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Diagnosis, management and 4-year follow-up of squamous cell carcinoma in the retromolar region from the LeBu-UEM extension project

Diagnóstico, conduta e acompanhamento de 4 anos de carcinoma espinocelular em região retromolar provindo do projeto de extensão LeBu-UEM

Diagnóstico, manejo y seguimiento a 4 años del carcinoma epidermoide en la región retromolar del proyecto de extensión LeBu-UEM

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Maria Eloise de Sá Simon
ORCID: http://orcid.org/0000-0002-0908-5149
Universidade Estadual Paulista, Brazil
E-mail: eloise.simon@unesp.br
Nathália Januario de Araujo
ORCID: https://orcid.org/0000-0003-1812-7723
Universidade Estadual Paulista, Brazil
E-mail: nathaliajanuario@outlook.com
Monique Gonçalves da Costa
ORCID: http://orcid.org/0000-0002-0867-1736
Universidade Estadual Paulista, Brazil
E-mail: moniquegc30@hotmail.com
Vinícius Tadeu Batistussi França
ORCID: https://orcid.org/0000-0002-9217-3317
Universidade Estadual de Maringá, Brazil
E-mail: vinibatistussi@hotmail.com
Neli Pieralisi
ORCID: https://orcid.org/0000-0003-2304-5263
Universidade Estadual de Maringá, Brazil
E-mail: nepieralisi@uem.br
Marilliani Chicarelli da Silva
ORCID: https://orcid.org/0000-0002-0024-7471
Universidade Estadual de Maringá, Brazil
E-mail: machicarelli1@gmail.com

Leonardo Perez Faverani
ORCID: http://orcid.org/0000-0003-2249-3048
Universidade Estadual Paulista, Brazil
E-mail: leonardo.faverani@unesp.br
Leonardo Alan Delanora
ORCID: http://orcid.org/0000-0002-3002-4420
Universidade Estadual Paulista, Brazil
E-mail: leonardoaland@gmail.com

Abstract

Malignant oral neoplasms have great relevance because they represent one of the main causes of death in the world. Squamous cell carcinoma is its most frequent form, but reports in the retromolar region are rare when compared to other oral sites. The objective of this work is to demonstrate the diagnosis and conduct in the case of a patient participating in the Oral Injury extension project (LeBu) at the State University of Maringá - PR/BR. Male patient, 67 years old, a heavy smoker for about 50 years, alcoholic, attended the university with an ulcer in the right lower retromolar region of brownish-white color, with approximately 3 to 4 mm, irregular shape, and rough surface. A biopsy was performed in the lesion region, collecting a fragment of approximately 2 mm, which was referred for histopathological examination, resulting in a diagnosis of moderately differentiated, invasive squamous cell carcinoma. The patient was referred for medical oncological, surgical, and chemotherapy treatment, remaining under dental monitoring throughout the treatment and later with scheduled returns. After 4 years of follow-up, the patient is in good general physical condition, with no signs of recurrence, orally rehabilitated, even quitting the smoking habit. Thus, it is concluded that the diagnosis and treatment of head and neck neoplasms lacks a multidisciplinary view, being the dental surgeon of great importance both for the diagnosis of these injuries, as well as in the prevention and treatment of injuries that may arise from or after the treatment.

Keywords: Squamous cell carcinoma; Mouth neoplasms; Diagnosis.

Resumo

As neoplasias bucais malignas possuem grande relevância por representarem uma das principais causas de morte no mundo. O carcinoma espinocelular é sua forma mais frequente, porém raros são os relatos em região retromolar, quando comparado a outros sítios bucais. O

objetivo deste trabalho é demonstrar o diagnóstico e conduta no caso de um paciente participante do projeto de extensão de Lesões Bucais (LeBu) da Universidade Estadual de Maringá - PR/BR. Paciente do sexo masculino, 67 anos de idade, fumante assíduo há cerca de 50 anos, etilista, compareceu à universidade apresentando uma úlcera em região retromolar inferior direita de coloração branca acastanhada, com aproximadamente 3 a 4mm, forma irregular e superfície rugosa. Realizou-se a biópsia na região da lesão, coletando um fragmento de aproximadamente 2 mm, o qual foi encaminhado para o exame histopatológico, resultando em diagnóstico de carcinoma espinocelular, moderadamente diferenciado, invasivo. O paciente foi encaminhado para tratamento médico oncológico, cirúrgico e quimioterápico, permanecendo sob acompanhamento odontológico durante todo o tratamento e posteriormente com retornos programados. Após 4 anos de acompanhamento, o paciente se encontra em bom estado físico geral, sem sinais de recidiva, reabilitado oralmente, cessando inclusive o hábito tabagista. Desta forma, conclui-se que o diagnóstico e tratamento de neoplasias de cabeça e pescoço carece de uma visão multidisciplinar, sendo o cirurgião dentista de grande importância tanto para o diagnóstico destas lesões, como na prevenção e tratamento de lesões que possam surgir decorrentes ou após o tratamento.

Palavras-chave: Carcinoma espinocelular; Neoplasias bucais; Diagnóstico.

Resumen

Las neoplasias bucales malignas tienen una gran relevancia porque representan una de las principales causas de muerte en el mundo. El carcinoma de células escamosas es su forma más frecuente, pero los informes en la región retromolar son raros en comparación con otros sitios orales. El objetivo de este trabajo es demostrar el diagnóstico y conducta en el caso de un paciente que participa en el proyecto de extensión de Lesión Oral (LeBu) de la Universidad Estatal de Maringá - PR/BR. Paciente de sexo masculino, 67 años, fumador empedernido hace 50 años, alcohólico, que acudió a la universidad por presentar una úlcera en región retromolar inferior derecha de color blanco pardusco, de aproximadamente 3 a 4 mm, de forma irregular y superficie rugosa. Se realizó biopsia en la región de la lesión, recogiéndose un fragmento de aproximadamente 2 mm, que se derivó para examen histopatológico, resultando en diagnóstico de carcinoma escamoso invasivo moderadamente diferenciado. El paciente fue derivado para tratamiento médico oncológico, quirúrgico y quimioterápico, permaneciendo bajo seguimiento odontológico durante todo el tratamiento y posteriormente con retornos programados. Tras 4 años de seguimiento, el paciente se

encuentra en buen estado físico general, sin signos de recidiva, rehabilitado oralmente, incluso abandonando el hábito tabáquico. Así, se concluye que el diagnóstico y tratamiento de las neoplasias bucales carecen de una visión multidisciplinar, siendo el cirujano dentista de gran importancia tanto para el diagnóstico de estas lesiones, como en la prevención y tratamiento de las lesiones que puedan derivarse de o el tratamento.

Palabras clave: Carcinoma de células escamosas; Neoplasias de la boca; Diagnóstico.

1. Introduction

Malignant neoplasms of the oral cavity represent a relevant oral health problem, mainly due to their high occurrence (Brener, Jeunon, Barbosa & Grandinetti, 2006). According to data from the National Cancer Institute (INCA) of the Ministry of Health in 2020, cancers present in the oral cavity occupy the 5th place in greatest occurrences in men in Brazil, and among these cases, squamous cell carcinoma occupies almost 90%, being considered the most common oral malignancy (National Cancer Institute, 2020 and Brener et al., 2006).

Mouth and oropharynx cancer affects, in greater prevalence, men over 50 years of age and is closely related to smoking and alcohol consumption, especially when associated. This is further aggravated by the common delay in diagnosis, mainly due to the lack of information on the part of the population and health professionals, which can reflect on a poor prognosis (Brener et al., 2006).

The retromolar region is covered by soft tissue, located immediately posterior to the last lower molars and classified as oral mucosa taking into account its anatomical position. Cancer in this region is relatively rare, representing about 7% of the cases of squamous cell carcinoma in the oral cavity (Andrade, Santos, & Oliveira, 2015). When present in this region, malignant neoplasms often result in bone infiltration, lymph node metastasis and infiltration into the infratemporal fossa in the initial stage, which reflects a worse prognosis when compared to the same type of cancer in neighboring areas, such as the floor of the mouth, gums and tonsils, especially as they are often diagnosed at a late stage due to the absence of early symptoms (Nishi, Shinozaki, Tomioka, Maruo, & Hayashi, 2018 and Faisal et al., 2017).

The treatment of oral cancer in the retromolar region is still very controversial due to the few published clinical and functional data. Patients with initial lesions are often treated

using a single modality (surgical or radiotherapy), while patients with advanced lesions are usually submitted to surgical treatment with adjuvant radiotherapy (Mendenhall, Morris, Amdur, Werning, & Villaret, 2005). However, the treatment based on stage has shown to be unsatisfactory in the oral cavity, since the diameter of the lesion in the retromolar area is not a reflection of the volume of the cancer, and bone invasion may occur in very small lesions. (Hitchcock et al., 2015 and Barker & Fletcher, 1977).

2. Methodology

The work in question deals with a case report in a qualitative and descriptive way, with the objective of demonstrating the diagnosis, conduct and 4-year follow-up of a patient participating in the Oral Injury extension project (LeBu) of the Universidade Estadual de Maringá- PR / BR, which through the service can have the diagnosis and treatment performed free of charge subsidized by SUS in partnership with the Dentistry Department of UEM-Mariná/PR (Pereira et al. 2018 and Delanora et al. 2020).

3. Case Report

Male patient, 67 years old, melanoderma, came to the State University of Maringá (UEM) presenting an ulcer in the right lower brown retromolar region, with about 3 to 4 mm, well-defined limits, irregular shape, sessile base and rough surface (Figure 1).

Figure 1: Initial aspect of the ulcerated lesion present in the patient's oral cavity.

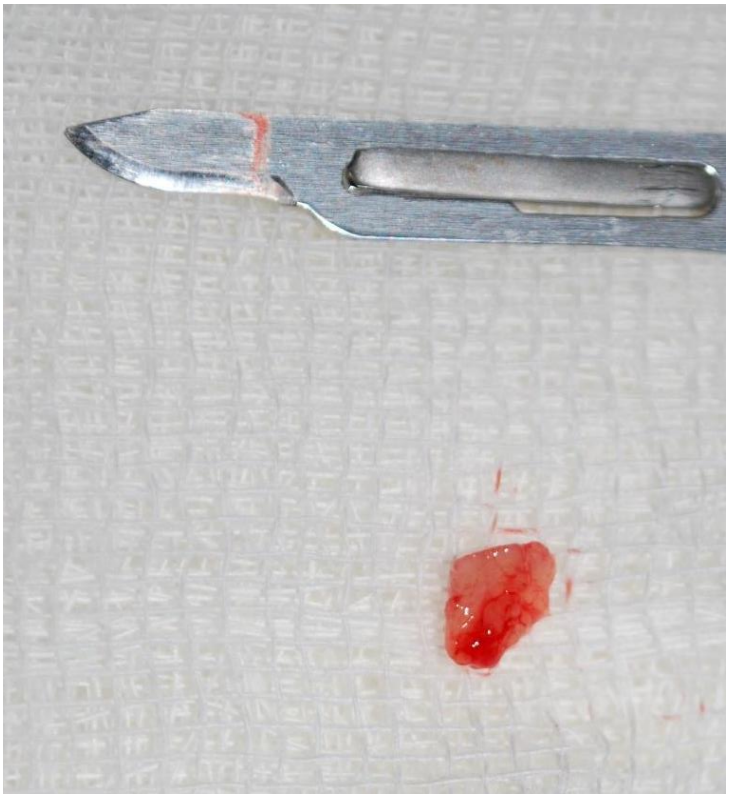
Source: Personal archive.

In the image it is possible to visualize the leukoplastic aspect of the lesion, with brownish regions and about 3 to 4 mm in diameter, as well as the rough appearance of its surface with well-defined limits in the right retromolar region.

In the anamnesis, the patient reported being a frequent smoker (15 cigarettes / day) for about 50 years, in addition to regularly using alcohol. The patient reported that the lesion appeared about 1 and a half years ago and has since evolved. Due to clinical conditions and anamnesis, he was elected as a diagnostic hypothesis of squamous cell carcinoma and the patient was referred to biopsy. After receiving all the necessary guidance, the patient signed the free and informed consent form, so that the treatment plan could be carried out with written consent.

The incisional biopsy was performed on the darkest portion including the edges of the lesion (Figure 2). The removed fragment was stored in a vial with buffered formalin and sent for histopathological examination.

Figure 2: Appearance of the specimen from the incisional biopsy performed in the right retromolar region.



Source: Personal archive.

The figure shows the fragment of about 2-3mm removed from the lesion through incisional biopsy, before its inclusion in buffered formalin solution and sent for histopathological examination.

After one week, the suture was removed and the good aspect of the surgical wound was verified, as well as the general good physical condition of the patient (Figure 3).

Figure 3: Aspect of the patient's oral cavity after biopsy in the right side of the retromolar region.

Source: Personal archive.

The figure shows the patient's oral cavity after performing an incisional biopsy in the right retromolar region, with evident suture.

All submitted material was examined histopathologically and through microscopy, a tissue fragment covered by Malpighian epithelium was visualized, showing with atypical proliferation of squamous cells with broad eosinophilic cytoplasm, anaplasia and nuclear hyperchromia with foci of invasion of the lamina propria. There were also foci of keratinization and dyskeratosis.

The diagnosis was established through the product of the biopsy of the lesion as a moderately differentiated, invasive squamous cell carcinoma. Thus, the patient was referred to medical treatment with oncologists and a head and neck surgeon. He underwent surgical and chemotherapy treatment and continued to be followed by the dental team of the faculty throughout all the treatment.

The patient is at 4 years of follow-up, in good general physical condition, with no signs of recurrence and has stopped smoking. The patient underwent oral rehabilitation with a removable partial lower prosthesis, without any impairment in function or failure to adapt due to the injury (Figures 4 and 5).

Figure 4: aspect of the patient's oral cavity at 4-year postoperative follow-up since the oncological removal of the lesion.

Source: Personal archive.

The figure shows the patient's oral cavity 4 years after the cancerous removal of squamous cell carcinoma in the retromolar region. The tissues are adequately healed and healthy, with a good general appearance and no signs of recurrence.

Figure 5: In A we see a right side view of the patient's oral cavity, in B the front view and in C the left side. In all of them, we visualize the patient using removable partial lower prosthesis, adequately adapted providing a functional rehabilitation to the patient, without losses resulting from the removal of the lesion.

Source: Personal archive.

The figure show, through three different planes (A, B and C), the patient's oral rehabilitation with the use of the removable partial lower and upper total prosthesis, without complications in rehabilitation resulting from the previous removal of the lesion.

4. Discussion

Oral cancer is among the top 10 causes of cancer -related death worldwide. The etiology of cancer is still uncertain, but it proves to be multifactorial and strongly associated with lifestyle and habits such as tobacco use and its association with alcohol, in addition to other factors such as genetic defects (Faisal et al., 2017 and Kumar, Nanavati, Modi, & Dobariya, 2016).

Early diagnosis and treatment of neoplasms are associated with a greater chance of cure and improvement in long-term survival, especially when they have an invasive character, such as cases of squamous cell carcinoma in the retromolar region. Cancer in the oral cavity treated early (stage I) has a survival rate of 80%, while in lesions diagnosed late the prognosis drops to 30-50%. (Carreras-Torras & Gay-Escoda, 2015).

Mouth cancers located in the region of the retromolar trigone are rare and, consequently, little reported in the literature, but very aggressive, with a poor prognosis. These tumors have peculiar characteristics involving the proximity of surrounding structures and early involvement of vid and vidente subsites in addition to significant postoperative functional impairment. In addition, tumors in this location can extend to the region of masticatory muscles, soft palate, oral floor and retropharyngeal space (Faisal et al., 2017).

The immunosuppression caused by chemotherapy, an adjuvant in the treatment of viden, triggers several oral manifestations that can even be serious and interfere with medical therapy, leading to major systemic complications and affecting the quality of life of these patients. (Hes Espanhol, Tinoco, Teixeira, Falabella, & Assis., 2010).

Aggressive chemotherapy damages not only neoplastic cells, but healthy cells as well. In this regard, the oral cavity is particularly vulnerable to its toxic effects due to several factors such as rapid cell renewal of the mucosa, complex microflora and dysfunction of the salivary glands, presenting a high risk of developing mucositis, infections, salivary dysfunctions and osteonecrosis, during treatment. Thus, although, after the diagnosis, the surgical treatment of oral cancer is not performed by the dentist, it is extremely important to monitor the patient by these professionals during the pre, trans and post treatment of these injuries. Thus resulting in a

multidisciplinary treatment, with evidente benefits to the patient, less comorbidity and a higher survival rate, (Herlofson, & Løken, 2006 and Hes Espanhol et al., 2010) as shown in our report.

More studies and updates regarding the incidence, prevalence, treatments, and prevention tactics of squamous cell carcinomas are needed for our literature, aiming at better conduct, well-being, and a bigger survival rate for patients affected by this disease.

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5. Final Considerations

Thus, it is concluded that the treatment of patients with head and neck cancer requires a multidisciplinary approach, being the follow-up with the dentist of great importance both for the diagnosis, as for the prevention and treatment of possible collateral injuries to the treatment that may appear in the oral cavity, which are easily bypassed by the dentist surgeon, aiding in the general well-being of the patient.

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Percentage of contribution of each author in the manuscript

Maria Eloise de Sá Simon – 12,5%

Nathália Januario de Araujo - 12,5%

Monique Gonçalves da Costa - 12,5%

Vinícius Tadeu Batistussi França - 12,5%

Marilliani Chicarelli da Silva – 12,5%

Neli Pieralisi - 12,5%

Leonardo Perez Faverani - 12,5%

Leonardo Alan Delanora - 12,5%