The Effect of Body Image Concerns, Anxiety, and Depression on Sexual Problems in Gynecological Cancer Patients

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SUMMARY
Gynecological cancers and their treatments directly affect the female genitals. Therefore, gynecological cancers are one of the cancer types where sexual dysfunctions are most common. Sexual problems can be a normal result of treatment processes and of cancer, as well as a reflection of the psychological difficulties experienced by individuals during the disease process. The disease itself and the treatments applied can cause psychiatric problems such as body image concern, depression, anxiety, decreased self-esteem, sleep disorders, and sexual dysfunction affect the quality of life negatively. The psychological treatment methods include psychoeducation, group therapy, sexual counseling, marriage counseling, structured psychotherapy, and brief psychosexual interventions. Psychiatric symptoms should be considered to emerge following treatment and quality of life and sexual functions may be adversely affected in gynecological cancer patients, and a multidisciplinary approach including psychological treatment and symptom management should be provided for the effective treatment of sexual difficulties.

Keywords: Anxiety; body image; depression; gynecological cancer; sexual dysfunction.

Introduction
Gynecological cancers consist of cervical, primary peritoneal/ovarian/fallopian tube, uterine/endometrial, vaginal, and vulvar malignancies, and, more rarely, malignancies associated with gestational trophoblastic disease. According to statistical estimates, in 2022, more than 115,000 new gynecological cancer cases are expected in the USA, and nearly 33,000 deaths due to gynecological cancer are expected.[1] According to the International Agency for Research on Cancer GLOBOCAN 2020 data, gynecological cancers constitute 13.1% of all female cancers in Turkey.[2] Gynecological cancer treatment usually includes surgery, chemotherapy, radiation, hormone therapy, or a combination of these methods. Patients are typically followed for 5 years as they enter the survival phase of their cancer diagnosis following the completion of their treatment. With the current developments in gynecological cancer treatment, survival rates are increasing, and more and more women live with the remnants of their cancer experience. Thousands of these women are trying to cope with the sexual sequelae caused by many factors and the problems they bring because cancer dramatically affects a woman’s sexuality, sexual function, close relationships, and sense of self.[3] The World Health Organization defines sexual health as “a state of physical, emotional, mental, and social well-being in relation to sexuality.”[4] Sexual intimacy and sexuality, which are important parts of life, are affected by various factors such as physical health, psychological well-being, body image perception, and general rela-
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... A healthy sex life is as important in cancer patients as it is in healthy people.[6] Since gynecological cancers and their treatments directly affect the female genitals, they are perhaps the most common cancers that cause sexual dysfunction. In the general population, female sexual problems are quite common, affecting 43% of women.[7,8] The estimated prevalence of sexual dysfunction in gynecological cancer patients is between 40% and 100%.[8-10] Sexual dysfunction has been observed in cervical cancer patients at a rate of 66.7%[11] and in gynecological cancer patients at a rate of 65%.[12] Decreased sexual desire, difficulty in sexual arousal, dyspareunia, recurrent vaginal infections, vaginal atrophy, decreased vaginal lubrication, feelings of losing femininity, cessation of all sexual activities, difficulties related to menopausal symptoms, and infertility associated with cancer treatment have been reported.[13,14] The frequency of sexual problems in women with gynecological cancer can be attributed to the fact that this disease has a strong negative effect on female identity and threatens people's perceptions of their own sexuality.[15,16] Both the cancer itself and the treatments can cause psychiatric problems such as depression, anxiety, decreased self-esteem, sleep disorders, sexual dysfunction, and decreased quality of life.[17,18] While sexual dysfunction associated with chemotherapy and radiotherapy usually resolves after treatment is completed, anatomical problems related to surgery can have a long-lasting effect on a patient's sexuality. [19] Surgical procedures often lead to decreased vaginal lubrication, difficulties in penile-vaginal intercourse, pain, decreased body image and self-esteem, arousal disorders, and orgasmic disturbances as a result of cuts or damage to the nerves innervating the pelvic organs. [19,20] Table 1 summarizes sexual dysfunctions and their causes in gynecological cancer patients.

Studies show that psychological variables such as depression, anxiety, body image, and the inability to “feel like a full woman” negatively affect sexual functioning in gynecological cancer.[21] In addition, some studies have shown that sexual dissatisfaction increases rates of depression and anxiety. Levin et al. (2010)[22] reported that sexual morbidity is a significant predictor of depressive symptoms and body image-related stress. Another study concluded that sexual dissatisfaction has the potential to cause high levels of depression and anxiety.[23] Although there is a mutual interaction between sexual problems and psychological symptoms, the effects of body image problems, depression, and anxiety on sexual problems in gynecological cancer patients will be discussed in this article.

### Body Image Concerns

Many studies have noted that gynecological cancer diagnosis and treatment methods cause deterioration in the body image of women.[24,25] Surgical interventions are the leading cause of such deterioration. [26] After major surgical interventions such as radical hysterectomy, vulvectomy, and total pelvic exenteration, many women experience feeling different, such as appearing less physically appealing to their spouses or sensing that their attractiveness as a sexual partner will decrease and their sexual life will deteriorate.[26] The end of reproductive capacity due to uterine deficiency and thoughts and concerns about sexuality increases the risk of depression in patients who have undergone hysterectomy for gynecological cancer.[27] After hysterectomy, in particular, women may experience intense sadness because of the meaning that women ascribe to the uterus and their belief in losing their feminine identity. Negative thoughts about physical appearance and negative sexual self-perception may develop in patients after surgical treatment and subsequent adjuvant radiotherapy treatment.[28] Alopecia, fatigue, nausea, and vomiting have been experienced after chemotherapy treatment, which can affect women's self-esteem and sense of sexual attractiveness. [29] All of these problems affect women's sexual lives negatively by increasing their feelings of fear, anxiety, and depression. In addition to body image problems, fear of cancer recurrence, post-traumatic stress dis-

<table>
<thead>
<tr>
<th>Sexual dysfunction</th>
<th>Causes of dysfunction</th>
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<td>Decreased sexual desire/libido</td>
<td>Psychological: Body image problems, anxiety, depression, fatigue, feeling of losing your femininity, concerns about infertility (in young patients), relationship changes and problems, communication problems</td>
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<tr>
<td>Sexual arousal problem</td>
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<td>Dissatisfaction in sexual life</td>
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<td>Absence of sexual fantasies and dreams</td>
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<td>Vaginal dryness/lack of lubrication</td>
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<td>Disparoni (painful intercourse)</td>
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<td>Anorgazmi</td>
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<td>Treatment:</td>
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<td>Chemotherapy, radiation to the pelvic area, surgical treatment to the pelvic organs, menopause, hormonal changes, pain, neuropathy, antihypertensives, diuretics, neuroleptics, antidepressants, antipsychotics, etc.</td>
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order, anxiety, and depression symptoms persist. Depression mood, altered self-image, and increased anxiety due to psychiatric illness and psychopathology may cause sexual dysfunction in women.[30]

Anxiety

Anxiety is a symptom frequently observed in cancer patients. While the anxiety levels of newly diagnosed cancer patients may increase up to 50%, chronic anxiety may continue in 30% of patients in the long term. Psychological challenges experienced by women during the gynecological cancer process include fear of death, fear of being dependent on others, uncertainty about the future, problems related to fertility, loss of role and function, and economic issues, which can cause anxiety.[32] When the relationship between anxiety and sexual function is examined, it can be perceived that the presence of pain during sexual intercourse may trigger anxieties about pain before intercourse, and it may also reduce sexual satisfaction and orgasm experiences.[33] A study of women with gynecological cancer reported that 69% of participants feared that their cancer would recur, while 66% feared that their cancer would spread, and 54% were uncertain about their future. The same study determined that 45% of women felt sad, and 44% felt depressed and experienced anxiety.[34] Such research findings indicate that anxiety causes sexual dysfunction disorders in women.[34,35]

Studies have shown that 50% of women with orgasm inhibition and 88% of women with dyspareunia and vaginismus have anxiety as defined by psychiatric diagnostic criteria, and 44% of women with panic disorder experience sexual dysfunction.[36,37] Regarding anxiety as the cause of sexual dysfunction, the literature explains that increased sympathetic activity brought on by anxiety in women disrupts genital vasocongestion. This is because the inhibition of the parasympathetic nervous system impairs sexual stimulation.[35] Impairment of genital vasocongestion may then impede lubrication and sexual arousal in women, and dyspareunia and vaginismus may adversely affect the sexual lives of couples as a result.[35] Consequently, a lack of sexual stimulation can lead to low sexual interest, sexual reluctance, and the inability to experience orgasm.

Depression

About 25-42% increase in the incidence of depression in gynecological cancer patients has been reported due to physical (location of the tumor and presence of pain), psychosocial (stress and individual's maturity), and social (interpersonal relations) factors.[38] In addition, studies investigating psychiatric comorbidities in gynecological cancer patients have shown that approximately one in five women treated for gynecological cancer (cervical, endometrial, or ovarian cancer) has depression.[39] Moreover, depression can be seen in women during the gynecological cancer treatment process due to many factors. These include anxiety based on uncertainty about the treatment process, fears of the cancer spreading to other organs and of death, changes in female identity, body image, and sexuality, difficulty in daily living activities, and lack of emotional support.[40] Depression may also occur due to the removal of the ovaries in radical hysterectomy and the loss of estrogen as a result of entering menopause. The resulting symptoms manifest themselves as genitourinary trophic disorders and neurovegetative and psychiatric symptoms.[41,42] The hormone estrogen plays a role in the development of many organs and tissues, and it can have permanent effects on the organization and development of the central nervous system. In particular, estrogens affect brain chemistry by changing the concentration of many neurotransmitter amines, so estrogen deficiency, hot flashes, sleep disorders, depression, and mood changes can be seen.[41] Estrogen deficiency constitutes a biochemical basis for the development of depression. Tryptophan, which plays a role in serotonin metabolism, is important for preventing depression. Although the amount of total tryptophan does not change in postmenopausal and post-oophorectomy women, these women experience a decrease in free tryptophan, which causes a decrease in serotonin. Therefore, decreased serotonin in the brain tissue leads to depression.[41,43] The increase in plasma-free tryptophan levels and a decrease in depression complaints with estrogen treatment reveal the relationship between estrogen and depression. The reason that depression causes sexual dysfunction is found in the neurotransmitter dopamine.[43] Dopamine is considered to have a facilitating effect on sexual response and desire, and dopamine levels in the blood decrease in individuals with depression.[43] Studies conducted with patients with gynecological cancer show the relationship between problems in sexual life and depression. Some studies have stated that the sexual problems experienced by women due to radical hysterectomy can last from 6 months to 2 years after the operation, and it has been reported that fatigue, anxiety, and depression continue for 5 years after the treatment.[44,45] A study of women diagnosed with ovarian cancer and undergoing oophorectomy concluded that 6% of the women...
had depressive symptoms for years.[46] Decreased sexual desire and arousal are associated with clinical depression as well as low self-esteem and frequent anxious and depressive thoughts. On the other hand, some antidepressant drugs can negatively affect sexuality. Antidepressants' side effects can include problems such as decreased or loss of sexual desire, inability to reach orgasm, painful orgasm, sexual arousal problems, decreased sexual satisfaction, dryness in vaginal secretions, dyspareunia, and vaginismus.[43]

Conclusion

Gynecological cancer is a disease that can have psychosocial and psychosexual effects on patients. Psychological intervention may be needed to address psychological, interpersonal, and sociocultural factors that contribute to sexual dysfunction, fear of cancer recurrence, anxiety, depression, body image concerns, sexual pain, and relationship factors. The psychological treatment methods include psychoeducation, group therapy, sexual counseling, marriage counseling, structured psychotherapy, and brief psychosexual interventions. The health-care professionals, especially doctors, should ask questions to encourage patients and their partners to express their sexual problems as an important step in revealing sexual problems that are often remnants of cancer treatment. Another point that should not be overlooked is that body image complaints, anxiety, and depression may underlie sexual problems. Sexual problems can be a normal result of treatment processes and of cancer, as well as a reflection of the psychological difficulties experienced by individuals during the disease process. In summary, health-care professionals should bear in mind that psychiatric symptoms may occur following treatment, quality of life, and sexual functions may be adversely affected in gynecological cancer patients, and a multidisciplinary approach including psychological treatment and symptom management should be provided for the effective treatment of sexual difficulties experienced by patients.

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