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NURSING CARE TO PATIENT WITH BREAST FUNGATING MALIGNANT WOUND: CASE STUDY

CUIDADOS DE ENFERMAGEM A PACIENTE COM LESÃO VEGETANTE MALIGNA MAMÁRIA: ESTUDO DE CASO CLÍNICO

CUIDADOS DE LA ENFERMERÍA A PACIENTE COM LESIÓN VEGETATIVA MALIGNA MAMARIA: ESTUDIO DE CASO CLÍNICO

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ABSTRACT

Objective: to describe the nursing care applied to a patient with breast fungating malignant wound. **Method:** case study carried out in July 2014 in a Oncology Unit of a specialized hospital in Campina Grande-PB. This study is part of a larger project approved by the Research Ethics Committee, CAAE: 13341413.0.0000.5182. **Results:** nursing care for patient with breast fungating malignant wound covered assessment of the individual patient and of the wound; different types of dressing and medication to control the signs and symptoms of wound were recommended and used, according to the clinical picture, considering the specificities of the wound. **Conclusions:** nursing care promoted comfort to the patient during hospitalization and were paramount to control the signs and symptoms. **Descriptors:** Nursing Care; Neoplasia; Ulcer; Breast.

RESUMO

Objetivo: descrever os cuidados de enfermagem aplicados a uma paciente com lesão vegetante maligna mamária. **Método:** estudo de caso realizado durante o mês de julho de 2014 em uma Unidade de Oncologia Clínica de um hospital especializado localizado em Campina Grande - PB. Este estudo faz parte de um projeto amplo, aprovado pelo Comitê de Ética em Pesquisa, CAAE: 13341413.0.0000.5182. **Resultados:** os cuidados de enfermagem prestados a paciente com lesão vegetante maligna mamária abrangeram avaliação individual da paciente e da ferida; foram recomendados e utilizados diferentes tipos de coberturas e medicamentos para o controle dos sinais e sintomas da ferida, de acordo com o estadiamento, consideradas as especificidades da lesão. **Conclusões:** os cuidados de enfermagem promoveram conforto a paciente durante a internação e foram primordiais para o controle dos sinais e sintomas. **Descritores:** Cuidados de Enfermagem; Neoplasia; Úlcera; Mama.

RESUMEN

Objetivo: describir los cuidados de enfermería aplicados a una paciente con lesión vegetativa maligna mamaria. **Método:** estudio de caso realizado durante el mes de julio de 2014 en una Unidad de Oncología Clínica de un hospital especializado localizado en Campina Grande - PB. Este estudio es parte de un proyecto amplio, aprobado por el Comité de Ética en Investigación, CAAE: 13341413.0.0000.5182. **Resultados:** los cuidados de enfermería prestados al paciente con lesión vegetativa maligna mamaria cubren la evaluación individual de la paciente y de la herida; fueron recomendados y utilizados diferentes tipos de coberturas y medicamentos para el control de las señales y síntomas de la herida, de acuerdo con la etapa, consideradas las especificidades de la lesión. **Conclusiones:** los cuidados de enfermería promovieron confort a la paciente durante la internación y fueron primordiales para el control de las señales y síntomas. **Palabras clave:** Cuidados de Enfermería; Neoplasia; Úlcera; Mama.

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INTRODUCTION

The skin is the largest organ in the human body, whose functions are protection of the internal structures, maintenance of homeostasis and perception. Through skin disorders in the functioning of the organism are identified, that is, external and internal signals such as oncological diseases. In the meantime, through the skin lesions tumors can be detected in early stages, which often allows a change in the prognosis of the disease and its treatment.¹

These malignant wounds are derived from failure of skin integrity as a result of infiltration of malignant tumor cells into tegument structures as a consequence of uncontrolled cell proliferation induced by the oncogenesis process which, in turn, develops an evolutionarily exophytic wound.²

The correct designation for malignant skin wounds resulting from advanced cancer process is very conflicting.³ In the English language, these lesions have various denominations, namely: *“fungating and/or ulcerating malignant wounds”*, *“fungating tumors”*, *“ulcerated and fungating wounds”*; *“malignant wounds”*; *“cutaneous metastasis”*; *“smelly tumorous”*; *“ulcerating metastatic skin lesion” e malignant fungating wounds”*.³

Therefore, these denominations are guided by the appearance of wounds during the evolutionary process of the disease, such as: ulcerating malignant wounds - when there is ulceration; ulcerated and fungating malignant wounds - those with vegetative aspect and ulcerated parts; malignant fungating wounds - those who have a form of cauliflower. The evolution of these wounds is the oncogenesis process on the skin.⁴

Malignant skin wounds can be classified as to the extent of affected structures and are classified by stages, ranging from 1 to 4.⁴ In this study, the patient has a breast fungating malignant wound. The fungating malignant wounds resemble a cauliflower in stage 1 and/or 4 and occur when a subjacent tumor infiltrates the skin, blood and lymphatic capillaries. The fungating malignant wounds may also be the result of cutaneous metastatic tumors derived from a primary tumor, which occurs through lymphatic and/or hematogenous means.^{5,6}

According to estimates from the Instituto Nacional do Câncer⁷, in 2014, 57,120/100,000 inhabitants will have new breast cancer diagnosis in Brazil; 10,490/100,000 inhabitants in the Northeast region; 750/100,000 inhabitants in Paraíba and 260/100,000 inhabitants in João Pessoa-PB. It is

noteworthy that these numbers reveal estimate for the primary location of the malignant neoplasia. This same organization⁷ found that 13,225 Brazilian women died from this disease during the year 2011.

Unfortunately, in Brazil, there is no estimate of how many women with cutaneous metastasis of primary tumor develop breast cancer and/or fungating malignant wound. However, European studies show that skin metastases from internal primary tumors appear in around 0.7 9% of cancer patients⁸. Nevertheless, breast cancer presents cutaneous metastasis and is responsible for 70.7% of all cases of cutaneous metastases⁹ and the incidence of fungating malignant wounds in women with breast cancer is from 2 to 5%.¹⁰

Fungating malignant wounds usually appear in the last year of life and the main symptoms are pain, foul-smelling, profuse exudation and friability, as well as body disfigurement, which generates physical, psychosocial and spiritual suffering to the patient.² These signs and symptoms are closely linked to tumor growth, that leads to an imbalance in the process of hemostasis and thrombocytopenia, causing bleeding due to the rupture of capillaries and vessels.¹¹⁻¹⁴

Due to the particularities related to cancer, the care directed to wounds are specific and different from those recommended for other types of lesions because the goal is not to heal but to control signs and symptoms.³

It is imperative to note that the discussion of fungating malignant wounds in women with breast cancer is neglected in Brazil, as scientific studies on the incidence and treatment are scarce in the country.

Thus, women with breast cancer presenting fungating malignant wounds is a challenge for nurses, as these professionals are responsible for the assessment and treatment of wounds and later for conducting the dressings. Therefore, nurses need to develop skills and abilities to identify, assess and treat fungating malignant wounds, providing comprehensive care to patients under their responsibility. The objective of the study is to:

♦ Describe the nursing care applied to a patient with breast fungating malignant wound.

METHOD

It is a case study, conducted in July 2014, in the Oncology Unit of a specialized hospital, located in Campina Grande/PB. The study is part of the project << The pain in the

perception of patients with neoplastic wounds >>, whose approval was issued by the Ethics Research Committee of the University Hospital Alcides Carneiro of the Federal University of Campina Grande/UFCG/PB, under the CAAE 13341413.0.0000.5182. It is noteworthy that the rules of Resolution 466/2012, that guides research involving human subjects, were obeyed.

For data collection we used script for anamnesis, physical examination and consultation of medical records. After the anamnesis, physical examination and obtaining additional information in the medical records, it was established the nursing care plan and solutions and coverage to be applied in the lesion were established.

Data analysis was based on literature related to the evaluation and treatment of tumor wounds consistent to the Instituto Nacional do Câncer protocol.¹⁶

STUDY CASE

M.S.R.A. is a 72 years old brown woman, Brazilian, literate, Catholic, retired, married, mother of 11 children, from Queimadas/PB. She lives with four children and her husband at a brick house with a minimum wage income. She was diagnosed with invasive clear cell carcinoma of the uterine cervix on 01/04/2012 and was admitted to the institution on 02/02/2012, where she was submitted to brachytherapy in four insertions of 180 cGy Microseletron - HDR each, from 03/14/2012 to 04/26/2012, in a total of 640 cGy. After reassessment of the patient, we saw the need for other brachytherapy cycle, scheduled from 05/30/2012 to 06/20/2012. Thus, the patient received a total dose of 3000 cGy in four insertions of 750 cGy.

On 08/20/2012 it was carried out a mammography, whose result indicated solid nodule with irregular borders in the left breast and BI RADS 4C. Soon after, she underwent breast nodule biopsy with results on 09/03/2012 and conclusive diagnosis of

invasive ductal carcinoma nuclear grade II. The immune-histochemical and cytochemical test results were available on 09/06/2012 and presented the following results: MIB1 (antigen Ki-67) positive in 80% of neoplastic cells and P53 protein positive. She underwent neoadjuvant chemotherapy with ACT (Adriamycin, Carboplatin and Taxotere) until 03/20/2013. However, the response to chemotherapy was partial and the tumor was considered unresectable. Therefore, she underwent breast and armpit radiotherapy associated with Xeloda, from 04/09/2013 to 05/20/2013. After radiotherapy, the left breast evolved to radiodermatitis and fungating malignant wound.

On 07/05/2013, the patient underwent magnetic resonance of abdomen, whose results were deep rectal ulcer with necrotic base, progressing to high and extensive rectovaginal fistula, and she was submitted to loop transversotomy for intestinal transit deviation on 06/13/2013.

On 08/12/2013 it was held another MRI and the images showed the following results: cancer treatment control with increased uterus and fungating wound inside its cavity.

The hemogram (07/25/2014) showed the following results: Erythrocytes - 2.9 mm³; Hemoglobin - 8,1g and Hematocrit - 25.5%. The patient was transfused with three bags of packed red blood cells on July 26, 27 and 28 of 2014.

Based on prescription, medicines used to reduce the signs and symptoms of fungating malignant wounds of the patient were: intravenous Ciprofloxacin 400 mg every 12 hours; intravenous ampoule of Dipyrone 1 every 6 hours and Collagenase as a primary wound coverage every dressing.

The patient remained in the institution until September 2014, when she died. The images below were shot on the first day of assistance by the researchers after the consent of the patient (Figure 1 and 2).



Figure 1. Fungating malignant wound in the left breast on 07/14/2014



Figure 2. Fungating malignant wound in the left breast on 07/14/2014

♦ Physical examination

Patient evolved with severe general condition, conscious, oriented in time and space, bedridden, oral and body hygiene preserved, sleep and rest harmed, pale mucous membranes, acyanotic, anicteric, edema of upper and lower limbs +3/+4. RS: dyspnea, tachypnea, bilateral chest expansion preserved, diminished breath sounds without adventitious sounds. CVS: the heartbeat was regular in 2 times, normal heart sounds and without murmurs. GIS: presence of open nasogastric tube, with debt of 120 ml, dark coloration, distended flaccid abdomen, painless to superficial and deep palpation, bowel sounds present in four quadrants, with colostomy bag in the upper left quadrant, with coloring debt and characteristic odor. GUS: presence of bladder Foley catheter,

debit of 300 ml, with characteristic color and odor. Vital signs: respiratory rate of 22 breaths per minute; heart rate: 74 bpm; pulse: 74 bpm; blood pressure: 110 x 70 mmHg; temperature: 36,2°C.

Nursing care performed with the patient were based on the INCA protocol¹⁶, which recommends basic and specific actions to tumor wounds, based on scientific discoveries.^{6,12,14}

After medical history and physical examination we carried out the examination of the wound, previously performing the initial cleaning with saline solution at 0.9% in jet (20 mL syringe and needle 40X12) and by collecting culture material at the end.

The fungating malignant wound in the left breast extended to the lateral of the chest (figures 1 and 2), measuring 12.6 cm x 28.3

cm, with odor grade III (considered that strong and nauseating odor smelled in the environment without opening the dressing).¹⁶ Asymmetric lesions, irregular and raised edges, the whole extent of the wound predominantly yellow, crispy, with fibrin and necrosis points, seropurulent exudate aplenty, adjacent skin in red and violet colors. According to the presented features, the lesion was classified as fungating malignant with stage grade 3 because it was considered the presence of fetid odor, bleeding, local pain, profuse exudate, local infection.⁴ Presence of hyperemia and skin maceration in the subclavian region, above and left inframammary, left abdominal and lateral left chest, and another wound presenting granulation tissue just below the left subclavian region (wound 2). Intense pain, confirmed by Numerical Pain Scale, whose score verbalized by the patient was nine (9).

In the local research institution, the nursing process is applied by nurses of clinical oncology units, however, there is no protocols for the treatment of fungating malignant wounds. Considering the characteristics of the wound and the existing dressings and medicines in the institution studied, it was proposed daily dressing with application of with calcium-alginate hydrating gel, followed by a highly absorbent non-adherent coverage (Exu-Dry) to fungating malignant wounds, injectable Metronidazole to reduce the odor and the use of morphine for pain control.

For the small area with granulation tissue it was proposed hydrogel dressing and for the perilesional intact skin we recommended a barrier cream to protect against humidity, since it was macerated.

DISCUSSION

Breast cancer in women is the cause of most skin metastases, which can occur at local or distal level. Inflammatory metastatic carcinoma is characterized by erythematous plaque with peripheral active edge, usually affecting the breast and the surrounding skin.¹

On suspicion of metastasis, all clinical screening should be performed, and the medical history and physical examination must be the initial steps. Complementary tests must be requested and histopathological analysis of malignant skin lesion may contribute to clarifying the origin of the tumor.¹

A study in Germany¹⁷ emphasized that to proceed with the proper treatment of fungating malignant wounds, it is necessary to conduct a thorough and individual assessment of the patient and of the lesion, such as

patient data (demographic, diagnosis and comorbidities); size, type and location of the wound (length, depth/height); wound characteristics (humidity, bleeding, secretion, coloring, odor); pain (general, in the wound, during dressing removal); other symptoms associated with the wound (eg. pruritus.); recognition of the autonomy of the patient; goals of wound care (in relation to the lesion and quality of life); wound care (cleaning, irrigation, measures to reduce odor, dressing); peculiarities of the realization of the dressing; the patients' consent regarding the photographic record and photo-documentation.

As regards the treatment of tumor wounds due to skin metastasis, INCA protocol recommends the use of some coverage and substances in order to control the symptoms and signs. In this perspective, the recommended coverage for the patient in question, are in accordance with the staging of lesions.

Studies^{11-5-6,18} recommend the use of absorptive dressings for tumor wounds such as calcium alginate as a primary coverage for the control of exudates, infection and bleeding, since it is considered a non-antigenic, bacteriostatic and hemostatic bio-absorbent substance. The calcium alginate is chemotactic for macrophages and fibroblasts and when it comes into contact with the exudate or blood, it forms a fibrous, hydrophilic, hemostatic gel and rich in calcium, which interacts with the wound sodium ions, absorbing excess of exudate and/or blood and maintaining the humidity.¹¹⁻⁵⁻⁶⁻¹⁸

The use of calcium alginate in the patient's wound reduced considerably the exudate and limited bleeding to dressing removal, which generated a reduction in the number of dressing changes.

Study conducted¹⁹ with twelve women with malignant breast vegetative injury showed no increase of granulation tissue and epithelialization after the application of bandages covered with calcium alginate gel since this substance has shown anti-microbial effect and anti-inflammatory properties when applied into malignant wounds.²⁰

An alternative proposed for the control of bleeding at the time of dressing removal was applying direct pressure on the bleeding vessels and/or bed irrigation with cold 0.9% physiological solution.^{11-5,16-8} Thus, as the wound had friability mainly in the dressing removal, irrigation was performed with 0.9% saline solution, which enabled decreased bleeding.

It is noteworthy that other ways to reduce bleeding during dressing removal have also been proposed, such as avoiding adherent dressings, keeping humidity in the injury/dressing interface, carefully removing the bandage and applying non-traumatic cleaning.^{11-15,16-8}

In the study in question, there was no record of a wound culture, however, it was prescribed Ciprofloxacin for infection control. In this sense, the literature²¹ recommends the realization of lesion culture to investigate the possible micro-organisms existing, as well as antibiotic therapy indicated. Some topical antibiotics are used to control infections in vegetative lesions, among them there is highlight to gentamicin sulfate cream or ointment, mupirocin cream or ointment 2%, polymyxin B sulfate associated zinc bacitracin, polymyxin B sulfate associated with neomycin and bacitracin zinc, and polymyxin associated with gramicidin and silver sulfadiazine.²¹

Research based on evidence^{2,22} point out that systemic use of metronidazole has a positive effect on tumor lesions with odor grade III because it helps to control exudation and foul odor. This substance acts directly on the DNA of microorganisms, preventing the synthesis of enzymes essential for the survival of pathogens, particularly anaerobes, which are closely associated with the genesis of the foul smell. To the patient in this study it was recommended and administered injectable metronidazole, which provided reduction of odor grade III to grade I, i.e., the one that is felt only when the dressing is opened.¹⁷

Regarding necrosis, studies¹¹⁻¹⁵⁻⁶⁻¹⁸ recommend evaluating the risk and benefit of a surgical debridement, since the vegetative malignant lesions present risk of bleeding due to friability. As the patient had low red cell rates, this idea was rejected. In the institution, locus of research, the multidisciplinary team makes use of collagenase as enzymatic debridement method; however, this technique did not obtain therapeutic success, since this product was being used since January 2014. In this regard, the Agência Nacional de Vigilância Sanitária²³ warns that if there is no desired effect within 14 days, the treatment with collagenase should be discontinued.

For some authors²⁴⁻⁶, this product is contraindicated for this type of wound because besides the enzymatic nature, this substance promotes granulation and epithelisation, since it eliminates the devitalized tissue, accelerating the maturation phase of healing.

The tumor cell behavior in face of this product is a little explored event, but intriguing to the principles of carcinogenesis. However, considering that the increase of the tumor may result from a single modified cell, the use of this product is discussed, as it is also angiogenesis inducer.

Regarding the strength of evidence, it was found that the articles highlighted regarding the contraindication of collagenase in this type of wound have evidence level 6, that is, they were opinions of respected authorities based on clinical competence or on the opinion of experts, including interpretations of information that is not based on research.

Regarding the control pain, studies^{11-15,16-18} recommend monitoring the level of pain through specific ranges, considering the use of opioids, and readjusting dressing change schedule in order to promote comfort and need for prior analgesia (starting 30 minutes for oral analgesia and five minutes for intravenous).

The patient in this study classified her pain as intense (through Numerical Pain Scale, the answer was '9'); the prescribed analgesic was dipyrone. According to Analgesic Pain Scale¹⁷, it is recommended the use of strong opioids for severe pain; i.e., the patient was using non-opioid analgesic when she should have been using a more potent drug. Based on the recommendation of INCA¹⁷ It was proposed and administered morphine, a receptor agonist of opioids, whose function is to inhibit ascending pathways of pain. After being administered the first dose of morphine, the patient voiced reduction of pain and indicated 1 on the Analog Pain Scale, prior to the dressing. In this case, there is a need for continuous use of this opiate, not only for the moment of the dressing procedure, but also for continuous pain relief and quality of life of the patient, as a palliative measure.

A study²⁷ conducted with 118 cancer patients, of which 26 were and of these, 11 had breast cancer, showed that morphine controlled pain after individualized titration and dose at regular intervals of four hours.

For wound with granulation tissue it was recommended and applied hydrogel, as it has bacteriostatic, fungicide, moistener, immunomodulatory and analgesic action, which provided positive result because there was improvement in the appearance of the lesion.

Study²⁸ carried out with two patients with malignant breast vegetative injury showed that the use of hydrogel (with composition of 65% glycerin, 17.5% polyacrylamide and 17.5% water) during two consecutive weeks in

peripheral wounds decreased exudate and pain.

It is highlighted the effectiveness of Exu-Dry bandage as non-adherent secondary coverage, highly absorbent for this type of injury. In the studied patient we used Exu-Dry as secondary coverage, which minimized the need for exchanges, generating decreased bleeding in the wound.

A case study²⁹ was performed using Exu-Dry in pressure ulcers, venous stasis ulcers, radiodermatitis and chronic malignant highly exuding wounds, in order to evaluate its effectiveness. Finally, it was found that the Exu-Dry was able to contain large quantities of exudates, thus reducing the potential for maceration, reducing exchanges that were frequent and prolonging compression therapy.

To the surrounding skin it has been proposed and used barrier cream, a pharmaceutical preparation for external use that has in its composition silicone oil and a cream recommended for protection against moisture excess. With respect to the patient of this study, it was observed that the perilesional skin showed no maceration after three consecutive days of use of this product.

The use of this cream showed effective in recovery of the skin of patients with dermatitis associated with incontinence in approximately five days³⁰⁻¹ and in a patient with tumor injury due to non-Hodgkin lymphoma.³²

FINAL CONSIDERATIONS

Fungating malignant wounds can cause not only physical harm but also social and psychological problems for patients, so the care related to these lesions become a challenge for nurses, since the goal of treatment is not to heal wounds but to control the signs and symptoms with opportunities of wellness to patients. In this sense, fulfilling the holistic care for a patient with fungating malignant wounds can be complex and nurses must recognize their limitations and seek advice from specialists, when applicable.

The nursing care provided to patients with breast fungating malignant wound allowed researchers and nurses of the institution, locus of this study, to develop assistance guided in scientific knowledge, providing new information to nurses facing the management of these lesions, emphasizing the importance of using adequate products and coverage, favoring comfort to the patient and control of signals and symptoms and helping to enrich the science of nursing as a profession.

This study may contribute to highlight the need of the nursing professional to improve in patient care with advanced cancer, especially when it comes to the care of fungating malignant wounds and to awake the interest of the institution to implement protocols that support greater autonomy to nurses in decision-making, ensuring legal support to the professional responsible for care, so that they can meet the needs of patients and family.

This study will contribute to a skilled nursing care and will provide dissemination of knowledge on the treatment of fungating malignant wounds for the scientific community about the practice of wound care, in order to strengthen the teaching and practice of Nursing.

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