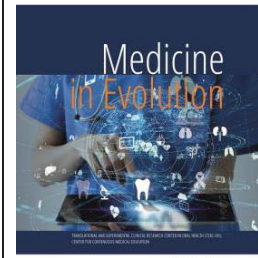


Therapeutical related quality of life in oncologic patient



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Abstract

Cancer, a word that is becoming more and more common nowadays, is an abnormal cell proliferation followed by its spread to the rest of the body. The aim of the paper is to assess the quality of life of patients with cancer. We follow both the etiological factors of the diseases, also the side effects of the performed therapy and the correlation of the obtained data from the completion of a questionnaire containing 19 questions. The average age for females is 52 years, compared to 48 years for males. Of the study group 71% had difficulty closing / opening the oral cavity, 32% stated that their pathology was in stage III (32%), the highest percentage of oncological treatment was occupied by chemotherapy and radiotherapy. Regarding the risk factors that could cause malignancies, 59% of the study group stated that they were smokers. Pain or discomfort when chewing are present quite often in 36% of respondents and 18% very often. Correlating a patient's health history, observed clinical changes, and the relative risk associated with prompt use of appropriate and proven diagnostic methods will ensure that physicians provide patients with an optimal level of management for a possible long-term satisfactory outcome.

Keywords: cancer, head, neck, quality of life

INTRODUCTION

Oral cancer is an extremely relevant issue for global public health. It is ranked in the top 10 neoplastic diseases, is the sixth most common malignancy worldwide, and despite advances in research and therapy, survival has not improved significantly in recent years, posing a continuing challenge to biomedical science [1]. Oral cancer metastasis is a complex process that involves detachment of tumor tissue cells, regulating cell motility and invasion, proliferation and evasion through the lymphatic system or blood vessels, a continuous chain that leads to a negative influence on quality of life.

Cancer is caused by a mutation of a normal gene. The scientific name for mutant genes is called oncogenes. Studies have shown that more mutations are needed to cause cancer. Old or physiologically malfunctioning cells self-destruct and are replaced by other young new cells. As for cancer cells, they do not self-destruct but continue to divide producing millions of new cancer cells [2].

Oral cancer patients undergoing treatment suffer from a wide range of side effects, both physical and psychological.

Treatment side effects, both short-term and long-term, can affect the quality of life for the cancer survivor [3].

These complications require special attention for their prevention and treatment, pre-treatment assessment and stabilization of the disease are needed for each patient, counseling patients before and during radiation therapy is important to help them become aware of oral complications and prevent them. [4]

Acute effects usually develop at the beginning of the radiation treatment period and persist 2-3 weeks after the end of treatment, while late effects may become apparent at any time after the end of treatment, ranging from weeks to years. The changes in pH and salivary flow are due to damage to the glandular tissue, leading to fibrosis, degeneration, acinar atrophy and cell necrosis producing dry mouth (xerostomia) and clinically reversible hyposalivation, local diseases caused by bacteria and fungi, halitosis and high discomfort when using mobile prostheses, changes in taste (dysgeusia), functional impairment when swallowing, speech and other complications of hard tissues. [4].

Oral mucositis is a condition characterized by ulcerative lesions of the mucous membranes of patients undergoing radiation or chemotherapy. Oral mucositis is currently considered to be the most severe complication of anticancer therapy, affecting 40-80% of patients undergoing chemotherapy and almost all those undergoing radiotherapy at the cephalic extremity. The incidence of oral mucositis ranges from 40 to 76% in patients undergoing chemotherapy and can reach 90% in patients receiving radiation therapy to the head and neck. These values increase when there is an association between chemotherapy and radiation therapy [4,5].

Oral lesions lead to a considerable decrease in the quality of life for these patients due to dysphagia (difficulty feeding) with solid and liquid food, dysarthria (poor coordination of speech muscles) and odynophagia (pain or burning sensation on swallowing); In addition, the lesions may be a gateway for opportunistic infections. [6]

Poor oral hygiene and inadequate prosthetic restorations can exacerbate oral ulcers. [4,5]

Most oral cancers are found in advanced stages (stage III or IV), usually when they have metastasized to another area, most often in the lymph nodes of the throat. Being difficult to detect, the patient has no symptoms and has a high risk of producing secondary tumors.

Aim and objectives

The aim of the paper is to assess the quality of life of patients with cancer. We follow both the etiological factors of the diseases and the side effects of the performed therapy and the correlation of the obtained data from the completion of a questionnaire containing 19 questions.

The study aims to correlate the obtained results by age groups, sex, location of the tumor and its stage, associating these results with vicious habits that are considered risk factors. We look which side effects have a greater predisposition to appear and how the quality of life has been influenced.

MATERIAL AND METHODS

The study was performed on a group of 277 patients aged 18-78 years.

Inclusion criteria: diagnosed patients with stage I, II, III or IV malignancy, a condition that must be located in the head-neck, have undergone or are undergoing treatment consisting of radiotherapy, chemotherapy, immunotherapy, surgical treatment or combinations thereof.

Exclusion criteria: patients with malignancies other than head-neck, patients with neck cancer but have not received any of the above treatments.

Taking into account the inclusion and exclusion criteria, only patients who were included in the study completed the questionnaire. Some patients completed the questionnaire online based on a platform, while another part of the patients completed the physical questionnaire in collaboration with the Oncohelp Medical Center Timisoara.

The patient questionnaire was a 19-questions questionnaire. It was piloted on 20 patients to see if the patients understood the asked questions. Subsequently, the questionnaire was widely applied. It includes relevant questions to assess the quality of the patients' life with oncological disease following or undergoing treatment consisting of chemotherapy, radiotherapy, immunotherapy, surgical treatment or the combination of these, highlight whether or not there have been changes in the oral cavity due to the treatment of the disease. What are these changes and how have they influenced the quality of life in terms of pain and physical disability, functional limitation, psychological discomfort and social disability. The questions had multiple answers attached. Study participants signed the patient's agreements.

After receiving the results from the questionnaires, their statistics were made using the Microsoft Excel program, for each question depending on the answer, but also associations between certain questions in order to highlight important data.

RESULTS

Following the statistical analysis, the average age data for females who were included in the study is 52 years, and for males is 48 years, the share by gender of patients was predominant female 58%, and males were 42%.

Depending on the environment they come from, it was established that 69% of the respondents are from urban areas, and 31% are from rural areas.

Depending on the location of the predominant tumor, malignant tumors are found in the tongue (25%), followed by the nasopharynx (14%), oropharynx, larynx, buccal floor and submandibular glands (10%), tonsils (8%), parotid gland (7%), eyes (2%) and brain (3%).

Tumor location by sex predominates in males for cancer of the tonsils, parotid gland, lingual floor, eyes, brain. (Fig. 1)

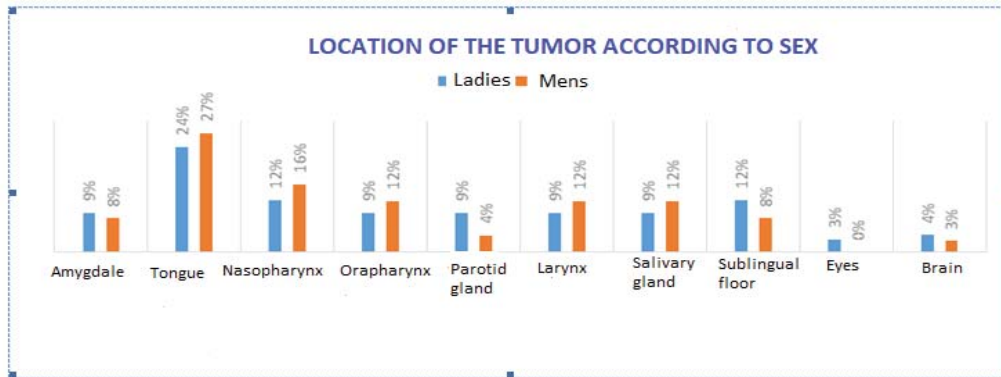


Figure 1. Tumor location by sex

Most respondents stated that their pathology was in stage III (32%), followed by stage IV (31%), stage II (27%), and in the incipient stage-stage I only 10% were discovered.

Regarding the oncological treatment, the highest percentage was occupied by chemotherapy and radiotherapy, followed by chemotherapy, radiotherapy and surgical treatment (15%) and radiotherapy with surgical treatment (14%).

Regarding the risk factors that could cause malignancies, 59% of the study group stated that they were smokers. Depending on the frequency of alcohol consumption, 34% drank alcohol occasionally, 24% frequently, 18% rarely, and 24% never drank alcohol. Diseases of the oral cavity were present even before the starting of treatments for most of the surveyed patients (68%), instead the quality of life of cancer patients decreases when starting the treatment. Pain or discomfort when chewing are present quite often in 36% of respondents, 18% very often and 29% occasionally. (Fig. 2) 69% of patients developed difficulties in opening and closing the oral cavity after treatment.

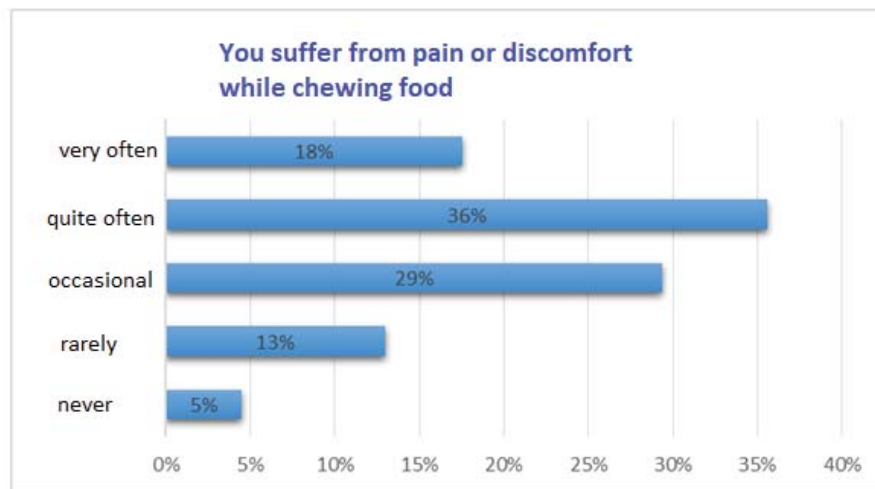


Figure 2. Discomfort during chewing

Of the patients who presented trismus (lockjaw), most were treated with radiation therapy or combinations of treatments which included radiotherapy. Of these, 71% had difficulty closing/opening the oral cavity (trismus), and 29% of patients did not have this condition. (Fig.3)

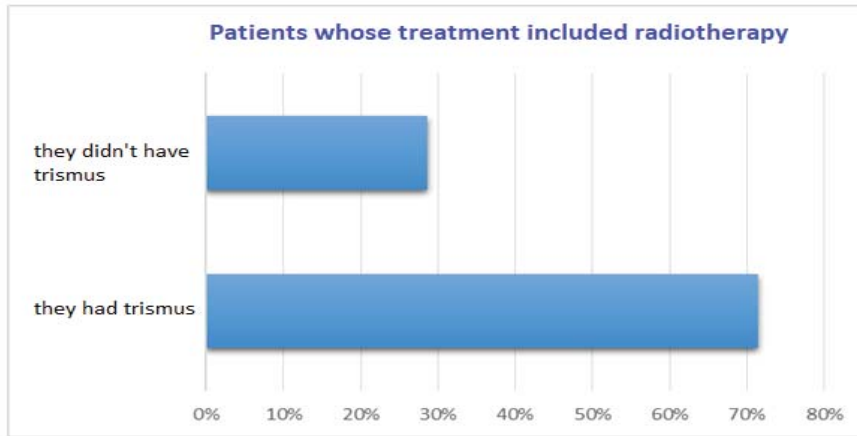


Figure 3. Correlation between radiotherapy and trismus

When asked about the diet, 37% answered "no" and the rest of the respondents, 63%, answered "yes" regarding the unsatisfactory diet due to problems in the oral cavity following cancer treatment.

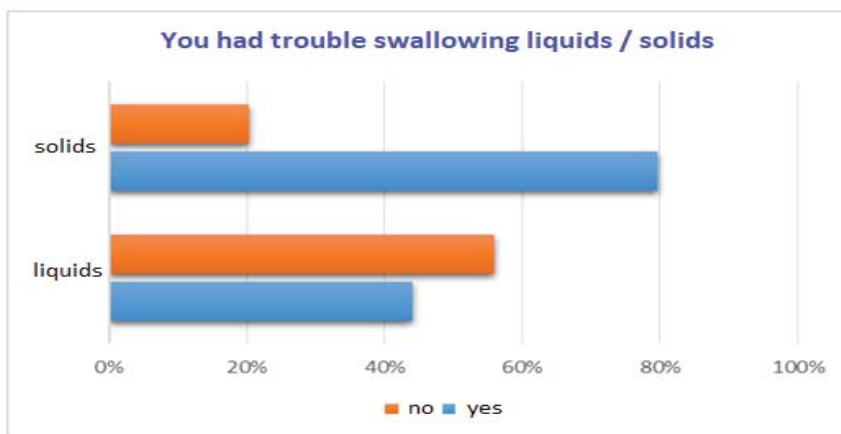


Figure 4. Difficulty swallowing solid / liquid foods

Regarding the ability to swallow solid and liquid foods, the greatest discomfort was given by swallowing solid foods (80%), followed by difficulties in swallowing liquid foods (44%). (Fig.4)

The quality of life of cancer patients decreases considerably predominantly, 75% state anxiety, with a less satisfactory life (75%) and embarrassed by the company of other people.

DISCUSSIONS

Cancer is by far one of the most common causes of death in developed and, respectively, developing countries. Of all cancers, squamous cell carcinoma of the head and neck has a frequency of 600,000 cases worldwide, with 40-50% annual mortality, and the burden is expected to double in developing countries until 2030 [7].

After recognizing the huge impact of head and neck cancer on patients' lives, research has focused on better investigation of their quality of life, as it is recognized that both diagnosis and treatment can have a significant impact on quality of life.

Quality of life is a broad, subjective, multidimensional, global concept that aims to provide a comprehensive picture of the patient's perception of himself. The World Health Organization (WHO) defines it as "an individual's perception of his or her position in life in the context of the patient's culture and value systems and of his or her goals, expectations, standards, and concerns." Another definition describes it as "the perceived discrepancy between the reality of what a person has and the concept of what the person wants, needs or expects." Sometimes specific treatments may not necessarily prolong life, but they can increase their quality. The importance of quality of life has been increasingly recognized and is reflected in its use as a measure of the outcome of cancer research, on an equal footing with the response rate and survival. [8]

The age and gender aspects of the participants in this investigation are consistent with the epidemiological profile of head and neck cancer found in the literature, men and women over the age of 45, exposed to at least one risk factor, such as highlighted dental problems before starting cancer therapy, smoking or alcohol.

Of all patients evaluated, 10% were eligible only for radiation therapy, 12% for chemotherapy combined with surgical treatment, 15% for chemotherapy combined with surgical treatment and radiation therapy, and 25% were treated with radiation therapy associated with chemotherapy, and in low percentages, associations between treatments. Technological advances in radiotherapy procedures and new chemotherapy protocols have favored the choice of these means of treatment. However, there is a risk of increased chemo-radiation-induced toxicity with painful and debilitating effects, which may necessitate discontinuation of treatment, compromising the patient's diagnosis.

Different treatment modalities for some head and neck tumors can lead to survival and similar disease control, however, treatment methods also have side effects such as the decreased quality of life, that also contribute to the diagnosis. In this context, the interest in the quality of life of these patients is directly associated with the day-to-day care practices in health centers.

Given the obtained results in the previous chapter, we can conclude that most of the surveyed patients had complications and their quality of life changed negatively.

From the previously obtained results we can conclude that most side effects occurred after the combined treatment of radiotherapy and chemotherapy. These side effects are represented in the oral cavity by occurring dysfunctions during swallowing, chewing, decreased saliva, alteration or even total loss of taste for indefinite periods and difficult speech. All these dysfunctions are interconnected, the decrease of the saliva quantity being the most important and having influence on the others.

In terms of physical dysfunction, as mentioned above, the results showed a decrease in performance, and in terms of social / emotional functions, the results showed that they also became unsatisfactory for patients, especially in the field of anxiety, in which patients have obtained a high percentage, most of them feeling embarrassed by the company of other people in their entourage.

Many research studies have focused on the impact of depression on treatment outcomes, such as mortality or disease progression, in cancer patients. However, depression is often underdiagnosed and therefore undertreated. Therefore, early identification or prediction of depression is crucial. [9,10,11,12]

As the literature shows, the risk factors for the occurrence of these cancers and not only, represented by tobacco and alcohol, had an increased share among the surveyed patients, respectively 59% and over 58% consume alcohol frequently / occasionally compared to those who never or rarely consume (42%).

Due to the fact that a fairly small number of the population regularly go for screenings and consultations, over 63% of the respondents had an advanced stage of the tumor, compared to 37% who had stage I or II.

Another observation is that patients had difficulty feeding after starting the appropriate treatment, the difficulties being more obvious during the diet with solid products compared to liquid products. Given that respondents mentioned changes in the amount of saliva, it goes without saying that eating solid products has been difficult.

Most patients reported trismus after radiotherapy treatment, as mentioned in the literature, this condition being highlighted in a large mass of patients treated with radiotherapy, compared to those treated with chemotherapy.

The quality of life decreased significantly for the patients included in the study, regardless of the treatment applied, each of them presented physical and emotional dysfunctions, concluding that their life has become less satisfactory, both due to the diagnosis and due to the side effects of the treatment. Researchers have shown increased levels of suffering in cancer patients after diagnosis, during active treatment and up to 4 years after treatment. [13,14,15]

CONCLUSIONS

The diagnosis of precancerous forms and oral cancer remains a challenge for the dentist profession, especially in the detection, evaluation and management of changes in the early stages.

Our focus on early changes and awareness of patients' harmful habits remains crucial to meeting this challenge. Correlating a patient's health history, observed clinical changes, and the relative risk associated with prompt use of appropriate and proven diagnostic methods will ensure that physicians provide patients with an optimal level of management for a possible long-term satisfactory outcome.

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