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ORIGINAL ARTICLE

Assessment of the quality of life of elderly with diagnosis of oral squamous cell carcinoma submitted to combined modality therapy

Avaliação da qualidade de vida de idosos com diagnóstico de carcinoma oral de células escamosas, submetidos à terapia combinada

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Abstract

Introduction: Evaluating the quality of life allows a more accurate clinical control as well as the provision of prognostic information for specific groups. This study was designed to evaluate the quality of life of elderly diagnosed with oral squamous cell carcinoma submitted to combined modality therapy. **Methods**: This is a retrospective and observational study, with cross-sectional quantitative character. A total of 206 records of patients with head and neck cancer treated between April 2013 and October 2014 were analyzed. Eleven patients over six months of treatment completion were included in the study. The questionnaire of quality of life of the University of Washington (UW-QOL) was applied. The data were collected regarding the social-demographic, clinical-pathological and therapeutic profiles, and the non-stimulated salivary flow was measured. Statistical analysis of quantitative data was performed by the Spearman nonlinear correlation, considering a confidence of 95%. **Results:** Chewing, saliva and speech showed the lowest scores (31.8; 42.3; 60.6, respectively). Statistically significant correlation was found between: shoulder and mood (r=0.787); swallowing and chewing (r=0.761); completion time of radiotherapy and recreation (r=0.659); activity and recreation (r=0.653); pain and swallowing (r=0.626); chewing and speech (r=0.607); age and speech (r=-0.617). **Conclusions**: Elderly with oral squamous cell carcinoma diagnosis sunmitted to combined modality therapy presented the areas related to chewing, saliva and speech as the most committed ones. Older individuals have greater impairment of speech, as well as those with longer completion of radiotherapy have better results related to the recreation area.

Key words: Elderly. Mouth neoplasms. Quality of life. Combined modality therapy.

Resumo

Introdução: A avaliação da qualidade de vida permite controle clínico confiável e provisão prognóstica para grupos específicos. Este estudo foi desenhado para avaliar a qualidade de vida de idosos com diagnóstico de carcinoma oral de células escamosas submetidos à terapia combinada. **Método**: Trata-se de estudo observacional e retrospectivo, de caráter quantitativo com corte transversal. Foi analisado um total de 206 prontuários de pacientes com câncer de cabeça e pescoço tratados entre abril de 2013 e outubro de 2014. Onze pacientes com mais de seis meses de conclusão do tratamento foram incluídos no estudo. O questionário de qualidade de vida da Universidade de Washington (UW-QOL) foi aplicado. Foram coletados dados relacionados ao perfil sociodemográfico, clínicopatológico e terapêutico, e foi mensurado fluxo salivar não estimulado. A análise estatística dos dados quantitativos foi realizada por meio da correlação não linear de Spearman, considerando uma confiança de 95%. **Resultados**: Mastigação, saliva e fala apresentaram os menores escores (31,8; 42,3; 60,6, respectivamente). A correlação estatisticamente significante foi observada entre: ombro e humor (r=0,778); deglutição e mastigação (r=0,761); tempo de conclusão da radioterapia e recreação (r=0,659); atividade e recreação (r=0,653); dor e deglutição (r=0,626); mastigação e fala (r=0,607); idade e fala (r=-0,617). **Conclusões**: Idosos com carcinoma oral de células escamosas, submetidos à terapia combinada, apresentaram áreas relacionadas à mastigação, à saliva e à fala como as mais acometidas. Indivíduos mais velhos apresentaram maior comprometimento da fala, assim como os que apresentavam maior tempo de conclusão da radioterapia apresentaram melhores resultados relacionados à recreação.

Palavras-chave: Idoso. Neoplasias bucais. Qualidade de vida. Terapia combinada.

INTRODUCTION

Aging is a process that occurs throughout the life cycle in an individual, heterogeneous and multifactorial manner. In the decision of therapeutic procedures, functional age seems to be more important than chronological age by considering the presence of comorbidities, geriatric syndromes and cognitive impairment[1,2].

Cancer is considered a worldwide problem public health due to its incapacitating sequelae and high mortality[3]. The increased life expectancy is accompanied by an increasing number of cancer cases. Specific physiological changes and comorbidities related to senility, as the deterioration of cardiac, respiratory, renal and immunological functions, can affect the tolerance to

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anticancer treatment, as well as interfere with its results[4].

The oral cavity is the most affected by malignant lesions in head and neck region, and the 11th most common malignancy, accounting for about 5% of all cancers[5]. Malignant tumors comprise more than 15% of oral amendments submitted to biopsy in the geriatric population, being surpassed only by reactive/inflammatory lesions[6]. The average age of patients with oral cancer at the moment of the diagnosis is 62 years[7].

The management of oral cancer is largely surgical[8]. Even though, for advanced lesions, radiotherapy and chemotherapy can be used in postoperative adjuvant therapy, with the objective of locally controling the disease and improving the survival rate[8,9,10].

In addition to the morbidity of cancer, its treatment causes numerous side effects, many of which present in the oral cavity. The complications that can be observed in patients undergoing radiation in orofacial region are mucositis, radiodermatitis, hyposalivation, xerostomia, radiation caries, ageusia, trismus, necrosis of soft tissue and osteoradionecrosis[10]. Oral cavity cancer and its treatment results in important physical, functional, emotional and social changes, with significant negative impact on quality of life[5].

One of the ways to evaluate the health status of the elderly is the analysis of the self-perception of health. It can effectively predict mortality and functional decline[11]. The quality of life is defined as the individual's perception of his/her position in life in the context of culture and value systems where he/she lives and in relation to his/her goals, expectations, standards and concerns[12]. Evaluating the quality of life allows a more accurate clinical control as well as the provision of prognostic information for specific groups[13].

Given the above, the present study has the objective of evaluating the quality of life through a questionnaire of the University of Washington (UW-QOL) of elderly diagnosed with oral squamous cell carcinoma (SCC) treated by combined modality therapy, investigating the factors correlated with the results and identifying the functional, social and emotional areas affected the most by antineoplastic therapy.

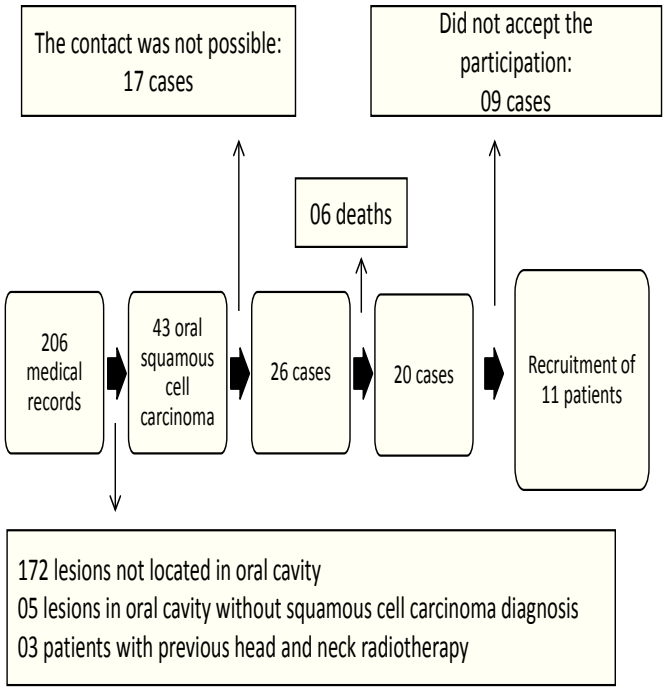
METHODS

This is a retrospective and observational study, with cross-sectional quantitative character. The sample consisted of individuals in post-treatment of the oral cancer submitted to combined modality therapy at the Hospital Haroldo Juaçaba – Instituto do Câncer do Ceará, reference unit in the state of Ceará, Brazil.

The following inclusion criteria were considered: lesions with diagnosis of oral SCC; and patients who underwent combined modality therapy with time between 6 and 24 months of completion of treatment. The topographical classification of the oral cavity according to the literature was considered[14]. The exclusion criteria were: lesions without histopathologic diagnosis of SCC; injuries not located in the oral cavity; patients who previously underwent radiotherapy in head and neck.

A total of 206 medical records of patients attended between April 2013 and October 2014 by the services of Radiotherapy and Head and Neck Surgery was analyzed. Forty-three individuals followed the inclusion criteria (Figure 1). Social-demographic, clinical-pathological and therapeutic data were collected from the medical records.

Figure 1. Combined modality therapy in elderly with oral cancer



It was decided that the patients who met the inclusion criteria would be invited to participate in the survey by telephone, being informed that the study would be conducted at the Stomatology Clinic of the Universidade Federal do Ceará. Figure 1 shows the patients' recruitment for the research. The participants' medical records were fulfilled, and aditional information was collected by anamnesis.

Sampling calculation

Study published in 2010 evaluated a group of 80 patients and investigated the factors associated with decreased quality of life. In their study, they observed that age was a factor that increased by 4.82 times the relative risk of decreasing the quality of life of elderly patients. Based on this risk, adopting a confidence of 95%, a power of 90% and a maximum follow-up of 102 months, it is necessary to evaluate ten patients in order to obtain a representative sample of a population of elderly

patients with a decrease of quality of life after radiotherapy[15].

Quality of life

The quality of life of patients who underwent combined modality therapy was evaluated by applying specific questionnaire for patients with head and neck cancer, concise and easy to apply, created by Ernest A. Weymuller Jr. at the University of Washington, Seattle (questionnaire UW- QOL). Its current version is composed of twelve questions related to pain, appearance, activity, recreation, swallowing, chewing, speech, shoulder, saliva, taste, mood and anxiety. Each question has from three to five response categories with scores ranging from 0 (worst) to 100 (best). The questionnaire allows the interviewee to choose the three most importante areas among the previously evaluated ones. Global issues are also included: how the patients feel when comparing their lives before and after cancer; their quality of life related to health; and quality of life in general. The questionnaire was translated into Portuguese and validated by the Cancer Hospital A. C. Camargo of São Paulo[16].

The research instrument is a self-report and individual type; however, illiterate individuals or with difficulties of understanding were aided by the researcher during the questionnaire.

Measurement of the non-stimulated salivary flow

The measurement of the salivary flow was performed by the spitting method with collection of the non-stimulated saliva. The patients were instructed not to eat or drink and perform oral hygiene an hour before the examination. All measurements were performed during the morning shift, avoiding circadian variations of salivary flow. At the time of collection, each individual was positioned sitting with the head slightly bent down and was instructed not to swallow or move the tongue and lips. During one minute, the saliva was accumulated in the mouth and then expelled inside sample cups. This procedure was performed five times for a total of five minutes. The collected material was measured, and the obtained volume, in milliliters (ml), divided by the time. The non-stimulated collected saliva is a more reliable indicator of reduced salivary flow and hyposalivation than stimulated saliva[17].

The classification of hyposalivation in different intensities was considered according to the literature, depending on the non-stimulated salivary flow (light: value > 0.2 ml/minute; moderate 0.1 - 0.2 ml/minute; severe: <0.1 ml/minute)[18].

Statistical analysis

The categorical data were exposed as absolute frequency and percentage, and the quantitative data, as mean ± standard deviation, followed by its minimum and maximum. The statistical analysis of quantitative data was performed by the nonlinear correlation of Spearman.

The data were analyzed using the software Statistical Package for Social Sciences, version 17.0 for Windows, considering a confidence of 95%.

Ethical considerations

This study is in agreement with Declaration of Helsinki. It was approved by the Human Research Ethics Committee of the Universidade Federal do Ceará and the Instituto do Câncer do Ceará, Fortaleza, Ceará, Brazil (numbers 851.482 and 888.617, respectively). All patients signed the Informed Consent Form. Dental care with the purpose of prevention, diagnosis and management of side effects of therapy was guaranteed to all participants.

RESULTS

Eleven patients were included in the study (Figure 1). There was a predominance of male patients (81.81%) (Table1). The mean age was 63.2 years with a standard deviation of 7.9 (ranging from 53 to 77 years) (Table 2). Most of the patients presented lesions in the mouth floor (45.45%), stage IV (54.54%), and underwent surgical resection combined with radiotherapy (100%). Table 1 shows social-demographic profile and clinical-pathogical and therapeutical features related to patients. 90.9% were smokers in pre-treatment period. Table 3 summarizes predisposing factors to patient-related as smoking, acohol consumption and exposure to sunlight. Time of completion in months and duration in days of the radiotherapy and the used radiation dose in patients is showed in table 2.

UW-QOL Questionnaire

Chewing, with the lowest average obtained score (31.8), proved to be the clinical domain with the worst perfomance. Next, the following domains presented in ascending order of score: saliva (42.3), speech (60.6), shoulder (63.6), swallowing (63.7), appearance (68.2), mood (70.5), activity and recreation (72.7), pain (77.3), anxiety (78.9), and, at last, with the highest average obtained (81.8), taste, which proved to be the clinical domain with the best performance (Table 2).

Pain, chewing, speech, taste and saliva were the areas considered as one of the three most important by survey participants, most frequently, being each one selected by four patients (36.36%). Appearance and mood were mentioned by two individuals (18.18%) each. Activity, shoulder and anxiety were mentioned by one individual (9.09%). The domains associated with swallowing and recreation were not mentioned by any of the participants. One patient did not choose any of the domains.

When asked about the classification of the quality of life related to health compared to the month prior to the development of cancer, five (45.45%) answered “somewhat better” or “much better”. When asked about the classification of the quality of life related to health in the last seven days, considering the

questionnaire application moment: seven individuals (63.63%) answered "fair". When asked about the classification of the quality of life in general (given all that contributes to personal well-being) in the last seven days, considering the questionnaire application moment, six (54.54%) answered "fair" (Table 2).

Table 1. Social-demographic profile and clinical-pathogical and therapeutical features related to patients with diagnosis of squamous cell carcinoma of the oral cavity submitted to combined modality therapy at the Hospital Haroldo Juaçaba – Instituto do Câncer do Ceará, from April 2013 to October 2014.

Characteristics	Number of individuals (%)
Gender	
Male	9 (81.81)
Female	2 (18.18)
Educational attainment	
Illiterate	5 (45.45)
Incomplete primary education	5 (45.45)
Complete higher education	1 (9.09)
Marital status	
Married or stable union	8 (72.72)
Divorced (judicially or non-judicially)	2 (18.18)
Widower	1 (9.09)
Professional activity	
Active	1 (9.09)
Inactive	10 (90.9)
Site	
Mouth floor	5 (45.45)
Tongue	4 (36.36)
Others	2 (18.18)
Tnm stage	
I/II	1 (9.09)
III/IV	10 (90.9)
Oral health	
Adequacy of the oral cavity prior to radiotherapy	4 (36.36)
Absense of consultation with a dentist prior to radiotherapy	7 (63.63)
Treatment	
Surgery + radiotherapy	6 (54.54)
Surgery + radiotherapy + quimiotherapy	5 (45.45)
Neck dissection	
Unilateral	2 (18.18)
Bilateral	7 (63.63)
None	2 (18.18)
Two-dimensional radiotherapy	11 (100.00)
Post-operative radiotherapy	11 (100.00)

Measurement of the non-stimulated salivary flow

Ten participants had severe hyposalivation: nine had zero salivary flow (00 ml/min) and one had a flow of 0.04 ml/min. One participant had moderate hyposalivation with flow of 0.12 ml/min (Table 2).

Spearman non-linear correlation

Table 4 shows variables that presented statistically significant correlation.

Table 2. Age, time of completion and duration of the radiotherapy, radiation dose, salivar flow and quality of life evaluated by patients with diagnosis of squamous cell carcinoma of the oral cavity submitted to combined modality therapy at the Hospital Haroldo Juaçaba – Instituto do Câncer do Ceará, from April 2013 to October 2014, by questionnaire of quality of life.

Characteristics	Average	Standard-deviation	Minimum	Maximum
Age (years)	63.2	7.9	53	77
Completion of radiotherapy (months)	15.5	5.1	6	22
Duration of radiotheapy (days)	57.5	8.8	48	80
Radiation dose (gray)	64	3	60	70
Salivary flow (mililiter/minute)	0.01	0.0	0.0	0.12
Domains				
Chewing	31.8	33.7	0	100
Saliva	42.3	33.7	0	100
Speech	60.6	25.2	33	100
Shoulder	63.6	40.8	0	100
Swallowing	63.7	23.5	33	100
Appearance	68.2	22.6	25	100
Mood	70.5	24.5	25	100
Activity	72.7	30.5	0	100
Recreation	72.7	32.5	25	100
Pain	77.3	23.6	50	100
Anxiety	78.9	22.5	33	100
Taste	81.8	27.4	33	100
Health-related quality of life compared to the month before cancer developement				
Much better/Somewhat better				45.45%
About the same				27.27%
Somewhat worse/ Much worse				27.27%
Health-related quality of life during the past 7 days				
Outstanding/Very good/Good				36.36%
Fair				63.63%
Poor / Very poor				0.0%

Characteristics	Average	Standard-deviation	Minimum	Maximum
Overall quality of life during the past 7 days				
Outstanding /Very good/ Good				36.36%
Fair				54.54%
Poor / Very poor				9.09%

Table 3. Smoking habits, alcohol consumption and exposure to sunlight of the patients with squamous cell carcinoma of the oral cavity submitted to combined modality therapy at the Hospital Haroldo Juaçaba – Instituto do Câncer do Ceará, from April 2013 to October 2014.

Predisposing factors	Number of individuals (%)
PRE-TREATMENT SMOKING	10 (90.90)
Smoking time	
< 30 years	01 (9.09)
> 30 years	09 (81.81)
Type of cigarette	
Industrialized	6 (54.54)
Handmade	2 (18.18)
Industrialized + handmade	2 (18.18)
Number of cigarettes/day	
< 10 cigarettes	3 (27.27)
> 10 cigarettes	6 (54.54)
Non-informed	1 (9.09)
POST-TREATMENT SMOKING	**0 (00)**
PRE-TREATMENT ACOHOL CONSUMPTION	**10 (90.90)**
Acohol consumption time	
< 30 years	2 (18.18)
> 30 years	8 (72.72)
Type of beverage	
Cachaça (associated or not with others)	8 (72.72)
Beer	1 (9.09)
Wine	1 (9.09)
Frequency	
< 5 days/week	4 (36.36)
Daily	6 (54.54)
POST-TREATMENT ACOHOL CONSUMPTION	1 (9.09)
PRE-TREATMENT EXPOSURE TO SUNLIGHT	10 (90.90)
Protection against sunlight	
Hat	8 (72.72)
POST-TREATMENT EXPOSURETO SUNLIGHT	2 (18.18)
Protection against sunlight	
Hat	1 (9.09)
Hat + lip balm	1 (9.09)

Table 4. Analysis of the correlation between the quantitative variables related to patients with diagnosis of squamous cell carcinoma of the oral cavity submitted to combined modality therapy at the Hospital Haroldo Juaçaba – Instituto do Câncer do Ceará, from April 2013 to October 2014, with data expressed as "r" and "p-value", when $p < 0.05$.

Variables	r	p-value
Shoulder vs Mood	0.787**	0.004
Swallowing vs Chewing	0.761**	0.007
Recreation vs Time of completion of radiotherapy	0.659*	0.027
Activity vs Recreation	0.653*	0.030
Pain vs Swallowing	0.626*	0.039
Chewing vs Speech	0.607*	0.048
Age vs Speech	-0.617*	0.043

*p<0.05, **p<0.01

DISCUSSION

A study published in 2011, which compared the quality of life related to health of patients with head and neck cancer who underwent different forms of radiotherapy, showed significantly high correlation between the scales assessed by the questionnaire on quality of life[19].

Similarly, in the present study, there was interdependence between some domains analyzed by the UW-QOL questionnaire, suggesting that interventions focused on a specific function of the head and neck regions in order to minimize sequelae may reflect in other areas, converging to the improvement of the quality of life. Chewing proved important due to its correlation with the other two areas, suggesting that the role of the dentist in rehab for dental prostheses can also bring benefits to swallowing and speech. The dependence between pain and swallowing assumes the management (medical or otherwise) of painful symptoms can result in improvements to both. Similarly, the speech therapy can also benefit chewing, given the correlation between these domains.

Literature demonstrates that domains related to quality of life show clinical improvement over time after completion of the treatment of head and neck cancer[20,21]. The statistical analysis in the present study showed that patients with longer completion time of radiotherapy had higher scores (clinically better) regarding recreation. This indicates that, in late post-treatment, activities related to fun in environments outside the home become more frequently adopted over time.

A study published in 2013 evaluated the quality of life of patients who underwent maxillectomy or mandibulectomy/glossectomy for the treatment of head and neck cancer and users of intraoral prostheses[22]. It was observed that the recreation area and the quality of life related to health showed greater impairment when associating the resection of the upper arch with radiotherapy. In the present study, the only patient who underwent palate

tumor resection had the highest positive evaluation to the recreation area, and rated his quality of life related to health as excellent, contradicting the findings of the referred study. The divergence of results reinforces the subjective nature of the assessment of quality of life.

Among the evaluated areas, only speech showed a statistically significant correlation with age, demonstrating the relative similarity of quality of life among the study participants. Older individuals reported greater difficulties in being understood during a dialogue, indicating the need for speech therapy focused on this population.

The speech is one of the three most affected areas among the evaluated domains in this study. Only two individuals (18.18%) reported absence of any commitment. In a study published in 2014, with patients between the fifth and eighth decades of life subjected to intensity modulated radiotherapy (IMRT) for the treatment of advanced oropharyngeal cancer, voice and speech impairment have been frequently reported. Voice quality showed maximum commitment in the first year after therapy, with complete recovery after 12-18 months[21]. The results are in agreement with the present study, since 75% of those who chose the answer "Only my family and friends can understand me" were between the sixth and 13th post-radiotherapy month, and 100% of those who reported total lack of speech commitment were between the 16th and 22nd months after radiotherapy.

A study published in 2013, with patients who underwent the resection of tongue and/or mouth floor SCC T1/T2 followed by surgical reconstruction (mean age 58.15 years), found that the use of radiotherapy and the realization of bilateral neck dissection resulted in poorer functional performance of speech[23]. The results are consistent with the findings of this study, since all those who claimed to be understood only by family and friends underwent both radiation treatment as the dissection of right and left side of lymph nodes.

Chewing, with the lowest average among the evaluated areas, had the worst clinical deterioration in this study. Only one individual (9.09% of the sample) chose to answer the item "I can chew as well as ever".

Considering the study published in 2013, with patients who underwent the ressection of oral tumor followed by rehabilitation with prostheses, 47% considered their quality of life as very good or excellent24. In the present study, with marked chewing impairment, only 27.27% and 18.18% of the sample considered their health-related quality of life and overall quality of life, respectively, as very good and excellent. Comparing the results reinforces the importance of rehabilitation by dental prostheses for patients after treatment of oral cancer.

Following the classification of hyposalivation, according to the literature[18], the measurement of salivary production in this study showed moderate hyposalivation for one participant (0.12 ml/min) and severe for the others (between 0.0 and 0.04 ml/min). Although there is no statistically significant correlation, the low values achieved are in accordance with the results of the UW-QOL questionnaire, which showed the saliva domain as the second worst clinical performance. Only two individuals (18.18% of the sample) showed the best clinical evaluation response.

Study published in 2012 evaluated the effects of radiotherapy on salivary function in individuals with nasopharyngeal carcinoma. After two months of treatment, the average parotid stimulated salivary flow was reduced by 75%, whereas the average of the overall stimulated salivary flow was reduced by 85.6%. There was full recovery of the parotid production after a year of the completion of radiotherapy, which remained until the second year[20]. In contrast, the incomplete recovery of total saliva production has been identified after one year, with 60% of the reduction still present two years after the treatment. This results are in line with the poor assessment of salivary function, by both the UW-QOL questionnaire as the measurement of the production of saliva in the present study.

The negative performance of salivary function observed in the participants of this research can be justified by the use of two-dimensional radiotherapy (2DRT) throughout the sample. Thus, one reinforces the need to use more advanced radiotherapy modalities such as IMRT, in order to protect healthy anatomical structures, such as the major salivary glands, from exposure to unnecessary radiation, focused on preventing sequelae.

Taste, with the highest average among the evaluated areas, had the best clinical performance. The participants pointed out as response the option "I normally feel the food's taste", representing 63.63% of the sample. Study published in 2013 evaluated the taste condition after head and neck radiotherapy and its impact on the quality of life. All patients had some degree of dysgeusia, being the total loss of the sense observed in 72.2% of the cases[25].

The poor results related to the taste found by the referred study[25], in patients in the end of the third post-radiotherapy week, is opposite to the satisfactory performance observed in the present study, with a minimum of six months after the radiotherapy. It is suggested, therefore, that the gustatory sensation goes through a recovery process with the passage of time after exposing the tongue to radiation, even in patients who underwent glossectomy, who prevailed at the Hospital Haroldo Juaçaba – Instituto do Câncer do Ceará.

Study published in 2013 evaluated the quality of life of patients with head and neck cancer during the follow-up of three months after radiotherapy. Patients over 60 years had better quality of post-radiotherapy life when compared to younger subjects, in all areas (except for insomnia and constipation, which are natural effects of senility), with a statistically significant difference for the taste, smell, loss weight, and overall health[26].

In the present study, all patients in the eighth decade of life reported total preservation of taste sensation, whereas over half of those in the sixth decade reported some degree of dysgeusia. These results are consistent with the referred study[26] and suggest that patients undergoing head and neck radiotherapy in old age tend to have less impairment of taste.

Studies in patients with head and neck cancer have shown that combined treatment modalities have a cumulative effect on the incidence and severity of adverse effects, as well as on quality of life impairment[27,28,29]. The present study is in accordance with the literature, since individuals submitted to chemotherapy presented greater impairment in the domains related to appearance, activity, recreation, swallowing, chewing, speech, shoulder, taste, saliva and mood.

Some limitations are observed in the present study: the sample was composed by a limited number of participants; only one cancer treatment center was considered in the research; and absence of pre-treatment antineoplastic data for comparisons. The association of all these factors limits the statistical analysis and the generalization of the results, being necessary caution in the interpretation of the findings. Besides, the present study is not able to detect the impact of each type of treatment separately in patients' quality of life.

This study concludes that elderly with oral SCCs diagnosis submitted to combined modality therapy feature fields related to chewing, saliva and speech as the most committed. Individuals with more advanced ages have greater impairment of speech, as well as those with radiotherapy completion time show better results related to the recreation area. The evaluation of quality of life in post-treatment time can help determine the profile of the patient and his/her needs, guiding the improvement of multidisciplinary care services for preventing and controlling sequelae.

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