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RESEARCH

ONCOLOGICAL PATIENTS AND THE NURSING FIELD: RATION BETWEEN THE ORAL MUCOSITIS GRADE AND THE IMPLEMENTED THERAPEUTIC

PACIENTES ONCOLÓGICOS E A ENFERMAGEM:
RELAÇÃO ENTRE GRAU DE MUCOSITE ORAL E A TERAPÊUTICA IMPLEMENTADA

PACIENTES CON CÁNCER Y LA ENFERMERÍA:
RELACIÓN ENTRE GRADO DE ESTOMATITIS Y TERAPÉUTICA DE IMPLEMENTACIÓN

Sarah Nilkece Araújo[1], Maria Helena Barros Araújo Luz[2], Lúcia Helena Rios Barbosa de Almeida[3], Grazielle Roberta Freitas Silva[4], José Machado Moita Neto[5], Ana Célia Mesquita Melo Araújo Costa[6]

ABSTRACT

Objective: To characterize the oral mucositis in patients under oncological treatment. **Method:** This is a descriptive and exploratory study with a quantitative approach, which was performed with 50 patients in a philanthropic hospital in the city of Teresina/PI/Brazil, from August to October 2010. **Results:** The outcomes showed the prevalence of oral mucositis in males and in the age groups lesser than 17 and over 60 years. The most frequent oncological diagnoses were leukemias and aerodigestive route cancers, whose treatments were focused on chemoradiotherapy, by predominantly determining the grades 1 and 2 of oral mucositis. The most associated chemotherapic agents with the disease were: cisplatin, cytarabine, methotrexate, vincristine sulfate, etoposide, doxorubicin hydrochloride. **Conclusion:** It is concluded that there is a need of including the nursing in fostering the preventive and controlling actions towards the oral mucositis, in order to maintain the welfare, therapeutic response optimization and improvement of the life quality of the oncological patient. **Descriptors:** Oral mucositis, Oncology, Nursing.

RESUMO

Objetivo: Caracterizar a mucosite oral em pacientes em tratamento oncológico. **Método:** Estudo exploratório-descritivo com abordagem quantitativa, o qual foi realizado com 50 pacientes em um hospital filantrópico em Teresina/PI, de agosto a outubro de 2010. **Resultados:** Os achados apontaram a prevalência de mucosite oral no gênero masculino e nas faixas etárias inferiores a 17 e superiores a 60 anos. Os diagnósticos oncológicos mais freqüentes foram as leucemias e os cânceres das vias aerodigestivas superiores, cujos tratamentos se concentravam na quimiorradiação, determinando predominantemente graus 1 e 2 de mucosite oral. Os quimioterápicos mais associados à afecção foram: cisplatina, citarabina, metotrexate, sulfato de vincristina, etoposídeo, cloridrato de doxorrubicina. **Conclusão:** Conclui-se que há necessidade da inserção da enfermagem no fomento às ações preventivas e de controle da mucosite oral, com vistas à manutenção do bem-estar, otimização da resposta terapêutica e melhoria da qualidade de vida do paciente oncológico. **Descritores:** Mucosite oral, Oncologia, Enfermagem.

RESUMEN

Objetivo: Caracterizar la estomatitis en pacientes en tratamiento contra el cáncer. **Método:** Estudio descriptivo, exploratorio, cuantitativo, con 50 pacientes en hospital de caridad de Teresina-PI, Brasil, de agosto a octubre de 2010. **Resultados:** Los hallazgos señalaron prevalencia de la estomatitis en hombres y en los grupos de edad inferiores a 17 y mayores de 60 años. Los diagnósticos de cáncer fueron las leucemias y los cánceres más frecuentes del tracto digestivo superior, cuyos tratamientos se centraron en la quimiorradioterapia, determinando principalmente grado 1 y 2 de la estomatitis. Los quimioterapéuticos más asociados con la enfermedad fueron: cisplatino, citarabina, metotrexato, sulfato de vincristina, etopósido y doxorubicina clorhidrato. **Conclusión:** hay necesidad de inclusión de la enfermería en la promoción de acciones para controlar y prevenir la estomatitis para el mantenimiento del bienestar, optimización de la respuesta terapéutica y mejora de la calidad de vida de pacientes con cáncer. **Descriptores:** Estomatitis, Oncología, Enfermería.

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INTRODUCTION

To know the reality of patients under oncological treatment is something instigating, because of the numerous deleterious aspects that cancer assumes in the life of the affected subject, which range from the diagnostic discovery until the confrontation of the antineoplastic therapy. This might determine the toxic effects in a short or long term, which greatly alter the life quality of the individual living with cancer. Among the complications of the short term treatment, it should be highlighted the oral mucositis.

This is a toxic and inflammatory reaction that affects the entire gastrointestinal tract, and is a sequel to the cytoreductive treatment induced by radiotherapy and / or chemotherapy in patients subjected to bone marrow transplantation. [1] Its origin is multifactorial and might be genetically determined, but its occurrence and severity are mainly associated with the antineoplastic treatment according to chemotherapy frequency and administration, radiation intensity and treatment duration. Other patient-related factors such as age, gender, leukocyte counting, nutritional status and oral hygiene also compose the mucositis casuistry.[2]

To characterize such a disease, the World Health Organization (WHO) proposed, in 1979, the Oral Mucositis Graduation Scale, which takes into account the anatomical, functional and symptomatic mucositis aspects, classifying it into grades 0, 1, 2 3 and 4, from the absence of injuries until the impossibility of feeding by the patient, being that the grade 4 is the highest commitment level. Thus, one has a tool to stratify the patients and guide the best conducts.[1]

Nursing should be inserted in this issue, by giving importance to the early recognition of changes in the oral mucosa in patients subjected to oncological treatments; assessment tools; establishment of nursing intervention protocols; patient and family education; care and oral hygiene programs; multidimensional understanding of pain and its management; main agents for prevention and treatment recommended in the literature for oral mucositis and the assessment regarding their usage and/or recommendation by the nursing professional.[3] Nonetheless, so that we can operate efficiently and effectively, it is necessary, first of all, to take ownership of the issue. Thus, this work is justified by the relevance and impact of the oral mucositis condition in the daily lives of most oncological patients, by directly influencing in their prognostics.

Hence, this study aimed to clinically characterize the oral mucositis, by correlating it with implemented therapeutic and searching for an interface with the nursing care.

METHODOLOGY

This is an exploratory study with a quantitative approach, whose scenario was the oncological clinic of a philanthropic hospital from the city of Teresina/PI/Brazil, which is comprised of three nursing stations, totaling 80 hospital beds with exclusive attendance by the Brazilian Unified Health System (known as SUS). The population was composed of oncological patients admitted to the clinic who presented oral mucositis, by forming a sample of 50 patients, adults and children, obtained by non-probabilistic sampling through accessibility.

For including the participants, we have considered the following criteria: to show a cancer diagnostic; to be in antineoplastic treatment or post-treatment, radiotherapy and/or chemotherapy and to be admitted to the oncological clinic at stake.

Data collection was performed from September to October 2010 with approach to the patients through application of a structured form and accomplishment of a physical examination of the oral mucosa, for submission in the Oral

Mucositis Graduation Scale, proposed by the WHO, by signing the Free and Informed Consent Form, by subject or guardian, and other requirements of the Resolution 196/96[4], as approval by the Ethics Research Committee from the Federal University of Piauí, under CAAE nº 0207.0.045.000-10.

The obtained data were subjected to descriptive analysis by means of the software Statistical Package for Social Sciences - SPSS (version 17.0) and discussed on the basis of the specialized literature.

RESULTS AND DISCUSSION

The obtained data, after approaching the 50 subjects participating in the study, are presented in the following tables.

Table 1. Sociodemographic profile of patients with oral mucositis (n=50). Teresina/PI, 2010.

VARIABLES		n	%
GENDER	Male	35	70,0
	Female	15	30,0
AGE GROUP	1-17	19	38,0
	18-59	15	30,0
	60 or over	16	32,0
SCHOOLING	Illiterate	19	38,0
	Elementary School	27	54,0
	High School	3	6,0
	Higher Education	1	2,0
FAMILY INCOME	None	32	64,0
	Up to 1 minimum wage	13	26,0
	2-4 minimum wages	5	10,0
TOTAL		50	100,0

Men were expressly the worst affected (70%) by oral mucositis and the age groups that have showed higher recurrence of the disease encompassed people from 1 to 17 years (38%) and aged over 60 (32%). The low schooling level has prevailed in study subjects, with a percentage of 54% regarding the Elementary School. With regard to the family income, it was observed that most were not employed (64%).

Table 2. Characterization of patients with oral mucositis regarding the cancer type and the implemented oncological treatment (n=50). Teresina/PI, 2010.

	TREATMENT			
Cancer	Chemotherapy n(%)	Radiotherapy n(%)	Chemoradiotherapy n(%)	TOTAL n(%)
Aerodigestive route *	-	1(7,5)	13(82,5)	14(28,0)
ALL	8(80,0)	-	2(20,0)	10(20,0)
Head and neck	-	2(28,6)	5(71,4)	7(14,0)
AML	5(100,0)	-	-	5(10,0)
Mouth and tongue	-	-	4(100,0)	4(8,0)
Acute Leukaemia	3(100,0)	-	-	3(6,0)
Others**	6(85,7)	-	1(14,3)	7(14,0)
TOTAL	22(40,0)	3(6,0)	25(50,0)	50(100,0)

Caption: ALL: Acute Lymphoblastic Leukaemia; AML: Acute Myeloid Leukemia.*Oropharynx and larynx. **Bone cancer, gastric, Wilms' tumor, Burkit and Hogdkin lymphomas.

Regarding the pathological profile of patients with oral mucositis, 20 types of neoplasms were detected in the 50 surveyed subjects. Aerodigestive, oropharynx and larynx cancers (28%), followed by Acute Lymphoblastic Leukemia (ALL) (20%) represented the most incident neoplasms. Head and neck cancers were the common diagnoses in 14% of patients. The Acute Myeloid Leukemia (AML) configured a percentage of 10% of subjects and of mouth and tongue cancers of, 8% of the total. Unspecified acute leukemia has reached a sample of 6%. Other cancers types, such as bone and gastric neoplasms, Wilms' tumor, Burkit and Hogdkin lymphomas, represented the diagnoses present in 14% of patients with mucositis.

Table 3. Ratio between the grade and type of oral mucositis and the oncological treatment type (n=50). Teresina/PI, 2010.

	TREATMENT			
GRADE	Chemotherapy n(%)	Radiotherapy n(%)	Chemoradiotherapy n(%)	TOTAL n(%)
Grade I	9(40,9)	2 (9,1)	11 (50,0)	22(44,0)
Grade II	10(55,5)	1 (5,5)	7 (39,0)	18(36,0)
Grade III	3(42,8)	-	4 (57,4)	7(14,0)
Grade IV	-	-	3(100,0)	3(6,0)
TOTAL	22 (44,0)	3 (6,0)	25(50,0)	50(100)

Of 50 surveyed patients, 50% concomitantly performed chemotherapy and radiotherapy as oncological treatments, 44%

underwent only chemotherapy and the others 6% only radiotherapy. The oral mucositis type manifested in these subjects was more incident in the following grades, respectively: grade 1 (44%), grade 2 (36%), grade 3 (14%) and grade 4 (6%). It is noteworthy to note that the mucositis grade 4, greater impairment of the integrity of the oral mucosa, manifested itself only in patients under chemoradiotherapy. The remaining mucositis grades were noted in the three therapeutic modalities, except grade 3, which was not observed in patients under radiotherapy.

Table 4. Ratio between the oral mucositis grade and the chemotherapic drugs used by patients (n=50). Teresina/PI, 2010.

	GRADE				
CHEMOTHERAPIC DRUGS	Grade I n(%)	Grade II n(%)	Grade III n(%)	Grade IV n(%)	Total n(%)
Cisplatin	9 (45,0)	6 (30,0)	4 (20,0)	1(5,0)	20(44,4)
Cytarabine	5 (35,7)	7 (50,0)	2(14,3)	-	14(31,1)
Methotrexate	8 (61,5)	3 (23,1)	1(7,7)	1(7,7)	13(28,9)
Vincristine	4 (66,7)	2 (33,3)	-	-	6 (13,3)
Doxorubicin	4 (80,0)	-	1(20,0)	-	5 (11,1)
Etoposide	2(40,0)	2 (40,0)	1(20,0)	-	5 (11,1)
Others*	10(38,4)	9 (34,6)	3(11,5)	4(15,5)	26 (62,2)
TOTAL	19(42,2)	16(35,5)	7(15,6)	3(6,7)	152(100,0)**

Caption: *Mercaptopurine, ifosfamide, allopurinol, daunorubicin, carboplatin, oxilaplatin and carmustatine. **Absolute frequency higher than n=45, since in the sample had patients who make use of more than one chemotherapic drug.

The total number of surveyed patients regarding the use of chemotherapic drugs was 45, and not the total amount of 50. That is why three patients underwent only radiotherapy treatment and two were in post-chemotherapic treatment. The large majority of patients made use of more than one chemotherapic drug; hence, the total absolute frequency extends beyond the sample of 45.

Cisplatin was the most incident chemotherapic drug in the prescriptions of surveyed patients, for a total of 44.4%, followed by cytarabine (31.1%), methotrexate (28.9%), vincristine sulfate (13.3%) and doxorubicin hydrochloride and etoposide (11.1%), each one.

Table 5. Ratio between the oral mucositis grade and its interference in the oncological treatment (n=50).Teresina/PI, 2010.

	TREATMENT DISRUPTION		
SEVERITY	Yes n(%)	No n(%)	TOTAL n(%)
Grade I	2(9,1)	20(90,1)	22(44,0)
Grade II	4(22,2)	14(77,8)	18(36,0)
Grade III	1(14,3)	6(85,7)	7(14,0)
Grade IV	2(66,7)	1(33,3)	3(6,0)
TOTAL	17(8,0)	41(82,0)	50(100,0)

When we assessed the interference of oral mucositis in the oncological treatment, it might be inferred that, in 82% of patients, mucositis was not preponderant factor for therapeutic disruption, compared with 18% of patients who had their oncological treatments delayed for the purposes of primary treatment of oral mucositis. In the latter case, 66.7% were bearers of oral mucositis in grade 4, while a small portion of 9.1% had mucositis in its first grade.

When analyzing the sociodemographic profile of the screened subjects, we have found that mucositis was more incident in men, although statistics confirm that women are more affected in a general way by cancer in Brazil, by composing a scenario of 3.340 cancer cases before 2.830 cases in men for the year 2012. [5] Nevertheless, the same statistical data [(5)] point out, in relation to the studied Brazilian State, the prevalence of aerodigestive route cancers in males, due to habits of alcoholics and smokers, mainly. Such a reality makes closer the ratio between gender and oral mucositis, since in cases of these cancer types of the aerodigestive routes, the treatments provide greater exposure and deterioration of the gastrointestinal tract mucosa, by determining a greater amount of mucositis cases.

Concerning the age group, there were children, teenagers and elderly as the most affected subjects by the disease at stake. As confirmed in the literature, children and teenagers are the most often victims of mucositis, because of the high proliferation of the basal mucosa and resistance variation. [6] Furthermore, the prevailing cancer types in children are the hematological ones, such as leukemias and lymphomas, which together cause bone marrow suppression and, therefore, tend to be associated to the oral complications with high frequency. Regarding the elderly, these are also common victims of mucositis, especially by the weakness of their immunological system and for composing the age group in which the cancer is more prevalent.[5] Thus, these individuals due to being more susceptible to carcinogenesis, are also more vulnerable to the deleterious effects arising from the oncological treatments, such as oral diseases.

Most subjects were not employed, so we should denote that, excluding the child audience, economically inactive, the financial situation of the patients seems limited, which hinders the funding of resources for the treatment and its complications. Moreover, the schooling level was poor, with the majority of the sample holding only the Elementary School. Low levels of income and schooling are variables that interfere with the adherence to preventive and therapeutic behaviors by the patients. The usage of permanent education techniques, which adopt alternative parlances for the target audience, becomes crucial to make the patient an active subject in its healing process. As an example, the approach to children through therapeutic toys and permanent health education, which makes use of an accessible and understandable parlance to all social classes; thus, it is essential to involve the individual in this educational process, by considering its knowledge about the health-disease process and linking it to its world viewpoint, values, attitudes and beliefs of society.[8]

When ascertaining the clinical aspect of the subjects, it should be emphasized a high incidence of leukemia, especially ALL, in the presented data, which can be explained by the amount of children covered in this study, since leukemia is the most common neoplasm in the childhood stage, by predominantly occurring in the age group from 0 to 14 years, being that it is rare in adults. The ALL corresponds to 85% of all leukemias, by reaching 1/25.000 individuals a year. [9] The chemotherapic treatment might result in multiple complications, including anemia, infections and oral mucositis. Because of the bone marrow immune-suppression caused by leukemia, the affected patients develop oral/dental problems two to three times more often than patients with solid tumors.[10]

The numbers were significant in relation to the aerodigestive route, head and neck, mouth and tongue cancers. This occurs because of the neoplasms that affect the upper respiratory and digestive tracts, the high rate of cellular renewal and the low radiotherapy resistance of epithelial cells of these areas, which early answer to the toxic effects of radiation and of chemotherapic drugs to which they are exposed.[11] These cancer types have in common the treatment based on radiotherapy, with field action in the head and neck, which clearly exposes the oral mucosa. Patients irradiated in the head and neck regions usually suffer oral and tasting changes, due to the xerostomy and dysphagia, which directly interferes with their daily activities.[12]

By considering the patients with the same mucositis grade, this manifests itself, mainly, when there is a combination of radiotherapy and chemotherapy during the oncological treatment. A similar study[13] shows that the occurrence of oral mucositis ranges from 40 to 60% of patients

subjected to chemotherapy. In patients under conditioning for bone marrow transplantation, such a value can reach a rate of 75%; in the head and neck radiotherapy treatment, the percentage is around 50% and, when the chemotherapic treatment is associated to radiotherapy, such a value reach 90% of occurrence.

Radiotherapy combined with chemotherapy for cancer treatment is potentially toxic to the oral mucosa cells, by hindering swallowing, by limiting speech and chewing, besides exposing the patient to the infections caused by opportunistic microorganisms, resulting in a decreased life quality. [14-12] However, even with too many adverse effects, chemoradiotherapy is the most accepted procedure by experts, not only because it enables the tumoral volume reduction, but also due to increasing the blood supply and oxygen contribution, by making the patients more susceptible to other oncological treatments. Thus, in view of the cost-benefit ratio, chemoradiotherapy is chosen as the better treatment for most neoplasm cases, in spite of its secondary side effects.[15]

Regarding the mucositis grades, it is important to notice that their assessment takes place from signs and symptoms reported by the oncological patient, such as the presence of erythema and injuries, isolated or concomitant to complaints, such as: pain and difficulty of swallowing. [16] Thus, one can infer from the data that the more exposed the oral mucosa for antineoplastic agents and irradiation, the greater the degradation of its basal cells and, consequently, manifestation of the signs and symptoms typical of more severe mucositis grades will be more evident.

Referring to Table 4, one can observe the incidence of oral mucositis associated, primarily, to platinum compounds, such as cisplatin; antimetabolites, such as cytarabine and methotrexate; alkaloids, such as vincristine sulfate and etoposide; and doxorubicin hydrochloride.

When considering the chemotherapic treatment in an isolated way, the frequency of mucositis incidence is 40%, being that this average is variable according to the type and dose of the used chemotherapic agent. The chemo-induced mucositis varies from 40 to 76% for patients treated with standard and high-dose chemotherapy, respectively. [17] The most frequently associated chemotherapic agents with the development of oral mucositis are alkylating, antimetabolites and anthracyclines.[18]

A similar study has listed the most triggering drugs for the occurrence of oral mucositis, namely: cytarabine, methotrexate, vincristine sulfate and, beyond these, fluorouracil and vinblastine. [19] Cisplatin was observed by inducing oral mucositis, especially, when combined with radiotherapy. [20] Another relevant study considers that high doses of etoposide cause the most severe mucositis forms. [21] While a research on the same theme mentions that oral injuries are more determined by methotrexate, due to its action mechanism, which affects the DNA synthesis and causes one of the most pronounced stomatotoxicity effects.[22]

According to the analysis of these works, one can observe a similarity of the outcomes relating to the drugs considered more starter factors of oral mucositis by scholars with the findings of this analysis. Nonetheless, regardless of the chosen antineoplastic, it is important to understand that all patients, who are exposed to isolated chemotherapy or not, are susceptible to reactions such as the oral mucositis. This occurs because the increased concentration of chemotherapic drugs in the spittle increases the mucosal toxicity, resulting in a decreased volume, changes in the oral microbiota and decreased levels of spitting immunoglobulin.[23]

The formation of free radicals by antineoplastic chemotherapy, although undesirable, is necessary, since is part of the action mechanism of these drugs. Most antiblastic agents interfere with the syntheses of the Deoxyribonucleic Acid (DNA) and the Ribonucleic Acid (RNA), of proteins and of the proper functioning of pre-shaped molecules. This fact enables the release of several toxic substances to the body, which affect healthy cells of tissues of rapid cell proliferation, as the oral mucosa cells. The most frequent side effects are: myelosuppression (bone narrow depression), alopecia and gastrointestinal and oral disorders, such as mucositis.[24]

By understanding the stomatotoxicity pathophysiology and the most antineoplastic inducer agents of oral mucositis, the nursing professional can draw, prior to the treatment submission, a specific care plan to each client, in order to interrupt the course of the deleterious effects and promote the life quality of patients. To identify nursing diagnoses, such as risk of impaired oral mucosa integrity, starting interventions and assessing the outcome thereof allow us to reflect on the good quality of care and accreditation of services that deal with the oncological audience.[25]

It should be denoted that a variety of used chemotherapic drugs was inversely proportional to the oral mucositis grade, since, in mucositis in the grades 1 and 2, one can observe the effect of 12 different antineoplastic agents, in each one, while this number falls to 8 different chemotherapic drugs in the mucositis in grade 3 and to 6 kinds of antineoplastic agents in the mucositis in grade 4.

This data is relevant to understand that oral mucositis acquires a greater grade of severity according to the dose volume and the chemotherapic drug type, and not through the variety of medications. The dose, chemotherapic drug type and administration time are predictive in the onset of oral mucositis and not the variety of medicinal drugs.[19]

One can understand that mucositis is a limiting condition to the oncological treatment, since it is capable of interrupting its continuity. In addition, it can be inferred that the interference in the oncological therapy is proportional to the mucositis grade, since the higher the graduation, the higher the oral and systemic impairment of the patient, due to bleeding, pain and diet restriction, which promotes nutritional and immunological weakness. Moreover, it represents a risk factor for sepsis in neutropenic patients, by increasing four times the relative risk for such a clinical picture[23-25], which can negatively influence in the remission and survival rates of patients. [26] Tasting changes, due to injuries in the taste buds by radiation and chemotherapic agents, influence the food intake and contribute to the worsening of the nutritional profile, usually, already harmed by the underlying disease.[27]

It is noteworthy to note that mucositis provokes interference in the oncological treatment, as well as becomes impactful for health systems. Such a sickness is burdensome, because of the possibility of extension of the admission days, coupled with local and systemic infections, supportive drug costs, such as opioids, anti-inflammatory medications and consumable stuffs.

The aggravating of this situation is the striking omission or lack of knowledge by nurses before this issue. Study about nursing professional practices in oral health of admitted children with cancer has pointed out to the absence of protocols with regard to oral hygiene and oral disease prevention arising from the oncological treatment. [28] Interventions are empirically prescribed without a solid foundation in scientific evidence, since a huge part of the

surveyed professionals in the study have demonstrated the lack of daily procedures regarding the oral health.

These results lead us back to a fragmented nursing care, in which a physical examination, diagnoses and interventions in the oral cavity seem to be realized as a field that goes beyond the competency of the nursing professional, which contradicts the semiological bases that are formers of such professionals, which recommend that the oral cavity examination is a part of the general physical examination of any patients served by the nurse and, when examining head and neck, it should inspect the oral cavity and tongue of the client, in order to detect any disease type and bacterial outbreaks. All this background corroborates the Holistic Care Theory of Myra Estrin Levine (internationally known as Levine's Conservation Theory), which gazes the patient as a dynamic and unique being in its completeness and wholeness and that nursing interventions should be centered in the adaptation and reaction of patients towards the injuries. The nursing professional, despite the emotional burden of the oncological patient itself, should exercise its resilience to provide an assistance strengthened by encouraging and emotional issues.[31]

CONCLUSION

From the discussed data, it is undeniable the relevance of the oral mucositis condition as an impactful factor to the life quality of the oncological patient. Therefore, drawing actual outcomes and indicators, which guide the nursing professional practice before the mucositis cases and that expose the severity of the issue in question, is the first step to establish a service that incorporates the technical quality and, especially, the practice of a true nursing care, by making use of empathetic and humanistic traces, which instigate the sensitivity of the subjects involved in the care. To empower the nursing professional practice with works that draw the profile of diseases and the affected audience is a way to make the labor routine closer to the scientific world and give subsidies for the strengthening of the profession and for the improvement of the care quality, in which the patient is the most favored subject.

REFERENCES

1. Santos PSS, Messagi AC, Mantesso A, Magalhães MHCG. Mucosite oral: perspectivas atuais na prevenção e tratamento. RGO. [periódico on line] 2009 Jul/Set; [citado 18 Nov 2012] 57(3):339-344. Disponível em: http://www.revistargo.com.br/ojs/index.php/revista/article/viewArticle/681

2. Oliveira BM, Diniz MS, Viana MB. Leucemias agudas na infância. Rev Assoc Med Minas Gerais. 2004; 14(Supl. 1): 33-39.

3. Albuquerque ILS, Camargo TC. Prevenção e tratamento da mucosite oral induzida por radioterapia: revisão de literatura. Revista Brasileira de Cancerologia. [periódico on line] 2007 Nov; [citado 18 Nov 2012] 53(2):195-209. Disponível em: http://www1.inca.gov.br/rbc/n_53/v02/pdf/revisao4.pdf

4. Ministério da Saúde (BR). Conselho Nacional de Saúde. Diretrizes e normas regulamentadoras da pesquisa envolvendo seres humanos: Resolução nº 196/96. Brasília (DF); 1996. [citado em 18 nov 2012]. Disponível em: URL: http://www.scielo.br/pdf/%0D/ramb/v50n4/22762.pdf

5. Instituto Nacional Do Cancer (INCA). Estimativas de câncer no Brasil. São Paulo(SP); 2010. [citado em 18 nov 2012]. Disponível em: URL: http://www.inca.gov.br/estimativa/2012/

6. Cheng KKF, Molassiotis A, Chang AM, Wai WC, Cheung SS. Evaluation of an oral care protocol intervention in the prevention of chemotherapy-induced oral mucositis in paediatric cancer patients. Eur J Cancer. [periódico on line] 2001; [citado 18 Nov 2012] 37:2056-2063. Disponível em: http://www.sciencedirect.com/science/article/pii/S0959804901000983

7. Sonis ST. The pathobiology of mucositis. Nat. Rev. Cancer. [periódico on line] 2004 Apr; [citado 18 Nov 2012] 4:277-284. Disponível em:

http://www.nature.com/nrc/journal/v4/n4/abs/nrc1318.html

8. Martins MCFN, Bógus CM. Considerações sobre a metodologia qualitativa como recurso para o estudo das ações de humanização em saúde. Saúde e Sociedade. [periódico on line] 2004 Set-Dez; [citado 18 Nov 2012] 13(3):44-57. Disponível em: http://www.scielo.br/pdf/sausoc/v13n3/06.pdf

9. Lopes LF, Mendes WF. Leucemias na infância. In: Camargo, B.; Lopes, L. F. Pediatria oncológica: noções fundamentais para o pediatra. 1ª ed. São Paulo: Lemar, cap.7, 2000, p.109-118.

10. Rutkauskas J S, Davis JW. Effects of chlorhexidine during imunossupressive chemotherapy: a preliminary report. Oral Surg Oral Med Oral Path. 1993; 76(4):441-448.

11. Parkin DM, Bray F, Ferlay J, Pisani P. Global cancer statistics, 2002. CA Cancer J Clin. [periódico on line] 2005 Mar/Apr; [citado 18 Nov 2012] 55:74-108. Disponível em: http://onlinelibrary.wiley.com/doi/10.3322/canjclin.55.2.74/full

12. Bonan PRF, Lopes MA, Alves FA, Almeida OP. Aspectos clínicos, biológicos, histopatológicos e tratamentos propostos para a mucosite oral induzida por radioterapia: revisão da literatura. Revista Brasileira de Cancerologia. [periódico on line] 2005 Mai; [citado 18 Nov 2012] 51(3):235-242. Disponível em: http://www.inca.gov.br/Rbc/n_51/v03/pdf/revisao2.pdf

13. Bellm LA, Epstein JB, Rose-Ped A, Martin P, Fuchs HJ. Patient reports of complications of bone marrow transplantation. Suport Care Cancer. [periódico on line] 2000 Dec; [citado 18 Nov 2012] 8(1):33-39. Disponível em: http://download.springer.com/static/pdf/26/art%253A10.1007%252Fs005209900095.pdf?auth66=1353262700_96263cb9358df72d88f47b0ff5357a56&ext=.pdf

14. Trotti A, Bellm LA, Epstein JB, Frame D, Fuchs HJ, Gwede CK et al. Mucositis incidence, severity and associated outcomes in patients with head and neck cancer receiving radiotherapy with or without chemotherapy: a systematic literature review. Radiother Oncol. [periódico on line] 2003; [citado 18 Nov 2012] 66(3):253-262. Disponível em: http://europepmc.org/abstract/MED/12742264

15. Turhal, NS, Erdal S, Karacay S. Efficacy of treatment to relieve mucositis-iunduced discomfort. Suport Care Cancer. [periódico on line] 2000 Oct; [citado 18 Nov 2012] 8:55-58. Disponível: http://download.springer.com/static/pdf/965/art%253A10.1007%252Fs005209900076.pdf?auth66=1353262400_5df9beb014c9e048de5ddfc0f6290158&ext=.pdf

16. Parulekar W, Mackenzie R, Bjamason G, Jordan RCK. Scoring oral mucositis. Oral Oncol. [periódico on line] 1998; [citado 18 Nov 2012] 34:63-71. Disponível em: http://www.sciencedirect.com/science/article/pii/S1368837597000651

17. Scully C, Sonis S, Diz PD. Oral mucositis. Oral Dis. [periódico on line] 2006 [citado 18 Nov 2012] 12(3):229-241. Disponível em: http://onlinelibrary.wiley.com/doi/10.1111/j.1601-0825.2006.01258.x/abstract;jsessionid=805CC01D001C9284DC911FB837224D83.d01t02?deniedAccessCustomisedMessage=&userIsAuthenticated=false

18. Franceschini C, Jung JE, Amante CJ. Mucosite oral pós-quimioterapia em pacientes submetidos à supressãode medula óssea. Rev Bras Patol Oral. [periódico on line] 2003 Jan/Mar; [citado 18 Nov 2012] 2(1):40-43. Disponível em: http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=BBO&lang=p&nextAction=lnk&exprSearch=20821&indexSearch=ID

19. Pico JL, Ávila-Garavito A,Naccachic P. Mucosits: its occurrence, consequences and treatment in the oncology setting. Oncologist. 1998 Jan/Mar;3:446-451.

20. Kelner N, Castro JFL. Laser de baixa intensidade no tratamento da mucosite oral induzida pela radioterapia: relato de casos clínicos. Revista Brasileira de Cancerologia. 2007 Dez/Fev;53(1):29-33.

21. Scully C, Epstein JB. Oral health care for the cancer patient. Eur J Cancer B Oral Oncol [periódico on line] 1996; [citado 18 Nov 2012] 32B(5):281-92. Disponível em: http://www.sciencedirect.com/science/article/pii/0964195596000371

22. Skeel RT. Manual de quimioterapia. 3ª ed. Rio de Janeiro: Medsi; 1993.

23. Epstein JB, Schubert MM. Management of orofacial pain in cancer patients. Oral Oncol [periódico on line] 1993; [citado 18 Nov 2012] 29B(4)243-250. Disponível em: http://www.sciencedirect.com/science/article/pii/096419559390043E

24. Bechard LJ. Nutrition Suport Care. In: Pizzo PA, Poplack DG. Principles and practice of pediatric oncology. Philadelphia: Lippincot Williams & Wilkins, p.1285-1300, 2002.

25. Carpenito-moyet, LJ. Manual de diagnósticos de enfermagem. 11ª ed. Porto Alegre: Artmed; 2008.

26. Silverman S. Diagnosis and management of oral mucositis. J Supp Oncol Otorrinolaringol [periódico on line] 2007 Feb; [citado 18 Nov 2012] 5(2)Supl.1:13-21. Disponível em: http://www.oncologypractice.com/jso/journal/articles/0502s113.pdf

27. Labbate R, Lehn CN, Denardin OVP. Efeito da clorexidina na mucosite induzida por radioterapia em câncer de cabeça e pescoço. Rev Bras Otorrinolaringol [periódico on line] 2003 Mai/Jun; [citado 18 Nov 2012] 69(3):349-54. Disponível em: http://www.scielo.br/pdf/rboto/v69n3/v69n3a09.pdf

28. Barbosa AM, Ribeiro DM, Caldo-Teixeira AS. Conhecimentos e práticas em saúde bucal com crianças hospitalizadas com câncer. Ciência & Saúde Coletiva. 2010; Ciênc saúde coletiva [periódico on line] 2010 Jan/Jun; [citado 18 Nov 2012] 15(Supl.1): 1113-1122. Disponível em: http://www.scielosp.org/pdf/csc/v15s1/019.pdf

29. Barros ALBL. Anamnese e exame físico: avaliação diagnostica de enfermagem no adulto. Porto Alegre: Artmed; 2002.

30. Mcewen M, Wills EM. Bases teóricas para enfermagem. 2ª ed. Porto Alegre: Artmed; 2009.

31. Alcantara TC, Nascimento SM, Sória DAC. A resiliência do enfermeiro oncológico. Cuid fundam [periódico on line] 2010 Out/Dez; [citado 18 Nov 2012] 2(Ed. Supl.):875-877,2010. Disponível em: http://www.seer.unirio.br/index.php/cuidadofundamental/article/viewArticle/1164.

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