



ORIGINALES

Association between odor and social isolation in patients with malignant tumor wounds: pilot study

Associação entre odor e isolamento social em pacientes com feridas tumorais malignas: estudo piloto

Asociación entre olor y aislamiento social en pacientes con heridas tumorales malignas: estudio piloto

Willian Alves dos Santos¹

Patricia dos Santos Claro Fuly²

Marise Dutra Souto³

Mauro Leonardo Salvador Caldeira dos Santos²

Luiza de Lima Beretta⁴

¹ Nurse. Master in Health Care Sciences at EEAAC/UFF. Icaraí, Niterói, Rio de Janeiro, Brazil. willian.allves@hotmail.com

² Nurse. PhD in Nursing. Adjunct Professor, Department of Medical-Surgical Nursing, EEAAC/UFF. Brazil.

³ Nurse. PhD in Nursing. Coordinator of the Development Project for the Development of the National Cancer Institute (INCA). Brazil.

⁴ Nurse. Student of the Master in Health Care Sciences at EEAAC/UFF. Brazil

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ABSTRACT:

Objective: To analysis associations between odor and social isolation in patients with malignant tumor wounds.

Material and method: A cross-sectional pilot study performed with nine patients with malignant tumor wounds treated at a university hospital from 2014 to 2016. Data were collected using a five-point likert scale for the evaluation of social isolation related to odor of malignant tumor wounds during nursing consultations. Data were analyzed by inferential statistical strategy with Spearman's coefficient at the significance level of 5% ($\alpha = 0.05$).

Results: Correlation was found with statistical significance between odor and psychosocial dimensions: constraint and limitation in attending public places.

Conclusion: odor is the main symptom that causes embarrassment and limits social coexistence, favoring social isolation and degradation of the quality of life of cancer patients.

Key words: Oncology nursing; Wounds and injuries; Social isolation; Palliative care; Nursing.

RESUMO:

Objetivo: Identificar as associações entre odor e isolamento social em pacientes com feridas tumorais malignas.

Material e método: Estudo piloto com corte transversal realizado com nove pacientes com feridas tumorais malignas atendidos em um hospital universitário no período de 2014 a 2016. Coletaram-se dados por meio de aplicação de escala *likert* de cinco pontos para avaliação do isolamento social relacionado ao odor de feridas tumorais malignas, durante as consultas de enfermagem. Analisaram-se os dados por estratégia estatística inferencial com cálculo de coeficiente de *Spearman* ao nível de significância de 5% ($\alpha = 0,05$).

Resultados: Constatou-se correlação com significância estatística entre o odor e as dimensões psicossociais: constrangimento e limitação em frequentar locais públicos.

Conclusão: O odor é o principal sintoma que gera constrangimento e limita a convivência social, favorecendo o isolamento social e a degradação da qualidade de vida dos pacientes oncológicos.

Palavras-chave: Enfermagem oncológica; Ferimentos e lesões; Isolamento social; Cuidados paliativos; Enfermagem.

RESUMEN:

Objetivo: Analizar las asociaciones entre olores y aislamiento social en pacientes con heridas tumorales malignas.

Material y método: Estudio piloto con corte transversal realizado con nueve pacientes con heridas tumorales malignas atendidas en un hospital universitario en el período de 2014 a 2016. Se recogieron datos por medio de aplicación de escala *likert* de cinco puntos para evaluación del aislamiento social relacionado con el olor de las heridas tumorales malignas durante las consultas de enfermería. Se analizaron los datos por estrategia estadística inferencial con cálculo de coeficiente de *Spearman* al nivel de significancia del 5% ($\alpha = 0,05$).

Resultados: Se constató correlación con significancia estadística entre el olor y las dimensiones psicossociales: constreñimiento y limitación en frecuentar locales públicos.

Conclusión: El olor es el principal síntoma que genera constreñimiento y limita la convivencia social, favoreciendo el aislamiento social y la degradación de la calidad de vida de los pacientes oncológicos.

Palabras clave: Enfermería oncológica; Heridas y traumatismos; Aislamiento social; Cuidados paliativos; Enfermería.

INTRODUCTION

Malignant tumor wounds (MTW) affect approximately 5% to 10% of patients with neoplasias, being present, in the majority of cases, in the last six months of life^(1,2). However, in a more recent study the incidence of this lesion was observed in 14.5% of oncological individuals⁽³⁾, being commonly associated with the primary or metastatic tumor^(4,5). The treatment is mainly palliative, in order to minimize signs and symptoms, in the light of promoting the improvement in the quality of life⁽¹⁾.

These lesions are caused by the infiltration of malignant tumor cells into the skin's compositions. There is a breakdown in the integrity of the integument and, as a result of the disordered cell proliferation of the oncogenesis process, it culminates in the formation of the wound, progressively affecting the skin, disfiguring the body, becoming painful and with a foul smell^(1,6,7).

Odor is considered a constant symptom in the daily life of patients with MTW, as one study found that 10.4% of odor cases are associated with these lesions⁽³⁾. With the disordered and abnormal growth of the lesion, we have the formation of aggregates of necrotic tumor mass, where the contamination by aerobic (*Pseudomonas aeruginosa* and *Staphylococcus aureus*) and anaerobic microorganisms (bacteroides) occurs, obtaining as a product of their metabolism the volatile fatty acids (acetic, caproic acid), putrescine and cadaverine gases, which are responsible for the foul odor^(8,9).

Such a situation is characterized as a major obstacle in the care process, because in addition to conferring bad smell on the patient and the people with whom they relate, it adds anguish in the progression of the disease, social and family restriction⁽¹⁾. Physiologically, the perception of bad odor is processed in the olfactory bulbs located in the brain, in the limbic and hypothalamic neural systems that are responsible for the motivational and emotional behavior. In addition, it gives patients unintended gagging triggered by the vomiting reflex, decreasing the sensation of taste and appetite, affecting the nutritional status. Therefore, the effects of odor are devastating on the patient's life, leading to nutritional, psychological stress and social isolation^(9,10).

Social isolation is defined as a state in which the individual lacks a sense of social belonging, having disengagement of social bonds, institutional connections or community participation, being a potential predictor of mortality risk^(11,12). Thus, multiprofessional care is important, since an holistic action can lead to improvement in the patient's self-esteem and quality of life, since bad odor is linked to this isolation⁽¹³⁾. For the nursing team, there is great difficulty in controlling the symptoms related to the wound, highlighting the odor which, in most cases is reported as unpredictable and uncontrollable. This symptom is characterized as a great problem for the patient, imposing a situation of social isolation, further deteriorating their health condition⁽⁵⁾. Thus, it is necessary to develop investigations for the construction and validation of protocols, with the objective of controlling the symptoms resulting from this type of injury, thus improving care and reducing the stress experienced by patients, family members and health professionals⁽⁹⁾.

Given the influence of odor on the psychosocial aspects of the patient with such lesions, as reported in the scientific literature and in the practice of care, the present study aims to identify possible associations between odor and factors that result in social isolation in patients with MTW.

METHODOLOGY

The research is a subproject of the Casadinho Project UFF-USP, approved in public call MCT/CNPq/MEC/CAPEs - Transversal Action no. 06/2011 - Casadinho/Procad: Innovation in Nursing in the treatment of tissue injuries - systematization, technological inclusion and functionality.

It is a cross-sectional pilot study with a quantitative approach, carried out in the Palliative Care Outpatient Clinic of a University Hospital from September 2014 to January 2016.

This outpatient clinic has been accredited as a high complexity unit in Oncology (UNACON) since 2009, being able to provide specialized and comprehensive assistance for the definitive diagnosis, treatment and follow-up of cancer⁽¹⁴⁾.

The present study is an extension of the research "Analysis of association of tumor wounds, primary site and demographic variables: implications for the systematization of nursing care", with the approval of the Ethics and Research Committee no. 183.757 on 01/11/2013.

Population or sample: inclusion and exclusion criteria

The convenience sample consisted of all patients with MTW who were attended on the study location during the study period and who met the following eligibility criteria: being over 18 years of age; having a diagnosis of cancer (any topography) at an advanced stage recorded in medical charts; presence of MTW classified in stage 1N or higher (since only superior to this stage the injury presents symptoms), of any topography; and manifesting authorization to participate in the research by signing the Informed Consent Form. Exclusion criterion was the presence of injuries from radiotherapy (radiodermatitis). The discontinuity criterion was the impossibility of participating in the nursing consultation for the exchange of dressings and the cases of death in the study period before the nursing consultation.

Study protocol

To perform the data collection, it was chosen the moment of the nursing consultation, with the consequent exchange of dressings, for analysis and completion of the data collection form, containing the following variables for collecting in medical records: sociodemographic (gender, age, ethnicity, schooling, marital status, working status) and clinical variables, during nursing consultation and medical records, such as clinical history, comorbidities, clinical diagnosis, primary tumor site, size, site, type of injury, staging, time of onset of the injury, treatment, products used and odor classification.

The Odor Scale was applied for odor evaluation and classification as well as a Likert-type scale with 15 items, subdivided into three dimensions (wound, exudate and odor), with responses organized into a five-point scale (1 = not at all, 2 = a little, 3 = fairly, 4 = very much, 5 = completely) on the psychosocial aspects of the patient involving wounds and symptoms, with a maximum score of 75 points. In the study, only the dimension taken into account was the odor.

For this dimension, the internal reliability was measured by Cronbach's Alpha Coefficient, considering a value above (0.7) as satisfactory.

Likert rating scale

The construction of the scale took four steps. In the first phase, an integrative review of the literature was carried out in order to verify the knowledge gaps in the context of neoplastic wounds. After tabulation of information, we identified that the symptoms are the main factors that jeopardize the quality of life and the psychosocial aspects of the patient with tumor injury, especially odor and exudate, with 90.69% and 100%, respectively, of the articles, as well as the isolation, which is described in 67.44% of the articles, generally associated with the fetid and exudative wounds.

The second stage was a systematic investigation of the literature in the databases Lilacs, Medline and Cochrane with descriptors in health sciences (DeCs): *odores*; *isolamento social*; *exsudatos* and *transudatos* and the Medical Subject Headings Mesh Terms: exudates and transudates; social isolation, as well as with the keywords and *palavras-chave*: *feridas neoplásicas*; *feridas tumorais*; malodorous; psychological factors; psychosocial aspects; malignant wound; fungating wound; malignant fungating wound, with selection of 37 scientific evidences that allowed to find the theoretical construct about the social isolation in patients with odor and exudate in neoplastic wounds. All the articles were read in order to know the evidence about the

phenomenon by mapping the main psychosocial factors compromised by odor and exudate in patients with neoplastic wounds. Each scientific reference was tabulated and grouped according to the evidenced psychosocial aspects. Afterwards, it was possible to establish three dimensions in the scale, each one with five items addressing different psychosocial areas: embarrassment, limitation in leaving home, limitation of relationship with the network of friends and family, limitation in attending public places.

The items of the instrument were prepared in the form of closed questions with easy-to-read language in order to provide an adequate interpretation of the instrument and the collection of data. Thus, the scale was divided into three dimensions: wound, odor, and exudate, as well as the five common psychosocial factors, namely a) To what extent, to you, the odor exhaled through the wound is shameful? ; b) To what extent does the odor exhaled through the wound negatively interfere with you leaving the house?; c) To what extent does the odor exhaled through the wound negatively interfere with your relationship with your family? d) To what extent does the odor exhaled through the wound negatively interfere with your relationship with your friends?; e) To what extent does the odor exhaled through the wound cause you to avoid attending public places?, thus being the five items of each dimension of the scale.

Likert-type or summed scales are characterized as psychometrics widely used in quantitative research that provide the interviewee with a quantitative indication of the degree of agreement or disagreement with the variables being evaluated. Numerical values are assigned to refer to the strength and direction of the marking.

Analysis of results and statistics

The data were tabulated in the Excel - Windows 2010 program, with statistical analysis performed using the Statistical Package for the Social Sciences (SPSS). The Shappiro-wilk normality test was used to verify whether the sample was parametric (p value > 0.05) or non-parametric (p value ≤ 0.05). For the parametric variable, the data were presented as simple descriptive measures: mean and standard deviation ($\bar{x} \pm SD$); for the non-parametric variables, the data were presented by the median and interquartile range ($\tilde{x} \pm Q_3-Q_1$). A Spearman correlation analysis and cross-frequency tables were performed between the odor grade and the five questions on the Likert scale of the odor dimension to verify the existence of an association between odor and factors favoring social isolation in patients with MTW. The correlation test was performed with 95% confidence and 0.05 significance.

RESULTS

The sample consisted of 77.78% (7) females and 22.22% (2) males aged between 29 and 74 years (mean = 59 years), all patients attending the first consultation or recurrent evaluation. A large portion of the participants were born in Rio de Janeiro and lived in the state of origin. With regard to schooling, it is observed that most of the participants have complete or incomplete elementary education 66.67% (6). The retired/pensioner labor status comprised 77.78% (7) of the sample, being characterized by age, length of service or illness. The amount of up to one minimum wage was responsible for the monthly income of 66.67% (6) of the patients.

Table 1: Distribution of sample data according to sociodemographic characteristics.
Rio de Janeiro, Brazil, 2016.

Variable	N	%
Sex		
Male	2	22.22
Female	7	77.78
Ethnicity		
White	5	55.56
Brown	2	22.22
Black	2	22.22
Age range		
[21-30[	1	11.11
[31-40[	0	---
[41-50[	1	11.11
[51-60[	2	22.22
[61-70[	3	33.33
[71-80[	2	22.22
81≥	0	---
x min: 29; x max: 75; \bar{x} = 59.11 SD = 14.04		
Marital status		
Single	4	44.44
Married	3	33.33
Divorced/Separated	0	---
Widowed	2	22.22
Schooling		
Illiterate	1	11.11
Elementary school	6	66.67
High school	2	22.22
Higher education	0	---
Employment status		
Unemployed	2	22.22
Employed	0	---
Retired/pensioner	7	77.78
Family monthly income/ R\$		
≤ 724.00	6	66.67
> 724.00	2	22.22
Does not have	1	11.11
Religion		
Catholic	4	44.44
Evangelical	5	55.56

Regarding the clinical variables, it is observed that 33.33% do not have any type of comorbidity, and 22.22% (2) have systemic arterial hypertension and 33.33% (3) type 2 diabetes. The most prevalent diagnosis was infiltrating ductal carcinoma, accounting for 44.44% (4) of the cases, followed by epidermoid carcinoma, with 22.22% (2). The primary site of pathological onset was mainly breasts, with 55.56% (5), and anal canal, with 22.22% (2).

Table 2: Distribution of the sample data according to their clinical characteristics. Rio de Janeiro, Brazil, 2016.

Variable	N	%
Diabetes	3	33.33
Systemic arterial hypertension	2	22.22
Hepatical cirrhosis	1	11.11
None	3	33.33
Medical diagnosis		
Infiltrating ductal carcinoma	4	44.44
Adenocarcinoma of the endometrium	1	11.11
Anal adenocarcinoma	1	11.11
Metaplastic carcinoma	1	11.11
Epidermoid carcinoma	2	22.22
Squamous cell carcinoma	1	11.11
Primary tumor site		
Breast	5	55.56
Anal canal	2	22.22
Womb	1	11.11
Tongue	1	11.11

With the clinical data of the injury being available, the right breast was the site with the highest index of these injuries, responsible for 33.33% (3) of the phenomenon, followed by the left breast, with 22.22% (2), and the anal region, with 22.22% (2) of the cases.

Based on the staging of the injury, it was possible to observe that 33.33% (3) were in stage 3 and 55.56% (5) were in stage 2. In addition, the circumstances of the appearance of MTW were also analyzed. Approximately 33.33% (3) of the injuries appeared after tumor resection surgery, of which 60% were in the form of a plastron. Approximately 22.22% (2) appeared after the biopsy and only 22.22% (2) spontaneously.

Table 3: Distribution of the sample data according to the clinical characteristics of the injury. Rio de Janeiro, Brazil, 2016.

Variable	N	%
Injury site		
Left breast	2	22.22
Right breast	3	33.33
Inguinal region	1	11.11
Anal region	2	22.22
Submandibular region	1	11.11
Type of injury		
Malignant vegetative wound	4	44.44
Malignant fungating wound	5	55.56
Malignant fungating vegetative wound	0	---
Staging		
1N	0	---
2	5	55.56

3	3	33.33
4	1	11.11
When did it appear?		
After biopsy	2	22.22
After surgery	3	33.33
Spontaneously	2	22.22
Absent*	2	22.22
Treatment		
Neo-adjuvant	3	33.33
Adjuvant	1	11.11
Palliative	5	55.56
Injury time		
≤ 6 months	3	33.33
> 6 months	6	66.67
Odor grade		
Grade 0	0	---
Grade 1	5	55.56
Grade 2	4	44.44
Grade 3	0	---

* Information not found in medical records.

The normality test was applied to the quantitative variables: injury size (p ; 0.024), age (p ; 0,156), total value of wound dimension (p ; 0.001), total value of odor dimension (p ; 0.027), total value of exudate dimension (p ; 0.001). It was observed that only the age variable has a normal distribution. All analyzes that are performed will be non-parametric analyzes. The descriptive analysis was based in the median and in the difference between the third quartile and the first quartile. The total value of the odor dimension presented median = 8 and difference of quartile = 5.

The Spearman correlation test showed the analyzes between the odor grade and their respective questions of odor dimension of the Likert ISPOE scale, in which there is a statistical correlation between odor and question one (addressing the constraint) (p = 0.0053) and question five (addressing the limitation of attending public places) (p ; 0.0495).

Table 4: Frequency table and Spearman correlation analysis between odor grade and Likert scale issues of odor dimension. Rio de Janeiro, Brazil, 2016.

Question 1 - To what extent, to you, the odor of the wound is shameful?								
Odor grade		Answers					Total	Correlation analysis
		Not at all	A little	Fairly	Very much	Completely		
Grade 1	Frequency	6	0	0	1	0	5	55.56
	(%)	44.11	0	0	11.11	0	55.56	
Grade 2	Frequency	0	0	0	2	2	4	44.44
	(%)	0	0	0	22.22	22.22	44.44	
Total	Frequency	4	0	0	3	2	9	0.005*
	(%)	44.44	0	0	33.33	22.22	100	

Question 2 - To what extent does the odor exhaled through the wound interfere with you leaving home?

Odor grade		Answers					Total	Correlation analysis
		Not t all	A little	Fairly	Very much	Completel y		
Grade 1	Frequency (%)	5 55.56	0 0	0 0	0 0	0 0	5 55.56	
Grade 2	Frequency (%)	2 22.22	0 0	1 11.11	0 0	1 11.11	4 44.44	0.092
Total	Frequency (%)	7 77.78	0 0	1 11.11	0 0	1 11.11	9 100	

Question 3 - To what extent does the odor exhaled through the wound interfere negatively in your relationship with your family?

Odor grade		Answers					Total	Correlation analysis
		Not t all	A little	Fairly	Very much	Completel y		
Grade 1	Frequency (%)	5 55.56	0 0	0 0	0 0	0 0	5 55.56	
Grade 2	Frequency (%)	2 22.22	0 0	2 22.22	0 0	0 0	4 44.44	0.089
Total	Frequency (%)	7 77.78	0 0	2 22.22	0 0	0 0	9 100	

Question 4 - To what extent does the odor exhaled through the wound interfere negatively in your relationship with your friends?

Odor grade		Answers					Total	Correlation analysis
		Not t all	A little	Fairly	Very much	Completel y		
Grade 1	Frequency (%)	5 55.56	0 0	0 0	0 0	0 0	5 55.56	
Grade 2	Frequency (%)	2 22.22	1 11.11	0 0	0 0	1 11.11	4 44.44	0.092
Total	Frequency (%)	7 77.78	1 11.11	0 0	0 0	1 11.11	9 100	

Question 5 - To what extent does the odor exhaled through the wound make you avoid going to public places?

Odor grade		Answers					Total	Correlation analysis
		Not t all	A little	Fairly	Very much	Completel y		
Grade 1	Frequency (%)	4 44.44	1 11.11	0 0	0 0	0 0	5 55.56	
Grade 2	Frequency (%)	1 11.11	0 0	2 22.22	1 11.11	0 0	4 44.44	0.049*
Total	Frequency (%)	5 55.56	1 11.11	2 22.22	1 11.11	0 0	9 100	

* Statistically significant

The Cronbach's alpha coefficient of the Likert scale was evaluated, which obtained a value (0.88) for the dimension of the odor, being the internal reliability satisfactory.

DISCUSSION

The deficient scientific production on the psychosocial dimension of patients with MTW in the nursing area has demonstrated the importance of elaborating investigations on the subject, highlighting the importance of the professional in integrating this dimension in the process of systematization of care. Odor management is a great challenge for the multiprofessional team and for patients with tumor lesions, as it implies, in addition to a feeling of hopelessness in the team in achieving effective control of signs and symptoms, impact on the patient's life, determining the constant awareness of the progress of disease, distress and social isolation⁽¹⁵⁾.

Historically, the incidence of this condition has not been well documented, which makes it difficult to obtain official statistical data. Studies indicate that 5% to 10% of cancer patients are affected by these conditions⁽¹⁶⁾. However, other studies indicate a prevalence of 14.5% of these injuries^(3,5,17,18). This shows the lack of consensus on the incidence of this injury.

Regarding the age of the patients, it is evident that the elderly are more likely to develop MTW. The literature highlights that these injuries are predominant in patients aged 60-70 years, presenting lesions from breast cancer (62%), head and neck (24%) and genital and anal region (3%)^(10,18). Data observed in the study identified that most of the sample presented age over 60 years, most of them females with injuries from breast cancer.

Patient survival is currently a questionable factor. It is observed that those who present these injuries have a life survival of six months after their appearance^(2,5,10,18-20). However, patients with greater survival time were found in the scientific literature. Research suggests that the increased life expectancy of patients with advanced cancer may be related to a significantly increased incidence of MTW^(13,18), which brings the need for studies aimed at measuring these variables.

Regarding the prevalence of this symptom in the MTW scenario, few studies have evaluated this context. An international study has found that about 10% of patients with these injuries have odor⁽³⁾. In a Brazilian study with 51 oncologic patients with MTW, the odor was present in 72.5% of the sample⁽²¹⁾. Despite the differences in incidence, this symptom is one of the most difficult to control, responsible for impairing the psychosocial quality of patients⁽²²⁾.

The main objective of MTW care is the control of symptoms, and bad odor is responsible for significant psychosocial consequences to the patient, characterized by negative alteration of body image, culminating in depression and social isolation^(5,23). A multicenter study conducted in 36 countries found that this symptom is a major challenge during wound management, accounting for about 80% of patients with these conditions. The greatest difficulties reported by patients were odor management (83%); social concerns (70%); pain and containment of exudate (68%); followed by emotional stress (65%)⁽²²⁾. According to the study findings, the impossibility of attending public places was due to the interference of the odor in the patient's body image and the anxiety of others perceiving the odor.

Studies reinforce this finding, since bad odor is described as the greatest cause of distress for patients and it is difficult to treat^(5,24). There is constant embarrassment to

individuals, as well as reinforcement regarding the progression of the disease and loss of control over the body. The great time available for dressings, the difficulty in dressing and the unpredictability of odor leakage mainly affect the behavior related to social interaction, negatively influencing the patient's well-being^(5,25).

Feelings of shame, disgust, depression and negative change of the body image are aspects reported by authors who studied the experience of living with the malignant tumor wound^(5,18,23), resulting in devastating social impacts, since the patient may present psychological problems, mainly related to anxiety, concern about the perception of bad odor by the people with whom they interact, as well as social repercussions, highlighted by the feeling of exclusion and blockage to social contact⁽²³⁾, thus compromising the patients' emotional and mental well-being. The study in question identified the association of odor with the feeling of shame and the impossibility of the patient to attend public places, factors related to the social isolation.

From this perspective, two phenomenological studies have pointed to the odor as the main symptom that demands from the patients various strategies to conceal it. The constant sensation of odor leaking, the possibility that other people may feel it, and the alienation of others trigger anxiety and shame that consequently limit daily activities. In addition, it demands an immense amount of time to cleanse wound dressing, and this is one of the factors that contribute to some participants avoiding going to public places, isolating themselves at home^(5,25).

A meta-analysis study showed that social isolation, loneliness and living alone corresponded to an average of 29%, 26%, and 32% increased likelihood of mortality, respectively. The results also differ between participants' ages, with social deficits being more predictive of death in samples with a mean age younger than 65 years. In general, the influence of social isolation on mortality risk is comparable with well-established risk factors for mortality⁽²⁶⁾. From this perspective, the social isolation promoted by the odor may influence the decline of the survival of patients with MTW.

The complexity of chronic wounds in advanced disease requires advancement in critical and scientific thinking to assist patients' quality of life. Systematic methods of multidisciplinary evaluation of patients' experiences and clinical problems are needed, along with effective management strategies, while recognizing that the appearance of MTW is highly individual⁽²⁾. In a survey of 70 patients in Taiwan, multiple regression analysis showed that odor, pain, and psychological problems were statistically significant for quality of life deficits and accounted for 87% of the variance⁽²⁷⁾. Thus, the embarrassment and impossibility to social interaction deriving from the odor are determinant factors that affect the quality of life of the patients with these complications.

In addition, the bad odor is cited by patients and caregivers as one of the most distressing aspects, which interferes with the sociability of the carrier. However, the study found that there was no significant association between odor and impairment in the patient's relationship with family and friends. The absence of a standardized approach for evaluation and management highlights the need to collect baseline data to support the development of guidelines^(3,22) which include family integration in the care of these patients.

As shown, patients with smelly wounds have complex physical and psychological needs. The psychosocial and spiritual natures of the patient are aspects little addressed by health professionals, and even professionals trained in palliative care have difficulty analyzing, approaching and integrating the different dimensions of the human being, especially in situations of finitude⁽¹⁵⁾. In a study with fourteen nurses, feelings of anger, frustration, inadequacy, sadness, and guilt were described for not being able to care for their MTW patients in the way they thought it was adequate⁽²⁵⁾. This points to the need for a deep reflection on this subject, besides including it in the academic and professional training contexts.

To control these symptoms, in addition to performing dressings appropriate to each particularity of the patient, it is necessary to know the products aimed at minimizing the signs and symptoms present in the injury. In terms of odor, the most effective product is metronidazole^(3,9,24) responsible for bacterial control. In addition, the administration of products that perform autolytic debridement through the use of chemical agents can effectively soften and remove necrotic tissue^(3,10), the main responsible for the production of odor⁽²⁸⁾. National studies have shown that metronidazole gel is the most indicated and effective in controlling and managing odor in MTW^(1,9,29). In the study in question, 0.8% metronidazole gel was used in all patients as a way to control the odor. The nursing record in this field is very incipient, and there is no adequately elaborated instrument for the notes on the tumor wound that presents particularities different from the other chronic injuries. Some tools are suggested to evaluate the wound and its signs and symptoms. In practice, the subjective opinions of patients and caregivers are the best indicators to guide nursing actions⁽¹⁰⁾. Thus, it is evident the need for the elaboration of guidelines and interdisciplinary protocols that enable a more quality service and cohesion in the interventions for each patient.

The nurse stands out as an agent of care for the injured patient, since they performs several technical procedures, such as the exchange of dressing⁽³⁰⁾. In addition, they stay for long periods of time with the patient, their caregivers and/or family members. This scenario favors the construction and strengthening of the patient-health professional bond, which provides the capacity to detect psychological anxieties using the possibilities existing in their care process in order to manage them, promoting comfort and quality of life.

Limitations of the study

There were limitations of the study regarding the size of the sample, since the research scenario has a regional service, which made it difficult to recruit patients from other locations. The absence of scales that evaluate the interference of odor in the psychosocial dynamics of patients with these injuries has brought the need for constructing an unprecedented scale in the oncology area. The results of this research will allow the realization of other studies with the same theme, since the theme explored lacks research studies at the national level.

Contributions to the nursing area

The nurse, as a member of the multidisciplinary team, performs procedures that transcend technical handling. Addressing the psychological and social anxieties in the care of patients with MTW will provide a holistic view, increasing the effectiveness of systematization of care, thus cultivating the dignity of cancer patients.

CONCLUSION

Odor is a sign that can directly favor social isolation in MTW patients and is responsible for causing embarrassment and preventing clients from attending public places. Such factors may be related to each other, since the fact of being embarrassed by the bad odor may impede the socialization of the patient. In addition, it can be observed the worsening of the quality of life with consequent deterioration of health status, since this variable can produce anxiety and depression.

The pilot study appears as a suggestion of how data on possible associations of odor and factors that may contribute to social isolation in patients with tumor wounds can be quantitatively obtained, both by means of the construction of a Likert scale, and by performing statistical procedures for the relations of the variables by means of a more robust study.

Nursing acts in the management and control of signs and symptoms of MTW patients. Besides knowledge about the idiosyncrasies of these injuries and the products suitable for their care, it is essential that the professional knows the psychosocial interference that signs and symptoms, especially odor, can cause. In this way, the team can act in a holistic way in patient care, focusing, in addition to the symptoms, their psychological and social longings.

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REFERENCES

1. Aguiar RM, Silva GR. Os cuidados de enfermagem em feridas neoplásicas na assistência de enfermagem. *Revista Hospital Universitário Pedro Ernesto* [Internet]. 2012[cited 2016 June 15];11(2):82-8. Available from: http://revista.hupe.uerj.br/detalhe_artigo.asp?id=331
2. Grocott P, Gethin G, Probst S. Malignant wound management in advanced illness: new insights. *Curr Opin Support Palliat Care* [Internet]. 2013[cited 2016 June 15];7(1):101–5. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/23254858>
3. Maida V, Ennis M, Kuziemy G, Trozzolo L. Symptoms Associated with Malignant Wounds: A Prospective Case Series. *Journal of Pain and Symptom Management* [Internet]. 2009[cited 2016 June 15];37 (2):206-11. Available from: <http://www.vincentmaida.com/Publications/JPSM2009-206.pdf>
4. Lo S, Hayter M, Hu W, Tai C, Hsu M, Li Y. Symptom burden and quality of life in patients with malignant fungating wounds. *Journal of Advanced Nursing* [Internet]. 2012[cited 2016 June 15];68(6):1312–21. Available from: <http://www.pubpdf.com/pub/22043819/Symptom-burden-and-quality-of-life-in-patients-with-malignant-fungating-wounds>
5. Probst S, Arber A, Faithfull S. Malignant fungating wounds: the meaning of living in an unbounded body. *European Journal of Oncology Nursing* [Internet]. 2013[cited 2016 June 15];17:38-45. Available from: [http://www.ejoncologynursing.com/article/S1462-3889\(12\)00019-1/abstract](http://www.ejoncologynursing.com/article/S1462-3889(12)00019-1/abstract)

6. Ponte D, Ferreira K, Costa N. O controlo do odor na ferida maligna. *Journal of Tissue Regeneration Healing* [Internet]. 2012[cited 2016 June 15];(1):38-43. Available from: <http://www.trh-journal.com/o-controlo-do-odor/>
7. Recka K, Montagnini M, Vitale CA. Management of bleeding associated with malignant wounds. *J Palliat Med* [Internet]. 2012[cited 2016 June 15]; 15(8):952-4. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/22489879>
8. Woo KY, Sibbald RG. Local wound care for malignant and palliative wounds. *Advances in skin and wound care* [Internet]. 2010[cited 2016 June 15];23(9):417-28. Available from: http://www.manukahonning.no/uploads/3/9/6/3/39639435/_2010_local_wound_care_for_malignant_and_palliative_wounds.pdf
9. Gozzo TO, Tahan FP, Andrade M, Nascimento TG, Prado MAS. Ocorrência e manejo de feridas neoplásicas em mulheres com câncer de mama avançado. *Esc Anna Nery* [Internet]. 2014[cited 2016 June 15];18(2):270-6. Available from: <http://www.scielo.br/pdf/ean/v18n2/1414-8145-ean-18-02-0270.pdf>
10. Draper C. The management of malodour and exudate in fungating wounds. *British Journal of Nursing* [Internet]. 2005[cited 2016 June 15];14(11): 4-12. Available from: <http://www.magonlinelibrary.com/doi/abs/10.12968/bjon.2005.14.Sup2.18210>
11. Pantell M, Rehkopf D, Jutte D, Syme SL, Balmes J, Adler N. Social isolation: a predictor of mortality comparable to traditional clinical risk factors. *American Journal of Public Health* [Internet]. 2013[cited 2016 June 15];103(11):2056-62. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3871270/>
12. Valtorta NK, Kanaan M, Gilbody S, Hanratty B. Loneliness, social isolation and social relationships: what are we measuring? A novel framework for classifying and comparing tools. *BMJ Open* [Internet]. 2016[cited 2016 June 15];6(4):e010799. Available from: <http://bmjopen.bmj.com/content/bmjopen/6/4/e010799.full.pdf>
13. Probst S, Arber A, Faithfull S. Coping with an exulcerated breast carcinoma: an interpretative phenomenological study. *J Wound Care* [Internet]. 2013[cited 2016 June 15]; 22(7):352-60. Available from: <https://core.ac.uk/download/pdf/18322828.pdf>
14. Castro MCF, Cruz PS, Grellmann MS, Santos WA, Fuly PSC. Palliative care for patients with oncological wounds in a teaching hospital: an experience report. *Cogitare Enferm* [Internet]. 2014[cited 2016 June 15];19(4): 841-4. Available from: <http://revistas.ufpr.br/cogitare/article/view/37294/23968>
15. Castro MCF, Fuly PSC, Garcia TR, Santos MLSC. ICNP® terminological subgroup for palliative care patients with malignant tumor wounds. *Acta Paulista de Enfermagem* [Internet]. 2016[cited 2016 June 15];29(3): 340-6. Available from: http://www.scielo.br/pdf/ape/v29n3/en_1982-0194-ape-29-03-0340.pdf
16. Lund-nielsen B, Adamsen L, Gottup F, Rosth M, Tolver A, Kolms HJ. Qualitative bacteriology in malignant wounds--a prospective, randomized, clinical study to compare the effect of honey and silver dressings. *Ostomy wound manage* [Internet]. 2011[cited 2016 June 15];57(2):28-6. Available from: http://www.o-wm.com/files/owm/pdfs/OWM_July2011_Lund-Nielsen.pdf
17. Probst S, Arber A, Faithfull S. Malignant fungating wounds: A survey of nurses' clinical practice in Switzerland. *European Journal of Oncology Nursing* [Internet]. 2009[cited 2016 June 15];13(4):295-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/19386546>
18. Lo S, Hu W, Hayter M, Chang S, Hsu M, Wu L. Experiences of living with a malignant fungating wound: a qualitative study. *J Clin Nurs* [Internet]. 2008[cited 2016 June 15];17(20):2699-08. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/18808638>

19. Probst S, Arber A, Trojan A, Faithfull S. Caring for a loved one with a malignant fungating wound. *Support Care Cancer* [Internet]. 2012[cited 2016 June 15];20(12):3065–70. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/22391594>
20. Gibson S, Green J. Review of patients' experiences with fungating wounds and associated quality of life. *Journal of wound care* [Internet]. 2013[cited 2016 June 15];22(5):265-75. Available from: https://www.researchgate.net/publication/236907711_Review_of_patients'_experiences_with_fungating_wounds_and_associated_quality_of_life
21. Lisboa IND, Valença MP. Caracterização de pacientes com feridas neoplásicas. *Estima* [Internet]. 2016[cited 2017 Apr 05];14(1):21-8. Available from: <https://www.revistaestima.com.br/index.php/estima/article/view/116/pdf>
22. Gethin G, Grocott P, Probst S, Clarke E. Current practice in the management of wound odour: an international survey. *Int J Nurs Stud* [Internet]. 2013[cited 2016 June 15];51(6):865-74. Available from: <http://www.sciencedirect.com/science/article/pii/S0020748913003210>
23. Dolbeault S, Flahault C, Baffie A, Fromantin I. Psychological profile of patients with neglected malignant wounds: a qualitative exploratory study. *Journal of wound care* [Internet]. 2014[cited 2016 June 15];19(12):513-21. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/21160442>
24. Alexander SJ. Malignant fungating wounds: key symptoms and psychosocial issues. *Journal of wound care* [Internet]. 2009[cited 2016 June 15];18(8):325-9. Available from: <https://www.ncbi.nlm.nih.gov/labs/articles/19862870/>
25. Alexander SJ. An intense and unforgettable experience: the lived experience of malignant wounds from the perspectives of patients, caregivers and nurses. *International Journal of Wound care* [Internet]. 2010[cited 2016 June 15];7(6):456-65. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/20673255>
26. Holt-lunstad J, Smith TB, Baker M; Harris, T, Stephenson D. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspect Psychol Sci* [Internet]. 2015[cited 2016 June 15];10(2):227-37. Available from: <http://journals.sagepub.com/doi/pdf/10.1177/1745691614568352>
27. Lo SF, Hayter M, Hu WY, Tai CY, Hsu MY, Li YF. Symptom burden and quality of life in patients with malignant fungating wounds. *Journal of Advanced Nursing* [Internet]. 2012[cited 2016 June 15];68(6): 1312–21. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/22043819>
28. Adderley UJ, Holt IGS. Topical agents and dressings for fungating wounds. *Cochrane Database of Systematic Reviews* [Internet]. 2014[cited 2016 June 15];5: 1-26. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/17443534>
29. Sacramento CJ, Reis PED, Simino GPR, Vasques CI. Manejo de sinais e sintomas em feridas tumorais: revisão integrativa. *R. Enferm. Cent. O. Min* [Internet]. 2015[cited 2017 Apr 05];5(1):1514-27. Available from: <http://www.seer.ufsj.edu.br/index.php/recom/article/view/944/841>
- Santana AC, Bachion MM, Malaquias SG, Vieira F, Carneiro DA, Lima JR. Caracterização de profissionais de enfermagem que atendem pessoas com úlceras vasculares na rede ambulatorial. *Revista Brasileira de Enfermagem* [Internet]. 2013[cited 2017 Jan 15];66(6):822-826. Available from: <http://www.sci>

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