

## PSYCHOSOCIAL ASPECTS AND THE ROLE OF THE MULTIDISCIPLINARY TEAM IN THE DIAGNOSIS AND TREATMENT OF ORAL CANCER

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### ABSTRACT

Oral cancer is one of the most common malignancies in the world, Squamous Cell Carcinoma being the most common form at lips' level. The treatment of oral cancer still remains a challenge for both doctors and patients. The quality of a person's life is also influenced by oral health through the role that the oral cavity has in speech, nutrition, facial aesthetics and social acceptance. This paper aims to highlight the need for the involvement of a multidisciplinary team in the diagnosis and treatment of oral cancer, with the achievement of a complex assessment, including in terms of anxiety, social stressors, personality traits, coping resources or the diagnosis of even some possible mental disorders. Thus, the psychiatric evaluation of patients with oral cancer aims to coordinate and involve a psychiatric therapy in the complex oncological and surgical treatment of these patients.

**Key words:** oral cancer, treatment, mental manifestations.

### Introduction

Oral cancer is one of the 10 most common malignancies in the world, Squamous Cell Carcinoma (SCC) being the most common form at the lips' level, accounting for 23.6% up to 30% of malignant tumors of the oral cavity (1,2), while adenocarcinomas, melanomas, sarcomas and lymphomas occur less frequently (2). Also, rare cases of Basal Cell Carcinomas (BCC) in the vermilion and oral mucosa are quoted in the specialized literature (3).

BCCs generally occur in the upper lip and do not usually lead to lymph node metastases. SCC most often develops in the lower lip, with the possibility of metastases at neck level. Lip carcinomas frequently occur on precancerous lesions, such as radiodermatitis, chronic cheilitis, and xeroderma pigmentosum. The diagnosis and treatment of these conditions in their early stages is very important to avoid their transformation into malignant tumors (4).

The oral cavity, despite its small size, represents a very important component of the digestive system (5), and due to its extensive innervation, it forms close connections with the brain (6). Thus, ingested food creates different emotions, that is why injuries in the oral cavity can seriously affect the quality of life.

Oral health is one of the important aspects of the quality of life. Good oral health has consequences in terms of speech, nutrition, cosmetic appearance of the face, social acceptance. All these aspects are correlated with mental health, therefore they can already be deeply affected in patients diagnosed with a mental disorder (7). The World Health Organization defines the quality of life as the individual's perception of its position in life, in the context of the culture and value systems where the patient lives and in relation to its goals, expectations, standards and concerns (8).

There are studies that support the fact that patients who are diagnosed with

various mental disorders are more vulnerable to various medical conditions, neglect their oral health and more frequently present various somatic diseases (9). Thus, the psychiatrist has an important role in the early diagnosis of various mental disorders, including when it comes to oral cavity conditions, which involves a multidisciplinary team necessary for the diagnosis and treatment of these conditions (9, 10).

Regarding the diagnosis and treatment of oral cancer, the multidisciplinary team carries out a complex assessment, including in what concerns the assessment of anxiety, social stressors, personality traits, coping resources or even the diagnosis of possible mental disorders. Thus, the psychiatric evaluation of patients with oral cancer aims to coordinate and involve a psychiatric therapy in the complex oncological and surgical treatment of these patients (8, 9,10).

### **Epidemiological Data**

The prevalence of oral cancer increases with age and 98% of cases occur over the age of 40. The main causes of oral cancer are smoking, chewing tobacco and drinking alcohol. Other risk factors were also associated, such as: genetic predisposition, male sex, male-female ratio of 5–8:1 (1, 2, 11), fair skin and prolonged exposure to the sun (12).

Exposure to viral oncogenes has been incriminated especially in immunosuppressed subjects (13). Several reports emphasize the etiopathogenetic role of viral factors such as HPV16 and HPV24, HSV1 and HSV2. In particular, the association of HSV2, exposure to UV rays and chemical agents can considerably increase the risk of these tumors (13, 14).

Initially, the tumor usually appears as a papule or plaque that develops into a vegetative or ulcerative appearance. In the early stages, a biopsy is indispensable to confirm the diagnosis of carcinoma. In advanced cases, the risk of metastasis to the

lymph nodes is higher (14) and the diagnostic protocol is completed with ultrasonography, computed tomography, and/or magnetic resonance.

Lip's squamous cell carcinoma accounts for 25% to 30% of all oral cancers. It often develops on an actinic or solar cheilosis (12). It is more commonly located on the lower lip than on the upper lip, because the upper lip is much less exposed to the sun than the lower (11, 12 and 14).

The localization of squamous cell carcinomas at the level of the upper lip and the commissural space are associated with an unfavorable prognosis (11, 12) compared to those located at the level of the lower lip (12).

In contrast, basal cell carcinomas are almost always located on the skin of the upper lip. Silapunt and colleagues (15) noted in a study that 15 out of 18 patients have a history of skin cancer. Therefore, a history of skin cancer may be a risk factor for the development of oral cancers.

Although the lower lip is more exposed to the sun than the upper lip and UVB radiation is the primary predisposing factor for basal cell carcinomas, the predominance of basal cell carcinoma in the upper lip is surprising. Some studies have observed that approximately one-third of BCC occur on areas with little exposure to solar radiation, while squamous cell carcinoma frequently develops on areas with sun exposure (16).

### **Vulnerable groups**

People addicted to drugs or alcohol neglect their hygiene, physical and mental health, as well as food needs, living in poor social conditions. All this leads to a decrease in immunity and the appearance of oncological diseases at the oral level. Bruxism, gingivitis and dental abscesses are often associated with these patients. Patients who are dependent on opioids are difficult to treat because they often present to the Emergency Department with an advanced form of the disease and also

require more analgesia than regular patients.

People diagnosed with depression, as a result of losing interest in usual activities, also neglect their oral hygiene, favoring the appearance of various associated conditions, requiring increased attention from the medical staff.

Older people are more susceptible to developing oral cancers due to prolonged exposure to the sun. A reduced salivary flow, low salivary pH and dental conditions are frequently added to this (9,12,16). Oral hygiene and the physical appearance are important aspects to be followed by the relatives and caregivers of these people, because patients may neglect the presence of early lesions found in oral carcinomas. They usually accept surgical treatment only in advanced and complicated stages with infection, hemorrhage and eating disorders.

Some patients with learning disabilities also have congenital defects of the jaw or mouth, leading to malocclusion and excessive drooling. Frequent mutilations such as lip biting can be distressing and cause the lesions to persist over a long period of time. Regurgitation of food is often associated, leading to poor oral health. Keen and Elzay (17) suggested that ectopic epithelial implantation from trauma could explain the formation of basal cell carcinomas at the vermilion level. The epidermis contains matrix cells, which are considered to be pluripotent, capable of differentiating into different cell lines (16).

Behavioral manifestations specific to people with psychiatric conditions, such as irritability or refusal to eat, can also be caused and aggravated by the pain that characterizes oral oncological conditions.

### **The treatment of oral cancer**

Although there are many researches in the field, the treatment of oral cancer remains a challenge in head and neck surgery (13,14,15,16). The main treatment modalities are represented by: surgical resection, radiotherapy and chemotherapy for curative or palliative purposes.

Sometimes it is necessary to add adjuvant or neoadjuvant treatment, depending on the size and location of the tumor, the infiltration of adjacent anatomical structures and the existence of regional or remote lymph node metastases (18).

Primary wide surgical resection with negative margins is the main treatment for oral carcinomas (13,16,18). Ashley et al (12) compared surgery and RT in patients with labial SCC and similar 5-year survival rates were observed in both groups (87% and 77%, respectively). Surgery and RT appear to be equally effective in treating lip SCC in early stages, but in advanced stages surgical resection offers much higher survival rates compared to radiotherapy.

In the case of large tumors, it is necessary to use local and regional flaps to achieve an excellent reconstruction in terms of texture, color and thickness of the excised structures. The ideal surgical treatment of the oral cavity should consider reconstruction of the sphincter ring using all three layers at the same time as excision. The reconstruction should provide an adequate oral opening and sufficient adjacent mucosa at the level of the buccal commissure to avoid scar contracture and implicitly microstomia (4, 5, 11,14).

When surgery involves excision of the jaw and nearby soft tissues (chin, cheeks, floor of the mouth), the reconstruction includes the creation of flaps with free vascularization. Unfortunately, the extent of this intervention is frequently associated with deficiencies from an aesthetic and functional point of view, presenting in particular lip incontinence, continuous drooling, chewing and swallowing difficulties, reduced mobility, disturbances of taste, smell or breathing and xerostomia (19). These functional disorders of the oral cavity can also be caused by radiotherapy or chemotherapy. Oral mucositis has been recognized as one of the most debilitating manifestations after cancer therapy, leading to intense pain and

reduced intake, accompanied by reduced appetite and weight loss (19, 20).

### **Psychic symptomatology associated with oral cancer**

Oral cancer represents a psychosocial challenge not only for patients, also for their family and medical staff, but not all patients are affected to the same degree (21). A multidisciplinary team is necessary for their treatment since diagnosis, during therapies, and throughout their survival (5, 7, 22).

The diagnosis of oral cancer represents by itself an important stress factor for the patient (22), anxiety representing one of the most important manifestations, causing progressive fears, such as: fear of the unknown, of death, fear of loneliness, fear of change, fear of losing control; and, in particular, the fear of losing one's identity (21, 23).

Manifestations of depression or anxiety represent an additional stress factor, which is added to that represented by the actual diagnosis of a severe oncological disease, with possible life risk. Also, these mental manifestations can influence the duration of hospitalization, compliance with oncological treatment and quality of life. Numerous studies highlight the prevalence of depression and anxiety-type manifestations among patients diagnosed with different forms of oral cancer (24). The depressive symptomatology diagnosed in oral cancer patients was found to be associated with other risk factors, such as age or educational level. Additionally, the stigmatization and discrediting of these patients contribute to the amplification of depressive and anxious symptoms, as well as the support of demoralizing ideation. Some studies highlight the beneficial effects of positive psychological resources such as optimism or hope, but also the existence of adequate social support (24).

Psychiatric symptoms secondary to the diagnosis of oral cancer have been found to be prolonged and can be found 7-11 years after the completion of treatment,

especially in situations where the treatment was focused only on the specific oncological intervention and not on ensuring an adequate, specific psychosocial intervention for these patients (25).

The mental symptoms associated with oral cancer are often underdiagnosed because both patients and some doctors consider depression and anxiety to be normal manifestations, specific to all patients diagnosed with a form of cancer. This symptomatology can be favored by a number of other factors, such as pain, premorbid personality traits, the adverse effects of oncological medication, the prognosis of the disease or any personal psychiatric antecedents.

Studies show (25) that anxiety manifests itself especially before the biopsy or the actual surgery, while depression is more frequent post-operatively. The prevalence of depression is variable throughout the evolution of the disease, up to terminal or recovery phase.

Oral cancer surgery can have important physical and psychological consequences, including important facial abnormalities. A study conducted by Mukherjee Arnab in 2022 identified as risk factors, in the peri-surgery period, for the appearance of various psychological manifestations the female sex, the preoperative anxiety related to pain and the impact on the family, the increased duration of hospitalization. Also, more than three fourths of patients with oral cancer are worried about their own body image, which is correlated with self-stigmatization, social isolation or damage to the relationship with the life partner. This study additionally reveals the fact that pain or other physical symptoms are important predictors regarding the risk of developing depressive symptoms. The duration of hospitalization after surgical intervention and the frequency of medical monitoring have implications regarding the evolution of mental symptoms (25).

The prevalence of depression and anxiety in patients with oral cancer is highly variable from 19 to 50%, even 10 years after the first diagnosis of the disease and initiation of appropriate treatment. The presence of psychological symptoms is influenced by the persistence of pain, the patient's age, sex, cancer staging, type of treatment or fear of recurrence. Job loss, oral cavity dysfunctions such as xerostomia, trismus, eating disorders or social dysfunctions are also added to this (26).

Another frequent manifestation in the case of patients with oral cancer is insomnia, being three times higher than in the case of the general population. This increased incidence of insomnia can be explained by the stress of the post-diagnostic period and insomnia can sometimes persist even after the completion of the surgical treatment (27).

A meta-analysis carried out by Santoso in 2019 indicates that in the case of patients with oral cancer, the prevalence of insomnia is 29% before the start of treatment, 45% during treatment and 40% after, and the prevalence of hypersomnia is 16% before treatment and 32% after (28,29).

Sleep disorders negatively influence the quality of life of patients with oral cancer and increase the risk of infectious diseases, as well as the initiation of affective disorders or cardiovascular diseases. A study conducted by Palesh in 2014 indicates that the duration of sleep is closely correlated with the duration of survival and the risk of death from cancer complications at 10 years of monitoring (26).

### Conclusions

The life quality of oncologic patients is very important in evaluating the results of oral cancer treatment. A cancer diagnosis affects multiple aspects of a patient's life, including psychosocial, physical and financial. Treatment should be performed by a multidisciplinary team, focusing not only on the clinical effects of treatment, but on life quality issues, thus improving overall patient care and satisfaction.

Psychological factors must be considered and included in the therapeutic management of each case. Psychiatric evaluation, medication, and psychotherapy can play an important role in alleviating symptoms and achieving optimal outcomes.

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