



RESEARCH ARTICLE

PERCEPTION AND COPING OF PATIENTS UNDERGOING RADIOTHERAPY FOR CERVICAL CANCER

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OPEN ACCESS

PUBLISHED

30 September 2024

CITATION

Padilha, CML., et al., 2024. PERCEPTION AND COPING OF PATIENTS UNDERGOING RADIOTHERAPY FOR CERVICAL CANCER. Medical Research Archives, [online] 12(9).

<https://doi.org/10.18103/mra.v12i9.5851>

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DOI

<https://doi.org/10.18103/mra.v12i9.5851>

ISSN

2375-1924

ABSTRACT

This study aims to understand the psychosocial impacts of radiotherapy on patients with cervical cancer, contributing to the planning of actions to improve their quality of life. A descriptive and qualitative field study was conducted with patients who completed the radiotherapy protocol and returned for clinical follow-up at the Hospital do Câncer II – RJ / INCA. Between September 2019 and February 2020, 17 patients were interviewed, aged between 33 and 85 years, excluding 7 for not meeting the criteria. The study revealed that the diagnosis and radiotherapy treatment of cervical cancer have a significant impact on the lives of women and their families, with varied experiences and perceptions among the patients. The research highlighted the importance of psychological and familial support in dealing with the consequences of the disease and treatment. Additionally, faith and spirituality play a crucial role in emotions and coping with the disease. Therefore, it is essential that strategies to improve these women's quality of life include adequate psychological support and the involvement of qualified professionals.

Keywords: Psychosocial Impact, Cervical Cancer, Radiotherapy.

1. Introduction

Cervical cancer represents a public health issue worldwide¹. However, It is considered one of the types of malignant tumors with the greatest potential for prevention and cure when diagnosed and treated early². The diagnosis of cancer, especially of the cervix, causes a great social and emotional impact, as the affected organ involves issues inherent to sexuality, femininity and reproduction³.

The main risk factors for the disease are identified in the literature as early onset of sexual activity, having multiple partners, smoking (the disease is directly related to the number of cigarettes smoked) and prolonged use of contraceptive pills^{4,5}. However, infection with the Human Papilloma Virus (HPV) is considered a necessary cause in the formation of precursor lesions that, if left untreated, could develop into cervical cancer⁶.

Screening for the identification of precursor lesions is done through cytopathological examination of the cervical-vaginal secretion, popularly known as the Papanicolaou test, or Pap test. This test is considered safe, cheap and easily accepted by the population, with proven sensitivity and specificity, in addition to a favorable cost-effectiveness ratio. It should be noted that, during its early stages, cervical cancer has no signs or symptoms⁷⁻⁹. In most cases, symptoms only appear when the disease has progressed, requiring more invasive treatments, which can cause sequelae and are sometimes only palliative^{7,10,11}.

Treatments for cervical tumors depend on several factors. Various authors highlight the staging of the disease, tumor size, age, and the desire to have children. Among the most common treatments for cervical cancer are surgery and radiotherapy^{1,12}.

In more advanced stages of the disease, surgery is typically not considered an effective treatment from a curative standpoint, and radiotherapy assumes a predominant role in patients with FIGO stages IIB to IVA. Patients with cervical malignancies referred for radiotherapy typically present with advanced-stage disease.^{1,13}

Radiotherapy induces alterations that lead to dysfunctions particularly related to the genitourinary system, which can significantly interfere with sexual life. Additionally, the psychosocial impact, combined with physical damage, results in a compromised quality of life.^{7,14-16}

Numerous studies report that the moment of the diagnosis confirmation, as well as the period preceding treatment, can induce significant psychological distress in women. This distress notably impacts their personal and professional relationships, causing them to either draw closer to or distance themselves from those around them.^{7,13,17}

Cancer is still perceived by many as an inevitable death sentence, representing one of the most severe and impactful outcomes in human life^{18,19}.

This perception, shared by both healthcare professionals and the general population, contrasts with that in countries like the United States, where the notions of prevention and risk are heightened due to cultural factors. Some authors have highlighted the importance of understanding disease progression, which carries significant implications for the patient, particularly in social terms, as it can underscore the relationship within the family matrix^{13,17}.

It is a fact that the discovery of a chronic illness like cancer is an experience that has a profound impact not only on the patient but also on their entire family context, negatively affecting physical, psychological, and social conditions. The patient faces a unique situation, confronting significant daily challenges involving helplessness, pain, and fear, which introduce new dilemmas, questions, and obstacles to coping and overcoming the disease²⁰.

Although the patient is the one who physically experiences the symptoms and side effects of treatment, the consequences are also felt by the patient's family, who share in the suffering as they face the unfamiliar reality of dealing with a potentially life-threatening disease^{21,22}.

With the diagnosis, the family structure must adapt to the new reality to provide the necessary support

and care for the patient facing cancer. This adaptation should occur without sacrificing the well-being of the caregiver or the family unit, thereby minimizing psycho-emotional harm throughout all stages—diagnosis, treatment, and even the terminal phase^{23,24}.

Therefore, aiming to contribute to the knowledge that guides the planning of actions focused on improving the quality of life for patients undergoing radiotherapy for cervical cancer, this study aimed to analyze the psychosocial impacts experienced by patients undergoing radiotherapy for cervical cancer.

2. Material and Methods

The methodological design involved a descriptive field study with a qualitative analysis approach. Considering that the use of qualitative research addresses specific questions within a real-world context, and according to the literature, this model cannot be quantified, as it is understood as "those capable of incorporating the issues of meaning and intentionality as inherent to actions, relationships, and social structures, with the latter being considered both in their emergence and transformation as significant human constructions"^{25,26}.

2.1 PARTICIPANTS

Initially, seventeen patients who had undergone radiotherapy for cervical cancer and returned to the hospital for medical follow-up were selected for this study. Seven patients were excluded due to incomplete references (such as treatment in another hospital, clinical staging of the lesions, incomplete radiotherapy, or not signing the Informed Consent Form).

All ten patients included in the study completed the radiation treatment protocol, which involved a combination of external megavoltage radiotherapy: 45 to 50Gy in 25 fractions, followed by intracavitary brachytherapy: high-dose-rate (HDR) with an Iridium-192 microsource, with 3 insertions of 8Gy at weekly intervals, totaling 80Gy.

2.2 INSTRUMENTS

In the interview, participants responded to an open-ended questionnaire consisting of ten questions.

These questions focused on the impact, thoughts, and feelings related to the diagnosis and therapeutic planning, with particular emphasis on radiotherapy. The questionnaire also explored fears and doubts, the sharing of the diagnosis, support from friends and family, and the impact on personal and professional life.

2.3 DATA COLLECTION PROCEDURES

For patient selection, the inclusion criteria required that participants had completed the full radiotherapy protocol (including teletherapy and brachytherapy), having signed the Informed Consent Form and had returned for clinical follow-up and cytopathological examination. Patients were recruited from the outpatient clinic of Cancer Hospital II – RJ / INCA. The initial selection was based on patient records of those awaiting appointments.

Data collection began in September 2019 and concluded in February 2020 due to the COVID-19 pandemic. During this period, semi-structured in-person interviews were conducted with the patients in a private consultation room, each lasting approximately 20 minutes on average.

2.4 DATA ANALYSIS PROCEDURES

The analysis of the interview data was conducted based on Bardin's method (2000), which emphasizes the faithful transcription of information. Guided by the literature^{25,27,28}, the guiding questions and their categories were organized according to their semantic structure, meaning that the categories were arranged based on the words and their meanings in relation to the thematic content.

2.5 ETHICAL PROCEDURES

All patients included in the study signed an informed consent form (ICF). The responses were transcribed into a specially designed instrument, which had been pre-filled with the clinical and epidemiological data contained in the patient records.

The study was approved by the Research Ethics Committee (CEP/INCA) as part of the prospective doctoral thesis titled "Cytological Evaluation of Cervical Cancer Patients Undergoing Radiotherapy"

and was assigned the Ethical Appreciation Presentation Certificate (CAAE) number 5770161 6.6.0000.5274. The project was adjusted, and its partial report was validated by the Research Ethics Committee (CEP) under opinion number 4.527.296 in February 2021.

3. Results

The age range of the ten patients included at the time of data collection (interview) was between 33 and 85 years, with an average of 52.2 years. However, at the time of diagnosis, the age range varied from 26 to 80 years, with an average of 45.4 years. Regarding sociodemographic characteristics, it was noted that low educational attainment and low income accounted for more than half (70%) of the patients. Concerning the frequency of cervical cancer screening (Pap smear), 3 patients had it done annually, 3 every two years, 1 more than 3 years ago, 1 four years ago, 1 seven years ago, and 1 did not remember.

Of the recruited patients, 70% (n=7) had a histological diagnosis of squamous cell carcinoma, and 30% (n=3) had adenocarcinoma, with clinical staging: 1B2 (n=1), 2B (n=6), and 3B (n=3). Half of the patients (n=5) had a family history of cancer, 50% were white, and 50% were mixed-race. Regarding smoking habits, 20% were smokers and 10% ex-smokers, while the others had never smoked. Additionally, 20% reported alcohol consumption. The average number of sexual partners was 4 (ranging from 1 to 16 sexual partners). As for marital status, 40% were married, 20% single, 20% widowed, and 20% in a consensual union.

The combination of radiotherapy and chemotherapy was indicated for 6 patients (60%), while exclusive radiotherapy was indicated for 4 patients (40%).

Regarding the responses on the impact, thoughts, and feelings associated with the diagnosis and therapeutic planning, particularly radiotherapy, it was observed that the theme of fear emerged prominently among the ten patients, as reflected in the following responses: "Fear and indignation"; "Fear and helplessness, but I had faith I could overcome it"; "At first, I didn't believe it; then panic

set in, I thought I was going to die"; "I thought it was my end, I was very scared"; "I was scared, but I knew it could be treated"; "It was a shock when I found out it was cancer, even though I did preventive exams"; "I was very nervous, didn't know if I could endure the treatment, if it was worth it"; "I was frightened, scared, I thought about God"; and "I was scared, but what could I do?"; "I imagined it would cause many sequelae"; "I thought it was just what had to be done"; "It was part of the treatment"; "I was afraid of radiation contamination"; "Very scared, but I thought it was part of the treatment"; "I was anxious and worried about the consequences"; "Fear and nervousness, I knew it would be very bad"; "Oh my God! I was very nervous"; "I was worried about also causing harm to my family"; and "I did what the doctor ordered, I trusted."

Regarding concerns, the themes of family and suffering were the most frequently mentioned: "The consequences, losing my job, the pain for me and my family"; "Death and suffering"; "Not being cured, suffering from the treatment, and dying as a consequence"; "Leaving my children, my life"; "The treatment, I knew it wouldn't be easy"; "The pain and the sequelae"; "After the shock, I had faith everything would work out"; "The painful death that the disease brings, but I had faith in God"; "The suffering, but I had faith in God"; and "The treatment, I even thought about not doing it."

In terms of sharing the diagnosis and receiving support from friends and family, denial was the most highlighted theme: "I was with my children and husband, they helped me a lot"; "It took a while for it to sink in and to tell..."; "I waited for it to sink in"; "At first, I didn't believe it; then I started telling, first to my husband, then to the children"; "I told them little by little..."; "I thought a lot before telling..."; "I told my children and husband, but it took me a while to tell others"; "I spoke openly, several people in my family had cancer...".

Regarding the impact on personal and professional life, the most cited themes were depression and stress: "The psychological impact, I had severe

depression, needed psychological support, was referred here at the hospital. I lost my job and have great difficulty with sexual relations"; "I had many moments of sadness and anguish, but I'm overcoming it, I don't have pain, but lack lubrication, I do the physiotherapy guided by the doctor"; "Aside from a bit of abdominal pain, I'm fine"; "I had days of anxiety and sadness, today, apart from leg pain, I'm fine"; "Pain during sexual intercourse interfered with my marriage"; "I feel more tired, irritated, and aggressive, have pain during sexual intercourse"; "I feel discomfort and sometimes bleeding, it scares me a little"; "I'm a widow, I no longer feel like having sex, especially because I use a colostomy bag"; "I have incontinence, both fecal and urinary. Bleeding during sexual intercourse, I do physiotherapy exercises as guided by the doctor"; and "I'm fine, I follow the doctor's instructions."

When asked about anxieties and consequences, specifically regarding radiotherapy, the prevailing theme was the fear of sexual relations, as reflected in the following statements: "I was worried about contamination, but then I understood..."; "Having pain during sexual intercourse"; "Causing harm to my family as well"; "Anxiety, but now I'm fine"; "My life with my husband was very difficult"; "The pain during sexual intercourse"; "Fear of having sexual intercourse"; "The discomfort of using the colostomy bag, I had to use it"; "Incontinence and discomfort during sexual intercourse"; and "I'm fine, I follow the doctor's instructions."

4. Discussion

It was observed that some sociodemographic characteristics found in this study are similar to those reported by other authors, such as the predominant mean age of 45 years, low education levels, and low income^{4,5,29}.

The analysis of the patients' interview responses focused on reflecting on the specificities of the content analysis technique^{25,28}, we observed that fear, anxiety, suffering, and pain are among the most commonly reported emotions. According to various

authors, cancer induces devastating reactions both physically and emotionally, triggering feelings of imbalance and internal conflicts. These reactions often lead to intense suffering, resulting in psychological disarray, especially in advanced cases^{13,20,30}.

Sexual life is a significant factor that impacts quality of life, potentially fostering both positive and negative emotions. During radiotherapy treatment, sexual activity is not recommended to avoid trauma and to maintain local hygiene. However, after treatment, sexual activity can be resumed, though pelvic physiotherapy is recommended as a complementary therapeutic intervention. This is due to the fact that vaginal stenosis, dyspareunia, low lubrication, and loss of sensitivity are the most common dysfunctions following cervical cancer treatment. Vaginal stenosis, one of the primary post-radiotherapy complications, involves the narrowing and shortening of the vaginal canal.³¹⁻³³

Additionally, according to other authors, apprehension regarding pain during sexual activity leads to reduced arousal, resulting in increased vaginal dryness and inadequate muscle tone. This, in turn, leads to a heightened perception of pain, making sexual intercourse more difficult^{34,35}. The accounts from our study on this subject highlight discomfort, pain, and fear associated with sexual intercourse.

The adverse effects of radiotherapy are also evident, particularly on the skin, where they manifest as radiodermatitis. These effects range from mild erythema and pruritus to dry or moist desquamation, and in severe cases, tissue necrosis³⁶. Almeida et al. (2008)³¹, conducted a qualitative study in the radiotherapy department, providing detailed descriptions of the experiences of women with cervical cancer. According to the authors, the therapeutic indication phase brought forth significant concerns and questions regarding the radiotherapy process. The narratives from the women revealed their anxieties and the physical and emotional challenges they anticipated and encountered.

One patient (D18, 38 years old) vividly described the intense discomfort she experienced: "...This heat is what kills me... it burns too much; when I try to urinate, I start trembling with pain and can't do it..."

Another patient (D3, 64 years old) expressed her distress about brachytherapy: "...Brachytherapy is terrible... but it has to be done... what can you do? Because it hurts and is uncomfortable... Can you imagine those [devices] inside us?..."

The study also highlighted the impact of treatment on marital relationships. One patient (D14, 47 years old) voiced her concerns: "...I'm even thinking about it because my husband is a very rough kind of man. I don't even know if he'll want to stay with me; I still have to talk to him... he doesn't understand women when it comes to sex; even when I was bleeding, he still wanted it no matter what. I've already told him that with this kind of treatment, it's not going to be possible anytime soon. He won't understand. I think that's why he's already getting anxious for me to leave..."

Similar issues were echoed in other interviews, with one patient stating, "In my life with my husband, it interfered a lot."

These accounts demonstrate the profound physical and psychological toll of radiotherapy on patients, as well as the strain it places on intimate relationships. The qualitative approach used by Almeida and colleagues provides a deep understanding of the multifaceted challenges faced by women undergoing treatment for cervical cancer, underscoring the importance of comprehensive care that addresses both medical and emotional needs.

In a study that analyzed the perception of women diagnosed with invasive cervical cancer³⁷, involving 12 patients with advanced tumor, it was identified that family support was highlighted as the primary source of strength in facing the disease, as reflected in the narratives of the interviewed patients. It is emphasized that family support for the oncology patient, as well as psychological support for actively

involved family members, is of utmost importance in coping with the illness. According to some authors, when confronted with cancer, the family faces the conflict between the need to support their loved one and the challenge of accepting the presence of the disease within the family unit^{22,24}. Support for the patient and their family should be provided at every stage: during prevention, diagnosis, throughout treatment, and extending to either cure or the terminal phase^{38,39}.

A cancer diagnosis, as a life-threatening disease, along with its treatments, brings consequences not only to the patient but also to those close to them. The disease often proves to be mutilating and cruel, especially when the diagnosis is delayed, a reality that is vividly reflected in the testimonies of the patients in this study³⁷.

Currently, psycho-oncology plays a fundamental role in coping with the disease, as it aims to integrate the patient, their family, and the medical/hospital team. It provides psycho-emotional, psychosocial, and psychoeducational support, with the goals of improving communication and decision-making, as well as modifying dysfunctional psychological patterns among these groups^{40 41}. A study by Silva and Zago (2005)³, highlighted that a cancer diagnosis represents a critical juncture for patients, with the communication approach employed by healthcare professionals significantly impacting the patient's perception and subsequent relationship with their diagnosis.

Doubts about the possibility of a cure and the imminence of death were among the fears expressed by patients upon receiving their diagnosis. As noted by Soares (2016), the physical and emotional exhaustion that accompanies a cancer diagnosis and the invasive therapeutic procedures, which in some cases cause mutilations, highlight the reality of death. This situation often leads individuals to experience feelings of anger, fear, anguish, self-pity, and a profound sense of losing control over their own lives^{13,30}.

However, the study found that faith can serve as an important source of comfort and support for many

individuals during periods of suffering, bringing them serenity to face the adversities of the disease. Faith provides emotional and psychological assistance, activates the immune and endocrine systems, and helps in overcoming pain and anguish. Consequently, it reduces stress and anxiety, which increases treatment adherence, strengthens feelings of hope and belonging, and brings greater serenity in facing the challenges of the disease. This, in turn, results in an improved quality of life for the patient and aids in the pursuit of healing.

Every human being carries within them an inherent strength that drives them to seek the sacred with greater intensity during challenging times. In this context, it is essential to distinguish between spirituality and religiosity, as both play a crucial role in shaping the search for meaning and the value placed on life. As stated by Benites (2017)³⁹, religion / religiosity encompasses a set of beliefs, language, and institutionalized practices rooted in an accumulated tradition, complete with its own symbols, rituals, ceremonies, and explanations regarding life and death. In contrast, spirituality is universal and not confined to any specific religion, culture, or group of people. It involves personal and intimate values that give life meaning and, as such, fosters personal growth and reflection on lived experiences.

When people are confronted with a serious illness, they generally become more sensitive, feel the need for protection, and often rely on their religious and spiritual beliefs. This is evident when patients invoke the name of God, reflecting their faith⁴².

In a study published by Oliveira et al. (2005), it was shown that faith in God, regardless of religion, provided the women studied with comfort and security. It was seen as a way to cope with the uncertainties regarding the progression of the disease and its treatment. The interviewees described how insecure and vulnerable they felt about the future and noted that their faith brought them comfort and alleviated their physical suffering³³.

The psychological impact was evident among the patients included in the study, leading to the

emergence of new behavioral patterns. According to most accounts, the treatment was perceived as a struggle for survival—a challenging battle intertwined with a treatment that was not well understood. This is exemplified by responses such as: “I was afraid of radiation contamination,” and “I was worried about causing harm to my family as well”.

Radiotherapy is a method capable of destroying tumor cells by using ionizing radiation, such as X-rays, which are a form of energy that destroys or prevents the growth of tumor cells. In this process, patients are exposed to radiation, but there is no contamination involved. However, many people who are not familiar with the treatment mistakenly fear that they could be contaminated by the radiation^{7,10,13}.

Radiation therapy is administered in approximately 60% of all diagnosed cases of malignant tumors, including the most prevalent types in the country, such as prostate, lung, breast, and cervical cancer^{7,43}.

A cancer diagnosis, as a life-threatening disease, along with its treatments, brings consequences not only to the patient but also to those close to them. The disease often proves to be mutilating and cruel, especially when the diagnosis is delayed, as vividly reflected in the experiences of the patients in this study^{7,10,14,37,44}.

Radiotherapy can cause significant and challenging changes to the patient's physical and emotional well-being, affecting aspects such as nutrition, hygiene, sterility, sleep, rest, physiological functions, work routine, and social and familial relationships^{22,31}.

This study provided insights into the significant impact that the diagnosis and radiotherapy treatment of cervical cancer have on the lives of women and their families. However, each patient experiences different perceptions, experiences, and behaviors. It is also important to highlight that issues of faith and spirituality involve emotions and convictions that prompt reflections on the meaning and purpose of life.

Therefore, strategies for coping with the disease and its treatment should be integrated with psycho-oncology, which will provide the necessary emotional and psychosocial support to the patient, their families, and the healthcare professionals involved. Additionally, these strategies should include psychoeducational approaches to medical issues related to prognoses, treatments, and procedures, such as radiotherapy^{13,40}.

The revelation of a cancer diagnosis is considered a crucial moment, and the manner in which the healthcare professional delivers the news directly influences the patients' relationship with their diagnosis³.

5. Conclusion

Knowledge of the effectiveness of available treatments and continuous improvements in radiotherapy techniques help foster a positive attitude and greater confidence in the treatment. This can result in better adherence to the therapeutic plan, increased willingness to face treatment challenges, and an overall improvement in quality of life throughout the process.

Therefore, providing accurate and up-to-date information to cancer patients, highlighting the successful outcomes of treatment and advances in radiotherapy, plays a crucial role in reducing psychological impact and strengthening the emotional resilience needed to face the disease more assertively.

Conflict of Interest:

None

Acknowledgements:

None

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