

Potentially Malignant Oral Lesions: A Mini Review

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ABSTRACT

Cancer can be defined, in a simplistic way, as the uncontrolled and disordered growth of cells that invade the adjacent tissues causing its involvement. Worldwide, oral cancer ranks sixth among the types of cancer diagnosed. Literature characterizes some conditions as main risk factors for the genesis of potentially malignant oral lesions, such as smoked or chewed tobacco and its association with alcohol abuse. Another relevant condition cited by some authors is the use of cocaine in the form of crack, due to its contaminants which are corrosive / irritating substances. Other probable triggers are still being studied, such as the human papilloma virus and certain bacteria. Among a considerably amount of main clinical conditions with potential malignancy recognized by WHO there are oral leukoplakia, erythroplasia and erythroleukoplakia. Visual detailed inspection of the oral cavity is a fundamental step during the patient physical examination. In addition, palpation of the intraoral region as well as extraoral areas such as the neck should be continued, which, together with a thorough anamnesis,

are able to provide sufficient elements to elaborate a possible diagnostic hypothesis. Thus, the dentist must perform a good physical examination in his usual practice, associated with a well-structured anamnesis, in order to favor the earliest possible diagnosis and correct management of these injuries.

Key words: Neoplasm, Oral cancer, Malignant lesions, Potentially malignant lesions, Oral diagnosis.

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INTRODUCTION

Cancer can be defined, in a simplistic way, as the uncontrolled and disordered growth of cells that invade the adjacent tissues. Usually, Oral cancer appears as a small tissue lesion with variable clinical appearance, located on the tongue, lips, cheek mucosa, sinuses, hard and soft palate, sometimes with extension to the oropharynx.¹

Worldwide, oral cancer represents the sixth among the types of cancer diagnosed.² In Brazil, it was estimated by the National Cancer Institute (INCA) that in 2011 14,120 new cases of oral cancer would be registered.³ The number of new cases of cancer of the oral cavity estimated for Brazil, for each year of the 2020-2022 triennium, will be 11,180 cases in men and 4,010 in women. These values correspond to an estimated risk of 10.69 new cases per 100 thousand men, taking the fifth position. For women, it corresponds to 3.71 for every 100 thousand women, being the thirteenth most frequent among all cancers.^{3,4}

Introduced in clinical practice in 2007 by the World Health Organization (WHO), the term "potentially malignant oral diseases" can be defined as a group of clinical conditions that predispose to the development of oral squamous cell carcinoma. This terminology was included in the 4th edition of the WHO classification of head and neck tumors. Although the rate of malignant transformation is frequently low (close to 1%), it should be noted that a patient who has a potentially malignant lesion holds a substantial increased possibility of cancer occurrence.^{2,4,5}

It was recently verified, through a systematic review, in which epidemiological surveys of 22 studies were analysed that estimates a

global prevalence of 4.47% of patients with potentially malignant oral lesions, with a special increase among men and Asian population.⁶

RISK FACTORS

The literature characterizes some conditions as the main risk factors for the genesis of potentially malignant oral lesions, such as smoked or chewed tobacco and its association with alcohol abuse.^{5,7,8}

Marijuana smoke may also have a carcinogenic potential, demonstrating the ability to alter and damage the oral mucosa epithelium, with the appearance of leukoplakia and erythroplasia being frequent, especially when associated with the habit of smoking commercial cigarettes. It is worth mentioning that, as a rule, the user of these substances has a worse general oral health condition than an individual who is not a user and can be inferred in inadequate hygiene conditions that can favor this condition.⁸

Another relevant condition cited by some authors is the use of cocaine in the form of crack which, due to its contaminants that are corrosive / irritating substances, such as hydrochloric acid and gasoline; thus, the changes that occur in the the DNA of the oral cells and oral cavity such as ulceronecrosing gingivitis, advanced periodontitis, gingival laceration and mainly burn-like gum lesions, can lead to chronic inflammation becoming an important risk factor for the development of these lesions. In addition to it, these drugs, due its mecanism of action and chemical nature, may increase the user's pain threshold, hiding or decreasing

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the painful symptomatology of oral lesions, fact that contributes to the increased delay in the search for health treatment.^{5,9-12}

The main clinical conditions with potential malignancy recognized by the WHO in 2017 are oral leukoplakia, erythroplasia, erythroleukoplakia, proliferative verrucous leukoplakia, oral submucosal fibrosis, palatine lesions in reverse smokers, oral lichen planus, systemic lupus erythematosus, congenital dyskeratosis and epidermolysis bullosa actinic. However, subsequently, some new clinical conditions have been suggested as potentially associated, namely: Chronic hyperplastic candidiasis, oral lichenoid lesions, exophytic verrucous hyperplasia and oral lesions of graft vs host disease.⁵

CLINICAL MANIFESTATIONS

Oral leukoplakia is a clinical condition characterized by a whitish plaque on the oral mucosa, which cannot be removed by mechanical action and is generally not associated with other local or systemic manifestations. According to the WHO, it is, therefore, a diagnosis of exclusion. Its most frequent clinical manifestation is the form of a uniform white plate, slightly flat and thin, with a surface that is often smooth and prone to superficial cracks. In addition to this classic presentation, other clinical forms can also be seen, such as nodular leukoplakia with small polypoid or rounded prominences, red or white growths; and also in the form of verrucous leukoplakia with a raised, exophytic, wrinkled surface. One should bear in mind the importance of the differential diagnosis with other white lesions, such as: spongy white nevus, frictional keratosis and hairy leukoplakia, for example.^{5,13,14}

Erythroleucoplasia is characterized by a persistent white and red plaque, which cannot be removed with mechanical force, but which, unlike oral leukoplasia, may usually cause some discomfort to the patient. As a clinical manifestation, there is a mixed white lesion with reddish stippling, but keeping the background mostly white, with irregular edges. Differential diagnosis should exclude conditions such as migratory erythema and erosive lichen planus.^{6,15,16}

Proliferative verrucous leukoplakia has, as oral manifestation, the occurrence of multiple lesions with the appearance of corrugated leukoplastic plaques and localization in two or more places of the oral cavity, commonly found in the gingival region, palate and alveolar process. As the name of the lesion suggests, it has a warty pattern. The lesions can spread or even become a self-limited condition during its course, with frequent recurrence in a previously treated area. They have a high potential for malignant transformation compared to other potentially malignant lesions.¹⁷

Oral lichen planus appears mainly as keratotic streaks or as a whitish spot and is asymptomatic. However, in its ulcerative variation, it becomes a painful injury. Its reticular shape is characterized by white lacy lines. The erosive form is characterized by an erythematous and slightly ulcerated lesion. This clinical presentation has been reported in the literature as predisposing to malignancy. In formulating the diagnostic hypothesis, oral lichenoid lesions should be excluded.^{16,18}

Oral lichenoid lesions present mainly in the form of keratotic streaks or as a whitish plaque in a similar way to lichen planus and are also generally asymptomatic. In reticular form it shows whitish linear lesions similar to lace, usually in close contact with a dental restoration.^{16,18}

Oral submucosal fibrosis is a chronic condition attributed to chewing gutkha habit and has as its main manifestation the sensation of injury burning when the patient is exposed to spicy foods, evolving to a condition in which the opening of the mouth becomes restrictive. Still, there is also tissue pigmentation loss, localized loss of taste papillae, presence of leathery mucosa, fibrous bands, tongue mobility is limited due to tissue stiffness, deformation of the uvula or its retraction,

deformation of the jugal mucosa. This lesion is endemic in areas of Asia and, in its differential diagnosis, the hypothesis of anemia should be ruled out.^{5,19}

Considering the asymptomatic nature of most of these conditions, Visual inspection of the oral cavity is a fundamental step during the physical examination of the patient. In addition, palpation of the intraoral region as well as extraoral areas such as the neck should be continued, which, together with a thorough anamnesis, can provide sufficient elements to elaborate a possible diagnostic hypothesis. Several auxiliary exams are available for clinical practice, for example, autofluorescence imaging with VelScope, acetic whitening with chemiluminescence and vital staining with toluidine blue.^{5,15,17,20} However, several studies demonstrate that these techniques have low diagnostic accuracy due to high rates of false positive results.^{21,22} Therefore, the dental surgeon must bear in mind the need to perform a detailed clinical examination on the patient and that laboratory tests are adjuvant and complementary, not replacing well-performed clinical practice.

The gold standard for confirming the diagnostic hypothesis in oral lesions is sample biopsy followed by histopathological examination. The result of the histopathological analysis tends to minimize classification errors and will assist in clinical decision-making regarding the case. In addition, the microscopy of the biopsied sample may exclude suspicions of malignancy in the lesion, given that squamous cell carcinomas, even if in a small proportion, can present clinically as white and red plaques. In the case of white and erythematous plaques, the examination will allow the verification of the presence of epithelial dysplasia and the degree of this dysplasia. The default is to use the intensity system (mild, moderate or severe) following the WHO guidelines for pathology reporting.^{12,23-26}

FINAL CONSIDERATIONS

From the discussed, above the diagnosis of oral cancer is challenging and the oral exam is of utmost importance in the prevention in the prevention, diagnosis and clinical monitoring of potentially malignant oral lesions signs and symptoms may be frequently overlooked by the person who has it in the very initial stages when the possibility of success with the treatment is higher.

Thus, the dentist must perform a good physical examination in his usual practice associated with a well-structured anamnesis, in order to favor the earliest possible diagnosis and correct management of these injuries. Also, complementary exams have important diagnostic auxiliaries to confirm the diagnostic hypothesis.

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