ORIGINAL ARTICLE *DOI: 10.4025/cienccuidsaude.v18i4.45510*

NURSING DIAGNOSIS IN PATIENTS WITH HEAD AND NECK CANCER IN AMBULATORIAL TREATMENT

Andrea Bezerra Rodrigues*
Maria Isis Freire de Aguiar**
Patricia Peres de Oliveira***
Iarlla Silva Ferreira****
Tayanne de Lima Magalhães*****
Jessyca Elaine Chagas Barbosa******

ABSTRACT

Objective: To identify nursing diagnoses through the NANDA-I classification, its defining characteristics and risk factors in patients with head and neck cancer (HNC) in outpatient treatment. **Methods:** Cross-sectional, descriptive study, developed at the head and neck outpatient clinic of a university hospital in Fortaleza-Ceará. The study sample consisted of 92 patients with PHC over 18 years-old, treated from March 2016 to May 2017. The collection instrument used was previously validated by judges and used the theoretical model of functional health standards. The method of analysis used was the Delphi technique for inter- assessment expert consensus, and two rounds of evaluation were made. **Results:** Most participants were male, aged between 60 and 80 years old, with a smoking habit and alcohol use. The most common type of cancer was oral cavity. The most frequent nursing diagnoses were sedentary lifestyle (78.8%) and ineffective breathing pattern (76.8%). **Conclusion:** The domains most affected in the patients with HNC in the study were activity and rest and health promotion.

Keywords: Head and neck neoplasms. Nursing diagnosis. Medical oncology.

INTRODUCTION

Head and neck cancers (HNC) include those that develop in the lip, oral cavity, oropharynx, nasopharynx, hypopharynx, nasal cavities, paranasal sinuses, larynx, and salivary glands. Precisely because of these anatomical locations, these cancers can promote important functional changes related to food, breathing and communication, affecting social interaction[1].

The main risk factor is tobacco, which is potentiated when associated with alcohol. However, viral infections, exposure to ionizing and solar radiation are also predisposing factors[2].

There are four types of treatment for head and neck cancer: surgery, radiotherapy, chemotherapy and biological therapy, which may or may not be combined according to tumor staging. These treatments also cause significant damage to various organ systems, such as xerostomia, osteoradionecrosis, mucositis, myelodepression, nausea, vomiting, among others[3]. The need for tracheostomy after major surgery in this region also causes a high rate of pulmonary complications. Dysphagia due to the tumor or treatments may also lead to malnutrition and dehydration, which in turn may delay the healing of surgical wounds and increase the risk of infections [4].

While the number of hospital admissions is declining worldwide, the number of outpatient consultations is estimated to increase to over one billion per year. Two US organizations, the American Academy of Ambulatory Care Nursing (AAACN) and the Collaborative Alliance for Nursing Outcomes (CALNOC), are collaboratively leading in an effort to reach a tipping point on the quality of ambulatory care[5].

The original outpatient care framework proposed by AAACN encompasses three main concepts: patient, environment, and nurse. The concept of patient was not specifically defined. Rather, it was addressed in terms of the nurse's focus on the individual person. Patient populations were defined in various ways; in terms of patients' health status, depending on age or source of reimbursement (e.g. Medicare,

*Nursing graduation.PhD in Nursing, Professor ofUniversidade Federal doCeará. Fortaleza, CE, Brazil. E-mail:andreabrodrigues@gmail.comORCID iD: https://orcid.org/0000-0002-2137-0663.
**Nursing graduation.PhD in Nursing, Professor ofUniversidade Federal doCeará. Fortaleza, CE, Brazil. E-mail:isis_aguiar@yahoo.com.brORCID iD:https://orcid.org/0000-0002-6068-1747 .
***Nursinggraduation. PhD in Education,Professor of Universidade Federal de São João del-Rei. São João del-Rei, MG, Brazil. E-mail:ppereseoliveira@gmail.com ORCID iD: https://orcid.org/0000-0002-3025-5034.
****Nursing graduation.PhD student of Nursing atUniversidade Federal do Ceará. Fortaleza, CE, Brazil. E-mail: iarlla@live.com ORCID iD: https://orcid.org/0000-0003-3792-5624.
*****Nursinggraduation. Residentat Instituto do Câncer do Ceará. Fortaleza, CE, Brazil. E-mail:tayannelmagalhaes@gmail.comORCID iD: https://orcid.org/0000-0003-2511-3901.
******Student of Nursing course.Fortaleza, CE, Brazil. Country.E-mail: jessycaelaine53@gmail.comORCID iD:https://orcid.org/0000-0003-3640-144X.

Medicaid, private insurance, etc.). Populations were also discussed as patients and their families, caregivers and other important people. The concept of environment helps define the practice of outpatient nursing away from other specialties. The concept of nurse defines the nursing professional by its dynamism and use of the nursing process in its specific specialty role[5].

In this context, knowledge about the most incident nursing diagnoses (ND), their defining characteristics and risk factors allow access to relevant data for the nurse in the application of the nursing process, favoring the development of individualized interventions. NDs provide support for the selection of nursing interventions in order to achieve results for which nursing is responsible[6]. Knowledge of the nursing diagnosis profile within a standardized language also contributes to support the most appropriate management and dimensioning actions and continuing education.

The relevance of this study is anchored in the certainty that the nursing diagnosis is a process of interpretation and grouping of the collected data, which is essential to guide nurses in their decision making. It is the foundation for choosing interventions in order to achieve results expected[6], giving scientificity to the care provided, guaranteeing the nurse the clinical judgment backed by evidence, which will result in quality and safety in patient care.

In this logic, this research was guided by the following question: what are the main nursing diagnoses, defining characteristics, related factors or risk factors in individuals with head and neck cancer in outpatient treatment?

To answer this question, the objective was to identify nursing diagnoses according to the NANDA-I Classification, its defining characteristics and risk factors in patients with HNC in outpatient treatment.

METHODS

This is a cross-sectional, descriptive study, developed at the head and neck outpatient clinic of a university hospital in Fortaleza - Ceará from March 2016 to May 2017. It is noteworthy that Northeast Brazil is one of the geographical regions of the country with the highest incidence of HNC cases, with an estimate made by the National Cancer Institute (INCA) of 17,590 new cases of oral and laryngeal cancer, among men and women[7].

In the first phase of data collection with the patients, the intentional non-probabilistic sample consisted of 92 patients with HNC undergoing treatment at the study site who met the following inclusion criteria: patients over 18 years-old who were in outpatient follow-up for HNC, considering the anatomical sites of the lip, oral cavity, oropharynx, nasopharynx, hypopharynx, nasal cavities, paranasal sinuses, larynx and salivary glands. Patients with thyroid cancer were excluded, since the tumor biological behavior and changes resulting from this anatomical site are extremely different from other sites.

In the second phase of diagnostic reasoning, the sample consisted of five nurses. The selection of nurses followed the criterion [8] that correlates the length of clinical experience with the levels of knowledge of the practice. These criteria classify nurses into five levels. The first level - beginner - characterizes the nurse with clinical experience of up to six months, needing to use protocols to determine their actions. The second level includes nurses with practical experience in concrete situations with significant elements. The third so-called competent level includes nurses who have a notion of what is important in specific situations and able to interpret and analyze the situation of patients. The fourth level - proficient - which identifies goals and specificities of the clinical situations and interventions needed, as well as their redefinition when necessary. The fifth and last one includes nurses with at least five years of experience in the domain area, who present intuitive judgment in decision making, accurately and accurately, being characterized as experts. To compose the sample of nurses for analysis of nursing diagnoses, it was established as criterion to have the level of expert knowledge.

Data collection at the outpatient clinic was made using an instrument prepared by the authors of the research and validated with eight specialists. This validation occurred from January to May 2016, obtaining a global content validity index (CVI) calculation of 0.87[9].

This instrument used as theoretical reference the model of functional health standard proposed

by Marjorie Gordon, because it is a functional theoretical model, which contains questions organized by domains. Gordon has a functional health standard that evolves from client-environment interaction. Each pattern is an expression of biopsychosocial integration and cannot be understood without knowledge of the other patterns[9]. A functional pattern represents a healthy set of behaviors, as opposed to a dysfunctional health pattern, described by the ND that may occur in the disease[10].

The instrument consisted of sociodemographic data, medical diagnosis, and treatment, interview and physical examination data, divided into nine domains (health promotion, nutrition, elimination and exchange, activity/rest, perception/cognition, roles/relationship, sexuality, Principles of life and safety/protection) and adjusted to 37 items, namely: Health Promotion (1. Complaint; 2. Current Summary/Disease; 3. Personal/Family/Cancer History; 4. Disease/Treatment Knowledge; 5. Medicines you know you have used 6. Compliance with current treatment if any and adherence to treatment 7. Smoking/alcohol use/drug use 8. Allergies) Nutrition (9. Recent weight change; 10.Type of diet, volume and interval, 11. Chewing; 12. Dental prosthesis; 13. Swallowing; 14. Fluid intake; 15. Weight/height/body mass index); Elimination and Exchange (16.Urinary elimination; 17. Intestinal elimination and elimination-related devices; 18. Skin integrity); Activity/Rest (19. Physical limitation, 20. Needs help with, 21. Exercise habits, 22. Pulmonary propaedeutics, 23.Cardiovascular propaedeutics, 24.Sleep/rest, 25. Has self-care deficit); Perception/Cognition (26. Impaired speech/use speech device; 27. Impaired memory; 28.Reads/writes; 29. Pain, pain location, degree of pain and scale used, drug treatment for pain, how long do you have pain?; 30. Vision/hearing/taste/smell; 31. Have you noticed mood changes after treatment?); Roles/Relationship (32. Marital Status; 33.Financial Support); Sexuality (34. sexual activity); Principles of Life (35. Spirituality/religion); Safety/Protection (36. Peripheral/central venous catheter/surgical incision/tracheostomy; 37. Complaint of fatigue, degree of fatigue, frequency of fatigue). It is noteworthy that at the end of the instrument the conceptual and operational definitions of each item in it were made in order to standardize data collection.

Data collection was performed by a researcher nurse and two nursing academics participating in the Study and Research Group in Clinical and Surgical Nursing (Grupo de Estudos e Pesquisa em Enfermagem Clínica e Cirúrgica/GEPECC), registered with CNPq;they were previously trained on the instrument.

If they wished to participate in the study, the patient was taken to a private room at the outpatient clinic for the application of the questionnaire and the physical examination, which lasted, on average, 40 minutes with each patient.

Data analysis happened in two steps. In the first, the nurses started the synthesis process, when the data were grouped and compared with the concepts, norms and models existing in the oncology literature, leading to hypotheses about the situation and establishment of the causes related to the inference. It is noteworthy that the instrument was organized according to the standards of Marjorie Gordon.

Data were subjected to analysis and interpretation, with data categorization and identification of divergent codes or gaps, comparison with normality patterns, establishment of relationship with HNC and its treatments [11]. In the second stage, the choice of the most specific diagnostic labels and declaration of defining characteristics and risk factors was made. It is noteworthy that when it was necessary to complement some information, they were sought in the field unit of the study. The adequacy of nomenclature followed the NANDA-I taxonomy[12].

The Delphi technique, considered of excellence for expert consensus assessment, was applied. Two rounds of evaluation were held between participants. Those ND in which there was a consensus in the first round were withdrawn to the second round, remaining in the next stage only those propositions that have not yet reached consensus. Nursing diagnoses were considered for the second round that showed agreement above 80% among the evaluators[13].

The study was approved by the Research Ethics Committee of the Federal University of Ceará, under protocol No. 64775/2015 and

Certificate of Presentation for Ethical Appreciation (CAAE) 46887415.9.3001.5045, in compliance with Resolution No. 466/2012. The included participants signed the Informed Consent Form, guaranteeing the confidentiality of the information collected, ensuring their anonymity.

RESULTS

Among the nurse evaluators (n = 5), all had more than ten years of experience in the oncology area and were published in the area of nursing specialty and diagnosis, with three working in the Northeast of Brazil and two in the Southeast.

Regarding the patients (n = 92), it was found that the majority (65.2%) were male, aged between 60 and 80 years-old (41.3%), married marital status (59.7 %), with religion (84.7%) and without caregiver (57.6%). Among all participants, most had smoking (54.3%) and alcohol use (58.7%). Most financial support was exclusively from the Unified Health System (SUS) (60.87%). The most common type of cancer was oral cavity (19.6%), followed by skin (16.3%), larynx (15.2%) and oropharynx (11%).

Regarding the domains of ND identified, we highlight the number 4 related to activity and rest involving ND ineffective breathing pattern (76.8%), impaired physical mobility (54.2%), impaired sleep pattern (33.7 %) and fatigue (35.8%) (Table 1).

Table 1. Altered domains in the patient population with the frequency of ND in patients with HNC, treated at the outpatient clinic. Fortaleza, CE, Brazil, 2017.

Domain	N° of ND	%
Acitivity/rest	4	30,8
Health promotion	2	15,4
Comfort	2	15,4
Perception and Cognition	2	15,4
Sexuality	1	7,7
Copingand Stress Tolerance	1	7,7
Nutrition	1	7,7
Total	**13**	**100**

Given the results shown in Table 2, the nursing diagnoses Sedentary lifestyle, Ineffective breathing pattern, Risk-prone health behavior, Ineffective sexuality pattern, Overweight, Impaired physical mobility, Poor fluid volume risk were the main identified ND in this study, all with more than 50% incidence.

Other ND present in the studied population were: impaired mood regulation, chronic pain, poor knowledge about the disease and treatment, impaired verbal communication, fatigue and impaired sleep pattern.

Table 2. Frequency distribution of NANDA-I nursing diagnoses present in patients with HNC cared in outpatient. Fortaleza, CE, Brazil, 2017.

Diagnostic Title and code*	N	%
Sedentary life style (00168)	72	78,2
Ineffective breathing pattern (00032)	70	76,8
Risk-prone health behavior (00188)	67	72,4
Ineffective sexuality pattern (00065)	58	63,0
Overweight (00233)	55	59,4
Impaired physical mobility (00085)	50	54,2
Poorfluid volume risk(00028)	48	52,1
Impaired mood regulation (00241)	43	52,9
Chronicpain (00133)	38	41,3
Poor knowledge (00126)	35	38,5
Impaired verbal communication (00051)	34	37,6
Fatigue (00093)	33	35,8
Impaired sleep pattern(00198)	31	33,7

*Taxonomy NANDA-I 2015.

DISCUSSION

Most of the study population was male, elderly and with habits of alcohol and tobacco use, which corroborates the literature, confirming that cases of HNC are more frequent in this gender, age group and are closely related to these lifehabits. [14].

The most affected domain was activity/rest with ND ineffective breathing pattern, impaired physical mobility, impaired sleep pattern, and fatigue. Patients with HNC who are submitted to surgeries, such as pelveglossomandibulectomia and total laryngectomies, routinely performed in this population, require tracheostomies, which leads to respiratory alterations[15].

In the domain of health promotion, the characteristics of daily physical activity below the recommended for gender and age, the habit of alcoholism and smoking were identified, which makes us reflect on the potential for health problems. Physical inactivity associated with overweight, identified in the sample, represents a risk factor for several diseases, including cancers in other anatomical regions, such as the colon and rectum and prostate. In addition, excessive fat mass has been associated with an increased risk of disease recurrence[16].

This low adherence to physical activity is believed to be due to the fact that the patients in the sample had fatigue, ineffective sputum, cough and impaired physical mobility, associated with the senescence factor.

During the course of cancer treatment, most patients will experience some level of fatigue, and approximately 30% will experience persistent fatigue for several years after treatment. It is therefore recommended that all healthcare providers should routinely examine the presence of fatigue from the time of diagnosis until after completion of primary treatment[17].

A study conducted in Brazil, which compared the free terms of nursing records with a nursing ND classification of patients hospitalized in an onco-hematological clinic of a university hospital in the state of Rio de Janeiro, pointed out that the individual with cancer does not feel reduced fatigue after rest, which often makes it more overwhelming than pain and; If it is not identified, fatigue may weaken the person with malignant neoplasia and interfere with their treatment and quality of life [18].

The diagnosis of fatigue, however, has particular complexity, since it requires from the nursing professional observation and accurate knowledge to identify its defining characteristics, since it is defined from a subjective judgment. Therefore, it is important to include the terms of investigation of the diagnosis of Fatigue in onco-hematological nursing care protocols.

On the other hand, to control one's own fatigue, it is clear that levels of regular physical activity can reduce cancer-related fatigue during treatment. Therefore, health professionals should actively encourage all patients to engage in a moderate level of physical activity, according to each patient's individual indication[19].

In the sexuality domain it was identified that 63% of the patients presented as clinical indicator alteration in sexual activity and difficulty in sexual activity, either related to sexual interest or pleasure. Study shows that sexuality, although not a much addressed topic in cancer patients, causes profound functional and social impacts due to loss of function of organs such as lips and tongue, which can have profound effects on kissing, as well as on the sexual arousal and the performance of oral sex[20].

There is a need to seek opportunities to support these patients even in outpatient clinical assessments where intimacy problems are underestimated. This research should be part of the rehabilitation process to positively promote and outline adaptive and coping strategies[18].

In the coping and stress tolerance domain, the impaired mood regulation was identified in almost half of the researched sample. Different data was found in a study conducted in Brazil with people undergoing onco-hematological treatment, the incidence of diagnoses in the coping domain and stress tolerance was low[18].

Given the concern about the influence of humor in the treatment of a person with cancer,

American societies have determined the use of the term distress to conceptualize the emotional stress experienced by cancer patients. Due to its clinical importance, this emotional distress has been considered the sixth vital sign for this group of patients, requiring identification, documentation and management[20], since it has been associated with lower patient satisfaction with healthcare, lower quality of life, and reduced survival[21,22].

The ND deficient knowledge about the disease and cancer treatment and impaired verbal communication in the perception/cognition domain corroborate a study conducted in India with patients with oral cavity cancer, in which 13% of the sample presented communication deficit[23]. This fact refers to the need, in the concept of outpatient care, for individualized guidance for health education, where the patient needs to be empowered for self-care.

In this study, those main NDs were considered to guide the discussion of the results. However, it is worth highlighting the relevance of other ND present in the study population, considering the condition of senility as mobility changes, impaired memory, which may compromise health guidelines, among others.

Study limitation

A limitation of the study is the lack of accuracy study of the main ND listed, which may direct a next research step. It is also recognized that reviews of nursing diagnostics classification systems are routinely performed every two years, and the study would probably require adjustments in future revisions of the nursing classification.

CONCLUSION

The results of this study may instruct nurses in directing intervention targets in patients with outpatient HNC, which is still little explored in the cancer literature. It was possible to identify the nursing diagnoses in this population, indicating that the professional should be aware of the most incident in the practice of care to this clientele, such as those related to the activity/rest domains, highlighting the ineffective breathing pattern, but also the other domains, such as sexuality, still little addressed in care practice.

Studies of this nature allow us to know still little explored phenomena of outpatient care for patients with head and neck cancer.

DIAGNÓSTICOS DE ENFERMAGEM EM PACIENTES COM CÂNCER DE CABEÇA E PESCOÇO EM TRATAMENTO AMBULATORIAL

RESUMO

Objetivo: Identificar os diagnósticos de enfermagem, utilizando a classificação da NANDA-I, suas características definidoras e fatores de risco em pacientes com câncer de cabeça e pescoço (CCP) em tratamento ambulatorial. **Métodos:** Estudo transversal, descritivo, desenvolvido no ambulatório de cabeça e pescoço de um hospital universitário de Fortaleza- Ceará. A amostra do estudo foi composta por 92 pacientes com CCP com idade superior a 18 anos de idade, atendidos no período de março de 2016 a maio de 2017. O instrumento de coleta utilizado foi validado, previamente, por juízes e utilizou o modelo teórico de padrões funcionais de saúde. O método de análise utilizado foi a técnica Delphi para avaliação de consenso interavaliadores *experts*, sendo feitas duas rodadas de avaliação. **Resultados:** A maioria dos participantes pertencia ao sexo masculino, com idade entre 60 e 80 anos de idade, com hábito de tabagismo e uso de álcool. O tipo de câncer mais incidente foi o de cavidade oral. Os diagnósticos de enfermagem mais incidentes foram estilo de vida sedentário (78,8%), e padrão respiratório ineficaz (76,8%). **Conclusão:** Os domínios mais afetados nos pacientes com CCP do estudo foram atividade e repouso e promoção da saúde.

Palavras-chave: Head and neck neoplasms. Nursing diagnosis. Medical oncology.

DIAGNÓSTICOS DE ENFERMERÍA EN PACIENTES CON CÁNCER DE CABEZA Y CUELLO EN TRATAMIENTO AMBULATORIO

RESUMEN

Objetivo: identificar los diagnósticos de enfermería, utilizando la clasificación de la NANDA-I, sus características definidoras y factores de riesgo en pacientes con cáncer de cabeza y cuello (CCP) en tratamiento ambulatorio. **Métodos:** estudio transversal, descriptivo, desarrollado en el ambulatorio de cabeza y cuello de un hospital universitario de Fortaleza- Ceará-Brasil. La amuestra del estudio fue compuesta por 92 pacientes con CCP y edad superior a 18 años, atendidos en el período de marzo de 2016 a mayo de 2017. El instrumento de recolección utilizado fue validado, de antemano, por jueces y utilizó el modelo teórico de estándares funcionales de salud. El método de análisis utilizado fue la técnica Delphi para evaluación de consenso interevaluadores *experts*, siendo hechas dos fases de evaluación. **Resultados:** la mayoría de los participantes era del sexo masculino, con edad entre 60 y 80 años, con hábito de tabaquismo y uso de alcohol. El tipo de cáncer más encontrado fue el de cavidad oral. Los diagnósticos de enfermería más señalados fueron estilo de vida sedentario (78,8%), y estándar respiratorio ineficaz (76,8%). **Conclusión:** los dominios más afectados en los pacientes con CCP del estudio fueron actividad y reposo y promoción de la salud.

Palabras clave: Neoplasias de cabeza y cuello. Diagnóstico de enfermería. Oncología.

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Corresponding author: Andrea Bezerra Rodrigues. Avenida Santos Dumont, 7785 apto 601 bairro dunas Fortaleza, Ceará , CEP 60177415. E-mail:andreabrodrigues@gmail.com

Submitted: 23/11/2018
Accepted: 17/07/2019