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The Effect of Cancer and its Treatment on Sexual Dysfunction in Women: A Review Study

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Abstract

Context: Sexual dysfunction (SDF) is one of the negative outcomes of cancer, especially breast cancer in women. Therefore, this review aimed to evaluate the effect of cancer disease and its treatment on SDF in women with cancer.

Evidence Acquisition: This narrative review was conducted by searching past studies in reliable international databases, including Web of Science, Islamic World Science Citation Center (ISC), Scopus, PubMed, and Google Scholar, over the last three decades. In the first step of the search, 189 studies were found. In the second step, 16 studies were selected to present the study after considering the inclusion and exclusion criteria.

Results: The results showed that SDF is one of the essential consequences of cancer, especially breast cancer in women, and the SDF incidence increases after cancer treatment, especially after chemotherapy. Based on previous similar studies, the SDF level in the cancer patients' group was significantly higher than that of healthy individuals.

Conclusions: Based on the results, SDF is one of the critical consequences of cancer and its treatment, which requires taking relevant measures to reduce this complication. In this regard, the physicians of these patients should provide the necessary recommendations as they refer them to psychiatrists. In addition, it is suggested that a part of the activities of psychiatric clinics be devoted to counseling about SDF treatment of breast cancer patients.

Keywords: Cancer, Sexual Dysfunction, Women, Brest Cancer, Quality of Life, Marital Relations, Sexual Satisfaction

1. Context

Sexual needs are essential for humans, like other basic needs, as a kind of relaxation (1, 2) and a requirement for proper sexual performance. Proper and healthy sexual performance is one of the signs of physical and mental health, which creates a sense of shared pleasure, strengthens and deepens intimacy, reduces tensions between couples, and increases a person's ability to cope with life's stresses and problems (3).

When the sexual function is not performed correctly and appropriately, the marital relationship may face problems (4). Sexual dysfunction (SDF) can include many factors, such as physical problems (5). Each of the chronic physical diseases can cause changes in the normal sexual response cycle and lead to SDF in many patients (6).

Cancer is one of the chronic diseases that leads to many sexual problems in women, such as SDF development (7). Cancer and its treatment can have serious negative effects on women's sexual performance. Failure to treat it can lead to physical problems caused by menopause symptoms, vaginal atrophy and dryness, pain, and indigestion (8). Decreased sexual desire, decreased sexual arousal, anorgasmia, relapse anxiety, and depression are other psychological and social problems caused by cancer, which make women have less sexual desire (9). Therefore, women with cancer are less likely to engage in sexual activity, which can affect marital intimacy (7, 9).

Women with cancer may be viewed as having a minor sexual performance in some societies, and this can negatively affect their self-esteem, self-concept, sense of well-being, satisfaction with life, and social relationships, leading to severe concerns in sexual satisfaction and marital compatibility (10-14). A review

of relevant studies was conducted to evaluate the effects of cancer on sexual dysfunction in women with cancer, taking into consideration the importance of cancer affecting sexual function.

2. Evidence Acquisition

This study was conducted as a review based on a literature review. Thus, previous similar studies in the last three decades were extracted by searching relevant keywords in reliable international databases, including Web of Science, Islamic World Science Citation Center (ISC), Scopus, PubMed, and Google Scholar. Searched keywords include "Cancer," "Sexual Dysfunction," "Treatment," "Women," "Sexuality," "Sexual Needs," "Female," "Breast Cancer," "Orgasm Disorders," "Quality of Life", "Marital Satisfaction," "Marital Relationship," "Marital Intimacy," "Sexual Function," "mental Health," "Intimate Relationship," "Sexual Medicine," "Psychological Well-Being," "Sexual Problems" and other keys The words were similar. In addition, the words "AND" and "OR" were used to perform an advanced search and combine words. In addition, the references of the final selected articles were checked to ensure the extraction of all possible articles related to the subject under discussion. In the first step of the search, 189 studies were found, and sixteen studies were finally selected by considering inclusion and exclusion criteria. These criteria were as follows:

- Studies only about evaluating SDF in cancer patients were selected.

- Studies in both stages before and after cancer treatment were considered.

- Studies whose target group was only women were selected, and studies that evaluated male patients were excluded from searching and results.

- Review studies and case reports were removed.

- Studies published in non-reputable journals and scientific databases were not considered.

- Articles presented on public and non-specialized websites were not considered.

3. Results

A decrease in estrogen and androgens causes several problems in sexual matters. Some issues such as vaginal dryness, thinning of vaginal tissue, reduction of vaginal elasticity, hot flashes, and other issues occur due to the decrease of these hormones (15) Since Asian women are more cautious about sexual issues and look at them with a conservative approach and as a private issue, this issue is especially sensitive in Asian countries. Another point is that most of the approaches are focused on the treatment of the disease, and the psychological problems caused by the disease and its treatment, especially sexual issues, are ignored (16). The sexual response cycle includes the stages of desire, sexual arousal, stability, orgasm, and rest. Disruption at any stage causes sexual problems. For example, a person has no desire to engage in sexual behavior despite being in perfect physical health in the disorder of sexual desire and arousal (13, 15), and (16). When the stage of sexual arousal is disrupted, vaginal moisture is reduced, sexual intercourse is painful (5, 6), and the response to erotic stimuli is significantly reduced due to vascular congestion (10-12). Shahid Sales et al. compared SDF in breast cancer patients and healthy individuals, indicating that most SDF issues in breast cancer patients were related to sexual desire disorder (57.6%), vaginal moisture disorder (53.1%), sexual arousal (48.2%), orgasm (4.1%), and pain during sexual intercourse (52.2%). SDF in the patient group was significantly different from that of healthy subjects ($P > 0.001$), but sexual satisfaction was not significantly different in the two study groups ($P = 0.262$) (17).

Orgasm disorder, physiologically, means reaching the peak of sexual pleasure. The arousal stage must be completed before reaching this stage, and the main problem in most patients is that people remain in the arousal stage, cannot reach the next stage, and gradually lose their sexual desire (18). The woman may become sensitive to her own and her partner's responses and worry about failing to allow her natural reflexes to lead to orgasm (18, 19).

A large number of women experience SDF during the diagnosis and treatment of breast cancer. SDF after breast cancer treatment and its negative effects on their quality of life (QOL) have been reported in different studies (20-22). Appropriate and healthy sexual performance is one of the signs of physical and mental health and creates a sense of shared pleasure, strengthens intimacy, reduces tensions between couples, and ultimately increases a person's ability to cope with life's stresses and problems (23).

Considering that the evaluation of sexual function in cancer patients is one of the essential and effective aspects of their quality of life (11), knowledge and awareness about changes and disorders in sexual function are critical to the diagnosis and treatment of cancer patients. Zeighami Mohammadi and Ghaffari conducted a study on SDF and its relationship with the quality of life of 100 women with cancer and showed that SDF was at an average level in 60% of the study and the highest SDF was in the dimensions of sexual desire

and sexual arousal, respectively. Only 4.5% of the study participants had a favorable quality of life. Chi-square tests showed a significant relationship between SDF and QOL of cancer patients ($P < 0.001$) (21). Erdogan evaluated the quality of sexual life and marital satisfaction in women with breast cancer. The results showed that the education level of the patient ($P = 0.04$), the education level of the spouse ($P > 0.001$), and the type of marriage ($P > 0.001$) affected the level of marital satisfaction. In addition, a positive and significant correlation was observed between marital satisfaction and QOL ($P \geq 0.001$). Thus, nurses should use a comprehensive approach to inform women with breast cancer about marriage and sex, and women should be psychologically and socially supported along with their husbands (24). Fahami et al. examined 150 women with breast and genital cancers and showed that 60% had good-quality marital relationships and 19.3% had SDF. In addition, there was a significant relationship between sexual performance and marital relationship quality ($P < 0.001$) (25). Avis et al. conducted a study on the QOL of young women with breast cancer and found that more than 70% complained of pain during sexual intercourse and sexual dissatisfaction (26). Jun et al. reported the negative perception of the body and SDF in women with breast cancer, and the impact of the disturbance on the couple's intimacy, negative perception of sexual desire, and sexual performance were significant (27).

The results of the present study showed that most of the previous research was about patients with breast cancer. Breast cancer is the most common cancer in women under 60 years of age and the second leading cause of death from cancer (after lung cancer) (28). Breast cancer can have profound effects on women's various functions in life (29). The results of some studies have indicated that SDF levels are higher in breast and genital cancer patients treated with radiotherapy and chemotherapy. Fahami et al. evaluated the relationship of SDF with the type of treatment in women with genital and breast cancers and found that SDF in the group treated with radiotherapy and chemotherapy was significantly higher than the other groups (30). Nekoueifard and Jahangiry reported that cancer and its treatment have a significant impact on the libido of women with breast cancer. In addition, there was a significant and direct relationship between the type of surgery for treatment and the marital satisfaction of patients (31) The relationship between sexual performance and the mental health of women with breast cancer was evaluated by Shayan et al. (32). The results showed that 81.6% had mental problems, and 85.8% had SDF. In addition, the highest SDF was related to pain during sexual intercourse, and the lowest was related to sexual desire. In addition, there was a direct and significant relationship between all dimensions of sexual performance and overall general health based on Pearson's correlation test. Considering the relationship between sexual function and mental health in these patients, it is necessary to examine the sexual function and the changes and consult with the patient and her husband in solving sexual problems (32).

Various methods can be effective in reducing the negative effects of breast cancer on multiple aspects of patients' mental health and especially their sexual performance. Mehrparvar et al. investigated the effectiveness of holographic reprocessing therapy in psychological adaptation to cancer in women with cancer. The findings showed that the holographic reprocessing treatment increased the scores of general adaptation and combativeness components and decreased the scores of helplessness-frustrations and worrying preoccupation in the experimental group compared to the control group ($P < 0.05$) (33). In Taheri et al. the educational effectiveness of intimate communication skills was evaluated on increasing marital adjustment and satisfaction of women with cancer. The intervention group showed a significant increase in marital compatibility and satisfaction compared to the control group ($P < 0.05$) (34). Fobair and Spiegel reported that breast cancer treatment, especially chemotherapy, causes changes in women's bodies with negative effects on sexuality, sexual performance, and emotional relationships. The patients with breast cancer experienced sexual problems immediately after treatment, and these problems continued during follow-up. In addition, relationship problems between couples also occur when they experience sexual problems (35). Alder et al. concluded that SDF was reported in 68% of women with breast cancer, and the history of chemotherapy in their treatment program had the most significant effect on all cases of women's sexual performance (36). Abu-Helalah et al. examined 236 patients with breast cancer with a negative impact on social functioning and emotional functioning. These people were concerned about the body's appearance and future and sadness about hair loss (37). Gilbert et al. reported that patients are worried about possible sexual changes in themselves, including fear of losing fertility, negative perception of the body, loss of femininity, and decreased sexual desire (38). Brédart et al. showed that a high percentage of women with breast cancer are dissatisfied with sex with their husbands, decrease in emotional relationships, and feel weak in their body image after passing the first stage of treatment (39). In addition, Panjari et al. reported that 70% of women with breast

cancer have SDF (29). A Cross-Sectional study by Ganz et al. conducted on 864 women with breast cancer also found the presence of SDF, which was more in women who received chemotherapy (20). Some parameters such as the type of cancer, stage of cancer, social and family support, duration of the disease, and other similar influencing parameters can be effective in the sexual performance of cancer patients. Yaghoobzadeh conducted a study on 800 patients with gynecological cancers. The results showed that the parameters, including duration of disease (P = 0.001), cancer stage (P = 0.004), type of treatment (P = 0.005), and social support (P = 0.001), can be used as predictors for women's sexual performance (40). Akyuz et al. conducted a study on gynecological cancer patients and reported many physical and psycho-social problems related to the treatment period (41).

The results of past studies have shown that sexual dysfunction in women's cancer patients is still not seriously followed up and not treated (42). A comprehensive evaluation of sexual health should be part of the routine examination of such patients, especially gynecologic oncologists, since SDFs are becoming increasingly common side effects of cancer treatment.

4. Conclusions

Based on the results, especially breast cancer, its effect on sexual function and the subsequent impact on the quality of life of these people should be considered in addition to the progress of science in the treatment of various cancers. Breast cancer and its treatment methods, especially surgery and chemotherapy, cause changes in the structure of women's bodies, which affect their sexual desires, sexual performance, and emotional relationships. In addition, the results of the evaluated studies have indicated that dysfunction in orgasm pain during sexual intercourse and sexual stimulation in patients with breast cancer are among the most common complications of breast cancer related to sexual dysfunction (SDF). Considering the side effects of breast cancer treatment on the sexual performance of patients, physicians must provide the necessary recommendations to patients to refer them to psychiatrists. In addition, a part of psychiatric clinic activities should involve counseling about SDF treatment for breast cancer patients.

Footnotes

Authors' Contribution: S.A: Presenting the idea, designing the study, writing and revising the manuscript; M.H: Collecting and recording data, writing and revising the manuscript.

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