

REVIEW ARTICLE

Chemotherapy as a Remedy to Gynaecological Cancers: Challenges and Coping Patterns Among Young Women

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Abstract

Cancer was the primary cause of death for approximately 10 million people worldwide in 2020, accounting for one in every six deaths. According to the estimates, between 2007 and 2030, there would be 11.5 million cancer-related fatalities worldwide; a 45% rise from the current 7.9 million instances. With around 1.3 million new cases identified each year and more than six million survivors globally, gynaecological cancers are the most prevalent forms of malignancies in women. Thus, it is clear that gynaecological cancers pose a serious threat to public health. Chemotherapy is one of the cancer treatment modalities, the side effects of which might affect young women's sexuality and functional status. Treatment for gynaecological cancers can result in both physical and psychological side effects, such as hormonal changes, vaginal changes (such as dryness, discharge, shortening, scarring), early menopause, pelvic floor disorders, lymphoedema, infertility, discomfort, exhaustion, anxiety, problems with body image, and a crisis of feminine identity. A number of coping mechanisms have been noted including: battling spirit, positive reinterpretation, helplessness/hopelessness, and nervous obsession. In order to improve consistency in psychosexual support after treatment, nurses should be well-equipped to talk about sexuality with their patients. Young women are at a heightened risk of infertility due to the gonadal toxic therapy-induced decrease of ovarian function. Efforts must be increased to conduct research on the preservation of fertility and sexuality in young women living with gynaecological cancers while receiving chemotherapy.

Keywords: Chemotherapy, Young women, Gynaecological cancer, Sexuality, Fertility

Introduction

One of the non-communicable diseases with a rising global prevalence over time is cancer.¹ In Nigeria and other emerging nations, cancer is a problem that is rapidly spreading. Cancers are still regarded as one of the most serious diseases in existence today, despite tremendous improvements in medical research.² Cancer

was the primary cause of death for approximately 10 million people worldwide in 2020, accounting for one in six deaths.³ According to estimates from 2007 to 2030, there would be 11.5 million cancer-related fatalities worldwide, a 45% rise from the current 7.9 million cases.¹ With around 1.3 million new cases identified each year and more than six million survivors worldwide,

gynaecological cancers are the most prevalent cancers in women.⁴ Cancer is still the leading cause of sickness and death for people in the 15-24 years age group and the second most common cause in the 25-39 years age group, which makes it a major problem for young women.⁵ Gynaecological malignancies are obviously a major public health concern since they cause young women to lose their monthly function and fertility, which sometimes results in psychological anguish.⁶

Gynaecological cancers are among the most common cancers worldwide, and they have a significant impact on women's lives and the lives of their families. Both those diagnosed with the disease and those receiving therapy often experience a gloomy sensation of fear and panic.⁷ Gynaecological cancers, which include cervical, ovarian, uterine, vaginal, and vulvar cancers, account for around 1 in 5 of all cancers diagnosed in women worldwide.⁸ Uterine and ovarian cancers tend to increase in incidence during the perimenopausal years, although vaginal and vulvar cancers are uncommon and typically affect older women. Contrarily, premenopausal women are more likely to get cervical cancer. Gynaecological cancers affect young women in ways that make their experiences so unavoidable because of the overwhelming number of distressing moments that come with the disease. These moments often project struggles that make it difficult for them to reconcile their personal demands with their ability to live up to expectations in life.⁹

Gynaecologic cancers are treated using a variety of techniques, including surgery, chemotherapy, and radiation therapy. Despite the fact that there is a lot of overlap, each treatment method can have particular adverse effects. These therapy modalities frequently cause adverse effects such as, bone marrow suppression, mucositis, diarrhoea, nausea/vomiting, and neuropathies, which can exacerbate symptoms like weariness, discomfort, sadness, and weakness.¹⁰ Although earlier research indicate that the frequency and severity of the most often expressed symptoms vary between the primary cancer types, the symptoms experienced also can vary with each individual. However, side effects from cancer treatment can lead to pain, discomfort, and reduction in quality of life.¹⁰ In addition, many cancer survivors also have at least one other medical comorbidity that impacts the complexity, chronicity, and advancement of the disease.¹¹ This affects the patient's quality of life, the cancer progression, and how the medication is administered.

Chemotherapy, or the injection of cytostatic medicines, is one of the cancer treatment techniques. Chemotherapy side effects have an effect on young women's functional status.¹² Supportive care is crucial since the effects of cancer pathology and its treatments are so severe and complex. For instance, diminished physical function is frequently linked to distressing symptoms, both of which may interfere with everyday activities and eventually lead to unmet demands for supportive care.¹³

Gynaecological cancer treatment is associated with a number of physical and psychological side effects, including changes in hormones and vagina (including scarring, shortening, dryness, and discharge), early menopause, infertility, lymphoedema, pelvic floor disorders, pain, exhaustion, anxiety, and problems with body image and feminine identity. Sexual problems, such as altered sexual self-concept, dread of sex, painful sex, infrequent sexual activity, and lack of sexual arousal, desire, and orgasm, are linked to these intrusive and sometimes persistent symptoms in young women with gynaecological cancers.¹⁴

Even after treatment is completed, young women with gynaecological cancer may experience a range of psychological and psychosocial disorders for a considerable duration. These disorders may include exhaustion, difficulty sleeping, problems with body image, anxiety, depression, limitations in cognition and function, sexual dysfunction, loss of menstrual function, infertility, limited emotional connections, and academic or occupational difficulties.⁵ Young women with gynaecological cancers experience physical, psychological, and social distress in addition to feelings of exhaustion, irritability, memory loss, low energy, recurrent pain, and diminished lived experience due to symptom distress. The side effects from chemotherapy play a major role in shaping cancer survivors' lived experience.¹⁵

Challenges of Young Women with Gynaecological Cancers

Many patients experience an increase in stress after learning they have cancer, and this stress can quickly turn chronic. Chronic stress may potentially hasten the growth of cancer, according to recent research. As a result, cancer diagnosis, treatment, and surviving can all be very stressful.¹⁶ The effects of stress on the development, growth, and metastasis of tumours have been established. Existence of stress for some people,

is a stimulant, but for many others, it is a weight. Stress is a natural and inherent part of existence. Stress can also be brought on by serious medical conditions, like receiving a cancer diagnosis for oneself, a close friend, or a member of the family.¹⁷

One method of treating cancer is chemotherapy, which involves the use of cytostatic drugs. Chemotherapy side effects have an impact on the functional status of young women.¹² Physical and psychological side effects from gynaecological cancer treatment have been linked to the following: altered hormone levels, vaginal changes (such as scarring, shortening, dryness, and discharge), early menopause, infertility, pelvic floor disorders, lymphoedema, pain, exhaustion, anxiety, and issues with body image and feminine identity. Young women with gynaecological cancers frequently experience these bothersome and often lingering symptoms, which have been linked to sex-related problems like altered sexual self-perception, pain during intercourse, fear of having sex, infrequent activity, and absence of desire, pleasure, and orgasm during intercourse.¹⁸ Since the effects of cancer pathology and its treatments are so severe and intricate, supportive care is vitally needed. Diminished physical function frequently coexists with signs of distress, which can make it difficult to carry out daily tasks and result in unmet supportive care needs.¹³

Pain is a typical side effect of therapy that might impair a woman's ability to exercise or feel emotionally well. A patient's physical functional deficiency could be so severe that they are confined to bed or need assistance with daily activities. While some survivors may have impairments in their capacity to carry out domestic duties or a job, others may display deficits in many aspects of emotional functioning (stress, concern, irritability, and depression).¹⁹ Among survivors who also received concomitant chemotherapy, peripheral neuropathy is prevalent. Others have described how, in the years after treatment, their menopausal symptoms worsened. These women frequently describe perceptual difficulties with recalling memories or difficulties focusing on everyday activities.²⁰

Young survivors' psychophysical identities have been found to be adversely affected by the loss of reproductive organs and the external scarring of the genitalia caused by radiation and severe surgery, respectively. Though it is sometimes disregarded, a young woman coping with or recovering from cancer finds that her inability to

conceive conventionally is a major source of stress or discomfort.²⁰

The conventional treatment for gynaecologic tumours frequently entails the removal of certain reproductive organs, which makes fertility preservation a difficult task.²¹ Gynaecologic cancers are a diverse category of cancers that affect women, each with unique pathological characteristics, clinical manifestations, and therapeutic options. They are both, however, potentially at risk of losing their fertility. Standard therapies include pelvic radiation and chemotherapy as adjuvant therapy, in addition to surgical removal and/or ablative therapies of reproductive tract organs.²¹

Effects of Chemotherapy in Young Women with Gynaecological Cancers

The primary way chemotherapy damages cancer cells is by inhibiting their ability to reproduce and grow. Cancer cells have extremely high levels of endogenous stress in their physiological makeup; they frequently divide and proliferate far more quickly than normal cells. This implies that the drugs can destroy cancer cells much faster and more effectively compared to the normal cells in the vicinity. A number of the promising inhibitor therapies that have been used to treat solid cancer, include angiogenesis inhibitors, hedgehog pathway blockers, tyrosine kinase inhibitors, mTOR inhibitors, poly (adenosine diphosphate-ribose) polymerase (PARP) inhibitors, p53/mouse double minute 2 homolog (MDM2) inhibitors, and proteasome inhibitors.^{21,22}

In chemotherapy treatments for gynaecological cancers, the most commonly used drugs are alkylating medicines such as ifosfamide and cyclophosphamide, which target follicles at every stage of the cycle and have a high probability (more than 70%) of causing permanent amenorrhea. As for other substances, platinum compounds, Temozolomide, Dacarbazine, Lomustine, Procarbazine, Melphalan, Busulphan, and Thiotepa, are all believed to raise the risk of ovarian dysfunction, which is more likely to be permanent in the event of post-pubertal exposures. The loss of ovarian function caused by gonadal toxic therapy is associated with several health problems and precocious menopausal symptoms, such as dry eye syndrome, osteopenia/osteoporosis and an increased risk of fractures, early cardiovascular disease, depression, anxiety, and cognitive decline. These side effects are in addition to raising the risk of infertility. This indicates that in order to restore the premenopausal

level of ovarian sex steroids and improve quality of life, the majority of young women with gynaecological cancer should undergo long-term (until the normal age of menopause) hormone replacement therapy.⁵

Heavy menstrual bleeding is a concern associated with chemotherapy treatment for young women which must be avoided, especially during the period of anaemia that follows myelosuppression. Depending on the mode of action, dose, and length of treatment, chemotherapeutic drugs may have varying degrees of gonadotoxicities. There is a high risk of gonadotoxicity with the use of alkylating drugs (such as Ifosfamide and Cyclophosphamide), Busulfan, and Melphalan. A moderate risk of gonadotoxicity has been linked to anthracyclines, taxanes, and platinum agents (Cisplatin and Carboplatin). Young women with gynaecological cancer may experience a variety of psychologic and psychosocial disorders for a long time, even after the completion of therapy. These disorders include exhaustion, sleep disorders, body image disorders, anxiety, depression, cognitive and functional limitations, sexual dysfunction, infertility, limited emotional relationships, work or school-related issues, and others.⁵

Effect of Chemotherapy on Sexuality of Young Women with Gynaecological Cancers

Since sexuality does not directly influence the physical removal of the disease, it is often overlooked in clinical settings during gynaecological cancer treatment.¹⁴ The WHO's 2010 definition of sexuality serves as the foundation for our understanding of what sexuality is. This argues that sexuality which encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy, and reproduction is influenced by the interplay of biological, psychological, social, economic, political, cultural, ethical, legal, historical, religious, and spiritual aspects.

As a result of their nonconformity with the ideas of "normative" sexuality, people with cancer are often asexualized. Nevertheless, for many, sexual health is a vital component of a high-quality life; common problems include low sexual activity frequency, low sexual pleasure, low satisfaction, high levels of discomfort, loss of vaginal elasticity, deep dyspareunia, vaginal dryness and shortening, and difficulties reaching climax.¹⁴ Side effects that manifest in other body systems, such as fatigue and bowel or urine dysfunction, can occasionally interfere with sexual activity. These abnormalities might

last for years throughout survivorship and eventually turn into chronic illnesses.¹⁴

Treatment for gynaecological cancer is linked to both physical and mental side effects, such as infertility, lymphoedema, pelvic floor disorders, hormonal and vaginal alterations (such as scarring, shortening, dryness, and discharge). Challenges with body image and feminine identity, and early menopause are among the conditions that can arise. Sexual disorders such as altered sexual self-concept, dread of sex, painful sex, infrequent sex activity, and lack of sexual arousal, desire, and orgasm are linked to these invasive and often persistent symptoms.¹⁸ It is known that changes in hormone levels and shifts in how one feels about one's body can have an impact on one's sexuality after receiving a cancer diagnosis.¹⁸

According to Hall *et al.*, the majority of the long- and short-term systemic effects of chemotherapy have been demonstrated to harm women's sexuality. The overall toxicity outcomes of the treatment were in line with the findings of increased systemic adverse effects (systemic therapy side effects, fatigue, nausea and vomiting, insomnia, appetite loss, and diarrhoea) in chemotherapy patients. About 40% to 100% of women with gynaecological cancer will experience sexual dysfunction following treatment, according to the study.¹⁴

Coping Patterns of Young Women Undergoing Chemotherapy for Gynaecological Cancers

When asked who they believed would be the ideal person to talk to about their experiences with cancer, most participants in a qualitative study that looked at psychological distress, coping, and social support among women with ovarian cancer responded as 'another survivor'.²³ A crucial component of wellbeing was having the support of family and friends, especially partners and spouses. Some people saw alterations in their interpersonal interactions. As a result of treatment requirements and their loved ones' staying away from them, time spent with family was diminished. The interactions they had with their family and friends had an impact on their life, according to all the participants.²³ Some participants described feeling abandoned by family members and/or acquaintances, who also exhibited erratic reactions.

The role of supportive care requirements in predicting the quality of life of patients with gynaecological

cancers was assessed. Less than ten percent of patients were reported to not require supportive care, while the vast majority of patients did. It discovered that unmet supportive care needs are a predictor of a reduced quality of life, as evidenced by a decline in general and functional health and an increase in cancer-related symptoms.²⁴

The demand of gynaecological cancer patients in terms of supportive care was assessed. According to findings, social support highlighted women's desires for peer support, family-related support, and financial support; disease-specific symptom management described women's desires for assistance in coping with reproduction/sexual issues; and women with gynaecological cancer expressed a desire for emotional support from caring medical professionals. Information support included communication and involvement, as well as access to adequate and appropriate information.²⁵

In a review on palliative care in gynaecologic oncology, it was noted that patients with gynaecologic cancer undergoing treatment for a curative purpose with surgery, chemotherapy, and/or radiation often face a variety of challenging issues during their illnesses, from physical and psychological symptoms to making advance care plans in light of a poor prognosis, which makes following the treatment recommendations challenging.²⁶

Four parameters physical well-being, psychological well-being, social well-being, and spiritual well-being were used by Ferrell and Dow to describe the domain for cancer survivor.² Coping is the term used to describe one's cognitive and behavioural attempts to manage stress-related internal and external demands for adjustment. A patient's ability to adjust psychosocially is significantly influenced by how they deal with their illness; hence it is important to support healthy coping mechanisms for cancer patients.²⁷ Coping mechanisms have been recognized as potential variables in relation to psychosocial adjustments. A study has shown that when the coping strategy improved, psychosocial adjustments further improved the welfare of the patient.²⁸ The relevance of coping mechanisms has been stressed in a study that involved 148 women with gynaecological cancer and indicated that laying out coping mechanisms and adopting a positive mind-set can improve the quality of life.²⁷ Fighting spirit, positive reinterpretation, helplessness/hopelessness, and worried obsession are just a few of the coping mechanisms that have been noted.²⁹

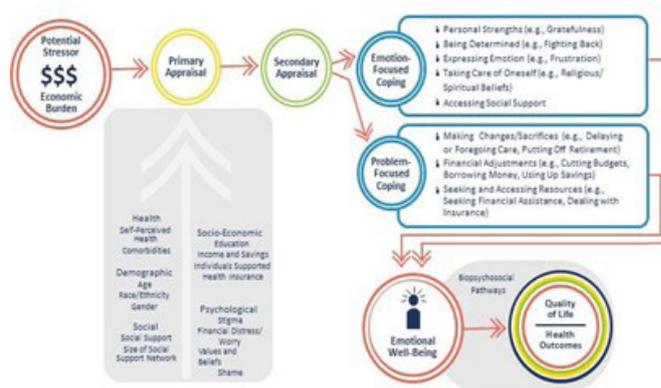


Figure 1: The Emotional well-being and Economic Burden Research Network (EMOT-ECON)

Conclusion

Gynaecological cancers are among the most common cancers in the world, and they have a significant impact on women's lives and the lives of their families. Chemotherapy or the use of cytostatic medicines is one of the cancer treatment techniques. Chemotherapy side effects have an effect on young women's functional status. Gynaecological cancer treatment is associated with a number of physical and psychological side effects, including changes in hormones and vagina (including scarring, shortening, dryness, and discharge), early menopause, infertility, lymphoedema, pelvic floor disorders, pain, exhaustion, anxiety, and problems with body image and feminine identity. These intrusive and frequently lingering symptoms are associated with sexual issues in young women with gynaecological malignancies, a changed sexual self-concept, pain during or after sex, restricted sexual participation, and a lack of desire, pleasure, orgasm, among other things. Fighting spirit, positive reinterpretation, helplessness/hopelessness, and worried concern are only a few of the methods for dealing with cancer that have been documented.

Clarifications

Chemotherapy is one of the cancer treatment modalities; the side effects of chemotherapy might affect young women's sexuality and functional status. Treatment for gynaecological cancer can cause both physical and psychological side effects. A number of coping mechanisms have been noted since the effects of cancer pathology and its treatment are so severe and intricate. In order to improve the consistency in psychosexual

support after treatment, nurses should be well-equipped to talk about sexuality with their patients.

Suggestions For Further Research

Future research can be considered, especially in the following areas:

1. Exploring the effects of chemotherapy on the sexuality and fertility of young women with gynecological cancers.
2. Examining the prevalence of infertility in young women with gynecological cancers undergoing chemotherapy.
3. Examining the efficiency of coping mechanism among young women with gynecological cancers undergoing chemotherapy.

Recommendations

Health awareness should be intensified by the nurses on the effects of chemotherapy treatment, generally with an emphasis on sexuality. The same should be made known to young women living with gynaecological cancers prior to treatment so as to allay their fears and panic, improve their emotions, social and cognitive functions and coping abilities.

Young women are at a heightened risk of infertility due to the gonadal toxic therapy-induced decrease of ovarian function. Efforts should be intensified on research about the preservation of fertility as well as sexuality in young women living with gynaecological cancers undergoing chemotherapy.

Implications for Nursing and/or Health Policy

Nursing curriculum can be updated to include information on current chemotherapy treatments used in the management of gynaecological cancers and the coping strategies to help patients cope with the side effects of these treatments.

There should be retraining of nurses on the effects of chemotherapy on sexuality of young women living with gynaecological cancers and their nursing intervention/management.

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Conflicts of Interest

Nil

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