual desire disorder or decreased libido is characterized by lack or absence of sexual desire or libido for sexual activity or sexual fantasies for a period of time (Ohadi 2001).

Sexual aversion disorder means avoidance of sexual contact because of fear or anxiety. The main difference between sexual aversion disorder and sexual desire disorder is that in the former, there is an actual avoidance of sexual situations. Even the thought of sexual intercourse may cause extreme anxiety or a panic attack in sexual aversion disorder (Ohadi 2001).

Sexual arousal disorder refers to an individual's inability to start sexual stimulation and to continue to end the sexual contact. It is also accompanied by vaginal dryness. Finally, orgasmic disorder is defined as an individual's inability to reach sexual satisfaction (Ohadi 2001).

New methods have been proposed for early diagnosis of breast cancer in the world. Therefore, these patients' quality of life after treatment should be taken into account. The prevalence of breast cancer has been reported to be 30-37% in 40-49 years old women and 23% in the age range of 50-59 years (Giti et al. 2002). This implies that most of the affected women are middle aged and sexually active.

On the other hand sexual function disorders can cause mental problems, such as depression, anxiety, and consequently marriage problems. So more attention should be paid to this aspect of patients' life by providing more information as well as the possibility of sexual consultation. Given the importance of this issue and the lack of research in Iran, this study intends to investigate sexual dysfunction among women after breast cancer treatment.

2. Materials & Methods

In this case-control study, 30 women were selected from the breast cancer clinic of Shiraz University of Medical Sciences, Iran through purposive sampling. These women had undergone breast cancer surgery and other treatments, including chemotherapy, radiotherapy, or using Tamoxifen, and had then referred to the clinic for follow up. The inclusion criteria of the study were being younger than 60 and being married. In addition, 30 healthy women without any mental or physical problems and with the same demographic characteristics such as the case group were considered as the control group.

The data were collected using a questionnaire containing two parts. The first part of the questionnaire referred to the demographic features and the second part was researcher-made and assessed sexual disorders. Psychologists and psychiatrists of Shiraz University of Medical Sciences confirmed the content validity and reliability of the questionnaire. The institutional Ethics Committee approved the study. Also, written informed consents for taking part in the study were obtained from all the participants. The data were entered into the SPSS statistical software (version 16) and were analyzed using descriptive statistics, chi-square, Mann-Whitney, and Kruskal-Wallis tests.

3. Results

This study was conducted on 60 women. According to the results, 53.5% of the women in the case group and 50% of the control group were between 41 and 50 years old. No significant difference was found between the two groups regarding the age ($P>0.05$). The majority of the study participants (43.3%) had high school diploma and there was no significant difference between the two groups in this regard ($P>0.05$).

With respect to the length of time after treatment, 34.3%, 44.3%, 14.7%, and 6.7% of the women had respectively passed less than one year, 1-3 years, 3-5 years, and more than five years since their courses of treatment had been finished. Regarding the type of treatment, 43.3% of the women had undergone surgery, chemotherapy, and radiotherapy and had used Tamoxifen. In addition, 30% of the women had been treated by surgery and chemotherapy, 6.8% had undergone surgery, radiotherapy, and Tamoxifen treatment, 6.7% had been treated by surgery and Tamoxifen, and 3.3% had only undergone surgery. The results revealed no significant

Table 1. Comparison of sexual disorders in both treated women and healthy women (n=60).

		Treated women				Healthy women				
Number	Question	Never	Sometimes	Most of the times	Always	Never	Sometimes	Most of the times	Always	Mann Whitney test
1	I think about sexual issues	60%	30%	6.7%	3.3%	16.7%	63.3%	13.3%	6.7%	P=0.002 *
2	I have sexual desire	30%	53.3%	10%	6.7%	6.7%	67.7%	10%	6.7%	P=0.127
3	I get irritated at the beginning of the sex	33.3%	46.7%	10%	10%	16.7%	53.3%	20%	10%	P=0.172
4	I remain aroused during the sex	46.7%	43.3%	3.3%	6.7%	23.3%	46.7%	20%	10%	P=0.028*
5	I get wet during sexual contact	26.7%	50%	13.3%	10%	6.7%	33.3%	33.3%	26.7%	P=0.003
6	I enjoy having sex with my husband	20%	53.3%	13.3%	13.3%	3.3%	46.7%	26.7%	23.3%	P=0.029*
7	I am worried about having sex	53.3%	30%	6.7%	10%	56.7%	30%	3.3%	10%	P=0.767
8	I am scared of having sex	76.7%	31.3%	6.7%	3.3%	76.7%	20%	0%	3.3%	P=0.904
9	I feel pain during intercourse	56.7%	30%	6.7%	6.7%	33.3%	56.7%	3.3%	6.7%	P=0.164
10	I bleed after having sex	93.3%	6.7%	0%	0%	90%	10%	0%	0%	P=0.643
11	I reach orgasm	40%	43.3%	6.7%	10%	6.7%	50%	30%	13.3%	P=0.003*

relationship between the number of treatments and sexual disorder (P>0.05).

In 70% of the treated women, type of surgery was total mastectomy. No significant relationship was found between the type of surgery and sexual disorder.

In the case group, 26.7% of the women were not menopause. Among the remaining case group participants, 6.7%, 43.4%, and 3.3% had experienced menopause at 31-40, 41-50, and 51-60 years of age, respectively. In addition, 10% of the women had experienced menopause before the age of 40 following hysterectomy and hormone therapy and before having breast cancer. In the present study, no significant relationship was observed between age of menopause and sexual disorder.

Regarding the frequency of sexual intercourse during the course of treatment, 23.3% of the case group women announced that they did not have any sexual relationship. Besides, 23.3% had sexual contacts the way they had before the treatment and 43.3% had less sexual contact.

The second part of the questionnaire assessed sexual disorders (Table 1). The results indicated a significant difference between the two groups regarding imagination and fantasizing about sexual issues (P=0.007). Accordingly, 60% of the case group participants compared to 16.7% of the women in the control group claimed that they never thought about sexual matters.

Furthermore, a significant difference was observed between the two groups regarding vaginal lubrication (P=0.003). The two groups were also significantly different with regard to the feeling of excitement during the sexual intercourse (P=0.028).

The study findings also showed a significant difference between the two groups concerning the question: "I enjoy having sex with my partner". Among the participants of the case group, 53.3% and 20% declared "sometimes" and "never", respectively. In the control group, on the other hand, 46.7% of the subjects stated "sometimes", while 26.7% responded "often".

Considering having sexual pleasure, 40% of the treated women reported that they had never experienced orgasm. In the control group, however, 50% of the women expressed "sometimes" and 30% stated "often". The results demonstrated a significant difference between the two groups regarding reaching orgasm (P=0.003).

4. Discussion

The results of the present study indicated that breast cancer and its treatment contributed to decrement of the frequency of sexual contacts during the course of treatment. However, the frequency of sexual relationships after the treatment was similar to the frequency before the treatment. The study results also revealed that hypoactive sexual disorder was more prevalent in the case group compared to the healthy women. Besides, imagination and fantasizing concerning sexual matters were significantly lower in the case group in comparison with the control group. However, sexual aversion disorder was not an important issue in the two study groups and they did not have any feeling of fear and stress about sexual contacts. Moreover, no significant difference was found between the two groups regarding the sexual arousal to start the sexual contact. In contrast, a significant difference was observed between the treated and healthy women with regard to the ongoing feeling of pleasure during sex and becoming wet. Therefore, such disorders were more prevalent in the case group.

The findings of the current study demonstrated no significant difference between the two groups concerning sexual pain disorder and vaginismus. Conversely, the two groups were significantly different regarding orgasmic disorder, the difference was in such a way that the treated women had more orgasmic problems and reached orgasm less compared to the healthy women.

Limited information is available about the reasons for change in sexual function after chemotherapy. Some studies have revealed that vaginal dryness and decrease in sexual desire could result from alternation in the level of estrogen. Tamoxifen could also aggravate these symptoms (Greendal et al. 2001). The findings of the present study indicated no significant relationship between sexual disorders and age, education level, and occupation. Also, no significant association was found between sexual disorders and type of surgery as well as menopausal age. Conversely, the devastating effects of premature menopause in young women was shown in the study carried out by Ochsenkuhn. He reported that sexual function was most impaired in the women with no longer menstruation after chemotherapy (Ochsenkuhn et al. 2011). The difference between the results of the present study and the study done by Ochsenkuhn could be due to the number of samples. Thus, further studies with larger sample sizes may be needed to confirm the results.

Dorvel (1998) carried out a research on 124 women after they had breast cancer treatment. The study findings showed no significant relationship between the type of surgery and sexual disorders. Nevertheless, it was proposed that lumpectomy was preferred over mastectomy (Dorvel et al. 1998). This result was consistent with results of our study which shows no significant association between the type of surgery and sexual disorders.

However, the present study findings indicated a significant relationship between years after the treatment and sexual disorder in such a way that the problems diminished over time.

Brockel and colleagues (2002) conducted a study on women with breast cancer and found that these women had sexual disorders after five years of the treatments such as surgery and chemotherapy. These sexual disorders included lack of sexual desire, inability to maintain the sexual pleasure during sexual contacts, and having problems to reach orgasm. Vaginal dryness was also a significant problem (Brockel et al. 2002). Given the increase in the number of the treated women with breast cancer, it is important to focus on quality of their life after treatment.

Ananth and colleagues (2003) carried out a study which shed light on different kinds of sexual disorders affecting the individuals with cancer. Thus, it was concluded that it was crucial to inform such patients about the possibility of these disorders and that they had to express their feelings, so that the consequences could be prevented (Ananth et al. 2003).

In conclusion, breast cancer diagnosis affects a woman, her partner, and the couple's life, because both the disease and the treatment course are highly stressful. Thus, the couple is faced with a large number of changes, eventually leading to emotional distresses for both

partners. In case these fears are not confronted with reality, they tend to maintain and intensify.

Training and psychotherapy, particularly couple-based psycho-educational interventions with an element of sexual therapy, could be performed to increase the life quality of these women and improve their body images. In this way, their sexual problems would be reduced, as well (Anllo 2000; Ochsenkuhn et al. 2011; Brockel et al. 2002).

Although much remains to be learned, the findings of the present study supported the view that assessment and management of sexual disorders should be considered as a part of the clinical care for the women treated for breast cancer.

Conflict of interest

The authors declare that they have no conflict of interest.

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