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BREAST CANCER: THE BIOPSYCHOLOGICAL EFFECTS OF TAMOXIFEN TREATMENT AND SIDE EFFECTS

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Abstract: Breast cancer is a very prevalent and incident disease in women, with a diagnosis that, when given, brings a lot of suffering and anxiety to the patient, mainly due to the unfavorable data, as well as the treatment, which can bring many changes in the quality of life of the patient. patient in all biopsychosocial and physiological aspects because he is very incisive and aggressive. In this sense, the present study aims to report the experience of students in the 4th period of the Faculty of Medicine of the Centro Universitário Alfredo Nasser, using the Maguerez arch as a methodology, using a 49-year-old female patient as a sample. This is a descriptive study, therefore, an experience report, going through the five stages of the Arch of Maguerez: observation of reality, key points, theorization, solution hypotheses and application to reality. With the in-depth observation of the patient and the studies acquired after careful reading and immersed in the universe of the theme, it was possible to identify what to do to intervene and improve the problems arising from the treatment of breast cancer, prolonged with the use and side effects of tamoxifen, as well as the implementation of solutions and intervention proposals to improve the patient's concerns, reduce the side effects of medication use and try to reduce the psychological effects brought about by the long-term use of medication and hoping that the good results brought by the intervention in the patient's reality provide an improvement in her quality of life.
Keywords: Maguerez's arch, tamoxifen, breast cancer, cancer treatment, chemotherapy.

INTRODUCTION

Breast cancer is one of the most feared types of cancer by women because of its psychological effects, such as: impact on sex life, fear of relapses, anxiety, depression, changes in body image, among others.), in addition to affecting, according to the Ministry of Health (2020), a much higher percentage of women (99%) than men (1%). In 1971, war on cancer was declared by the National Cancer Act, which in the last 50 years has promoted significant advances in both knowledge and treatment of breast cancer. Thus, combining early diagnosis through mammography with therapeutic methods, survival rates have been significantly and progressively higher in cases that until recently were seen as incurable (HOFF et al., 2013). However, the disease-related morbidity and mortality rates still remain high, which demonstrates how important and necessary primary prevention is (MOLINA; DALBEN; LUCA, 2003). In this sense, in 1985, Cuzick and Baum reported a decrease in the incidence of breast cancer in Tamoxifen users, being the first observation of the drug's effectiveness as a chemopreventive, with later studies concluding that it must be prescribed for 5 years. The drug has a complex action (ASTRAZENECA, 2007; VIANA, 2007; NAUFEL et al., 2014), which can plausibly be explained as a competition for estrogen sites in the female body, mainly in the breast tissue, despite producing effects in other fabrics. (HOFF et al., 2013).

METHODOLOGY

This is a descriptive experience report, using Maguerez's arch as a methodology. Due to the Covid-19 pandemic situation, teleconsultations were carried out with the patient, with weekly checks via the messaging application to monitor her case and her well-being, in addition to her family nucleus, her social reality and the consequent application in the study of the Arch of Maguerez.

Maguerez's arc is a methodology in which the starting and ending point is social reality. This methodology is based

on problematization as a learning tool, consisting of five steps: observation of reality, key points, theorization, solution hypotheses and application to reality, which allow the student to be able to identify problems and elaborate proposals that help to overcome it (VILLARDI; CYRINO; BERBEL, 2015).

The first stage, "Observation of reality" and identification of the problem, involves the beginning of a process of appropriation of information by the subjects, who are led to observe the reality itself and identify its characteristics. (COLOMBO; BERBEL, 2007). Thus, we sought to analyze the patient in a biopsychosocial way and her history, observing her quality of life in all its completeness, from the situation and comfort of her residence and her perspective regarding the treatment and post-treatment, as well as her care with nutrition and your mental health. It was not possible to perform a physical examination on the patient, but the anamnesis was very detailed to cover the distance and the pandemic period.

With that, after the election of the determinants of the problem and their determination, there was a detailed choice of the key points to be analyzed and theorized within the experience report. Then, we tried to theorize the entire problem, offering reasoned explanations and answers present in the bibliographies available so far. "A well-developed theorizing leads to an understanding of the problem, not only in its dimensions based on experience or situation, but also in the theoretical principles that explain it". (BERBEL, 1999; BORDENAVE & PEREIRA, 2005; COLOMBO & BERBEL, 2007).

Thus, for a greater deepening of the experience offered by the case, books, articles, observations and medical prescriptions, exams were investigated so that they could be better personalized and proposed interventions that could be applied in the patient's reality, respecting her conditions and intervening. so that she could present even more aspects of a healthy state and have the highest possible quality of life.

RESULTS AND DISCUSSION

REALITY OBSERVATION

E.M.S.A, 49 years old, female, black, Brazilian, born in Conceição do Araguaia (PA), has completed high school, has 3 children and works at home. She lives with her husband, who works in sales and travels constantly; but, the eldest son lives in the same city.

Upon physical examination via teleconsultation, the following results were observed:

- GENERAL EXAMINATION: 78 kg (17 kg gained after using tamoxifen), 1.58 m tall, BMI 31.2 (grade I obesity).
- HEAD AND NECK: spots on the skin of the face; presbyopia.
- GASTROINTESTINAL: poor intestinal transit, with alternating variations of days with normal functioning and days with exaggerated diarrhea.

It is important to point out that E.M.S.A has a diet composed of fruits, eggs and meat, consumes almost no other proteins or vegetables and likes to drink soda. She practices walking during the week in the afternoon and sporadically rides a bicycle. She has also complained of unsatisfactory sleep, spots on her skin and face resulting from moments of anxiety and the depressive feeling that she sometimes finds herself. She uses Losartan for hypertension, Indapamide and is neither a smoker nor an alcoholic.

Menarche of E.M.S.A happened at 13 years of age, sexarche at 18 years of age and the date of the last menstruation was at 35 years of

age. She had 4 pregnancies, 3 of which were vaginal deliveries and 1 miscarriage. She reports an active sex life, without discomfort and a steady partner. She has no recurrent vaginal discharge. At age 35, she had her uterus removed due to an endometrial polyp and has in her history surgeries for inguinal hernia and tubal ligation. She has no apparent injuries to the external genitalia and her last preventive exam was in July 2020.

The patient reports that she always had regular appointments with the doctor as a form of prevention. E.M.S.A's story with breast cancer began in May 2015 when, while taking a shower, she found a small abnormal lump when doing a breast self-examination. She went straight to the mastologist, had a mammogram and an ultrasound of her breasts. On ultrasound, a nodule was seen, and on mammography the result was BI-RADS 5. That is: that nodule seen had a very high risk of being cancer. After the biopsy and confirmation, the patient was directed to treatment: 8 chemotherapy sessions (between September 2014 and March 2015), followed by a quadrandectomy in the right breast (April 2015), 30 radiotherapy sessions (between November 2015 and January 2016) and the use of tamoxifen for 5 years after quadrandectomy. She also reports feeling hot flashes due to the use of tamoxifen, and there is still pain in the breast where the quadrandectomy was performed.

KEY POINTS

- Prolonged use of Tamoxifen
- Alternating periods of diarrhea and constipation after Tamoxifen treatment
- Irregular and unsatisfactory sleep
- Anxiety and depression
- Complaint of pain in the right breast
- Spots on the face
- Food deficient in vegetables

THEORIZATION

Cancers are diseases in which an uncontrolled expression of genes proliferates inside abnormal cells that, in turn, form a tumor and have the ability to spread through different routes to other tissues and organs (HOFF et. al, 2013). With the exception of non-melanoma skin cancer, breast cancer is the type of neoplasm that most affects Brazilian women, representing 29.7% of cancer diagnoses in Brazil in 2020 (MINISTÉRIO DA SAÚDE, 2020).

Among the main signs and symptoms of breast cancer, we can mention: lump in the breast and/or armpit, breast pain and changes in the skin that covers the breast, such as bulging or retractions with an appearance similar to an orange peel. In general, the lesions are painless, fixed and with irregular edges (SILVA; RIUL, 2011).

Risk factors for breast cancer include: environmental and behavioral factors (postmenopausal obesity, sedentary lifestyle and alcohol consumption), frequent exposure to ionizing radiation, genetic and hereditary factors and, as it is an estrogen-dependent disease (Cantinelli et al., 2006) reproductive and hormonal history factors are at risk, such as: early menarche, late menopause, first pregnancy over 30 years old, oral contraceptives, nulliparity and hormone replacement therapy (DROPE, et al., 2018).

The Ministry of Health (2004) recommends that the disease can be previously controlled through early detection, allowing a greater chance of cure. For this, clinical breast examination by a doctor or nurse is necessary as a screening method, and mammography is the gold standard, recommended by the Ministry of Health for women between 50 and 69 years old, every two years. (MINISTRY OF HEALTH, 2014)

With that in mind, seeking to standardize mammographic reports, the BI-RADS (Breast

Imaging Reporting and Data System) model was adopted in Brazil, which aims to guide the best conduct according to findings — negative, benign, probably benign, suspicious and highly suspicious. -, which are observed in the classification of BI-RADS 1 to 5 (VIEIRA; TOIGO, 2002).

Based on the diagnosis, treatment plans are drawn up considering the stage of the disease and the type of tumor, opting for surgery, radiotherapy, chemotherapy, hormone therapy and biological therapy (MINISTÉRIO DA SAÚDE, 2020).

In non-metastatic cases, Hoff et al. (2013) makes it clear that the standard modality of treatment is preoperative neoadjuvant chemotherapy, so that conservative surgery can be performed to continue the treatment, such as segmental breast resection. And as highlighted by Hoff et al. (2013): "The main problem of patients undergoing surgery is local recurrence, which brings emotional damage due to the negative impact of the oncological prognosis".

Then adjuvant hormone therapy may be considered. Among hormone treatments, the most firmly established representative is tamoxifen. The drug is an estrogen receptor antagonist: it acts by competing with the hormone for an estrogen binding site on the receptor, leading to inhibition of estrogen activation and decreasing the effects generated by the hormone (HOFF et al., 2013). Tamoxifen can help reduce the chances of recurrence and appearance of cancer in the other breast, as well as increase the patient's life expectancy. It is usually used both before and after surgery (AMERICAN CANCER SOCIETY, 2019).

According to Liedke (2006), there is no benefit in the use of tamoxifen for a period longer than 5 years, and there may even be a worsening in disease-free survival. Evidence also demonstrates that there is no interaction between tamoxifen and adjuvant radiotherapy, regardless of their use together or in sequence.

Tamoxifen may exhibit a partial estrogen agonist effect, which may be beneficial as it prevents bone demineralization in postmenopausal women (LEITE et al., 2011); however, it may increase the incidence of endometrial cancer and thrombotic events (HOFF et al., 2013). Thus, even though it is a good option for the treatment of breast cancer, it works on tissues other than the breast; requiring caution in risk-benefit assessment.

From this, side effects to prolonged use of Tamoxifen are possible: hot flashes, nausea, weight loss, water retention, dry skin, amenorrhea, menstrual cycle changes, discharge, itching and vaginal bleeding, uterine cervix cancer, mood swings, depression, weakness (LEITE, et al., 2011) dizziness, rash, hair loss and intestinal problems (ASTRAZENECA, 2007)

Thus, the woman feels the impact of the consequences of the treatment for breast cancer in the biopsychosocial spheres (HUBER et al., 2006). One of the factors that can be aggravated after the diagnosis of the disease is depression, which can decrease or persist in those patients with previous depression, being correlated mainly with the body image of women who have gone through breast cancer, negatively influencing their well-being. being sexual, since they tend to have a negative image of their bodies (LOTTI et al., 2008).

In this bias, Huber et al., (2006) recommended that sexuality and sexual functionality are reduced due to the consequences of the treatment process, such as depression, tiredness, vaginal dryness and decreased libido.

According to research by Ussher et al., (2012), more than 70% of women interviewed

reported decreases in frequency and energy for sex, in sexual arousal, in feeling desirable and in interest in sex; and 60% of them found a decrease in pleasure and sexual satisfaction.

Another factor that can lead to damage or aggravation after the diagnosis of cancer is the poor quality of sleep. Müller and Guimarães (2007) point out that pain, the use of medications and different clinical conditions can affect the quantity and quality of sleep. Presence of psychiatric comorbidity, such as anxiety and/or depression and the presence of an irregular sleep-wake cycle are conditions that increase vulnerability to the development of insomnia (RAFIHI-FERREIRA; SOARES, 2012).

It can be said that, despite all the advances and dissemination of information, the feeling generated in women undergoing breast cancer treatment remains that of a "death sentence", commonly associated with pain, suffering and degradation. The woman is faced with the imminent loss of an important organ and full of representations, in addition to a disease full of suffering and stigma (VENÂNCIO, 2004).

In this sense, the philanthropist Irene Pollin, cited by Vênâncio (2004), brings in her book Medical Crisis Counseling: Short - Term Therapy For Long-term Illness (1995), the eight constant concerns in the lives of patients who experience chronic diseases, illustrating clearly the biggest problems brought by women with breast cancer. This prerogative addresses: loss of control over life, changes in self-image, fear of dependence, stigmas, fear of abandonment, anger, isolation and death. In addition, there is the fear of disease progression and recurrence (VENÂNCIO, 2004)

Researching the quality of life of women treated for breast cancer and their social performance, it is evident that changes in work, leisure, family and social relationships of these women are caused more by psychological than physical problems. Concomitantly, anxiety and depression are among the most frequent psychological problems among patients. Carroll (2000) citing Raminerz et al., indicates that 20% to 30% of patients with breast cancer have anxiety, depression and low self-esteem at some point after the diagnosis, which may last for some time after the end of treatment.

Coping with cancer therefore requires subjective steps that the patient takes towards solving the crisis that has arisen due to the cancer. According to Hoff et al., (2013), they are:

- **Recognition:** the patient is dealing with the diagnosis and the extension of meanings. (it is important that the therapist motivate the patient's verbalization and stimulate him to new reflections).
- **Identification:** the patient actually feels sick.
- **Desidentification** it is the moment when you realize beyond the disease that affected you and reflections become deeper.
- **Relativization:** the patient is able to see complementarity in what he previously perceived as opposition and stabilizes himself emotionally and mentally.
- **Transformation:** it starts to adopt a new internal reference of greater understanding about their situation, reflecting on the search for external solutions.
- **Elaboration:** it seeks new paths towards healing. You can ask for help, reconfigure your functions within the family dynamics; discover new skills.
- **Integration:** interaction and integration of all the knowledge gained in this trajectory, resuming the restoration of a mentally and physically healthy life.

SOLUTION HYPOTHESIS

- Diet regulation, with the introduction of fibers, fruits, vegetables
- Assistance in creating a routine
- Implement a sleep routine
- Decrease symptoms of anxiety and depression
- Maintain follow-up with the doctor

APPLICATION IN REALITY

The guidelines were made according to the needs and the possibility of being appropriated to the patient's reality, analyzing time, costs, availability, taste and effort to put them into practice, always focusing on adherence and quality of life.

It is extremely important that measures that improve and change the lifestyle are applied to reduce symptoms and side effects of long-term use of tamoxifen. First, we advise her to undergo psychological follow-up, so that she can express her feelings more about the breast cancer treatment and the results achieved so far. Since, patients who have a history of cancer need an integrated social support network.

Thus, by talking more about her anxieties and sadness, she would also feel more comfortable talking about the subject with family, friends and close people. This way, we sought to make her more present with the children who do not live with her, establishing a time within her weekly routine to make calls to them. In this context, the routine predicts that the patient feels her support network is stronger, even in times of a pandemic.

Seeking to improve the patient's quality of life and strengthen the positive biopsychosocial aspects that surround her, it was suggested that she take a light to moderate walk for 30 minutes a day, which would also interfere with a good quality of sleep. In this bias, sleep hygiene was suggested so that she had an environment conducive to rest. The patient was given lavender oil, an herbal medicine used for relaxation. It was suggested that she put it in an air freshener or drip drops on her pillow, to have a feeling of calm and an environment conducive to a good night's sleep. In addition, we advised her to read and avoid watching television or using her cell phone before going to bed, allowing her body to start preparing for the moment of rest.

Aiming at improving self-esteem, a daily skin care routine was proposed and a possible consultation with a dermatologist to verify the products needed to improve the spots that bother her. However, the recurrent use of sunscreen was immediately advised so as not to have new spots on the face.

Due to the gastrointestinal problems, a nutritional intervention was sought with fiber-rich food options introduced in the main meals. The consumption of vegetables, fruits, yogurt and oilseeds was encouraged to regulate intestinal transit.

FINAL CONSIDERATIONS

Breast cancer is a disease that still affects the female population in Brazil, and tamoxifen is the drug most associated with the treatment of the disease. Notoriously, the drug brings positive results, but, together with the disease, it causes considerable changes in the rhythm of life and has biopsychosocial repercussions.

It is important to make the patient aware of all the changes that the treatment against breast cancer and the use of tamoxifen can bring. This way, the objective is a closer follow-up and comprehensive care in fact, attending to all the vital spheres of the patient, keeping her aware of all the steps and consequences, from transparency, firmness and acceptance when giving the diagnosis, to

the changes and therapeutic interventions, to have a better prognosis. The applications were actually presented remotely, via video call and guiding audios, and lavender oil and a specific sunscreen were sent to encourage the patient both to relax and reduce her anxiety, as well as to feel vain and encouraged to Create a self-care routine. Therefore, it is expected to obtain a significant improvement in the patient's condition, assisting her more broadly, being more willing, less anxious, and with an increased well-being, adding the applicable guidelines in her reality and in the search for multidisciplinary care and, with that, possibly avoiding further future complications.

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