Malignant Melanoma of Oral Cavity, A Case-Based Review of the Literature

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Abstract: *Introduction*: Primary Mucosal Malignant Melanoma is an aggressive cancer, especially when there is a late diagnosis. The mortality is low in early stages but in advanced stages is less than a 30% on a 5-years following. Only a 0.5% to 3% of Melanomas are Mucosal Melanomas. Among them, the Mucosal Malignant Melanoma of oral cavity is a rare tumor, with an extremely aggressive behavior at diagnosis.

Case Report: 51 years old male, consult on April 2015, at Centro de Salud Familiar Flor Pedreros Parra, Trehuaco city, Chile, for dark blue round tumor, 1.5 cm wide, placed near the tooth 1.3, compromising the gum. The patient refers previous consultations with a smaller and flat lesion. He reveals important everyday sun exposure, without proper UV protection. One month later, the tumor grows and becomes indurate, consequently the patient was transferred to Herminda Martin Hospital of Chillán City, where incisional biopsy concludes "Mucosal Malignant Melanoma with infiltration of surroundings tissues". Chemotherapy is realized with poor results. Last control with Odontology in August 2015, the tumor evolves to a black nodule, 4 cm wide, compromising the upper maxilla, right eye and mouth opening, concomitant to multiple black satellite papula. Computed Tomography showed skull base infiltration, cervical lymphatics and other zones of head and neck. The patient was transferred to palliative care and died before a year from diagnosis.

Discussion: The primary Mucosal Malignant Melanoma of oral cavity it's a very strange condition. It has variable presentations, sometimes like a little maculae with different colors or like a highly pigmented tumor with ulcers or hemorrhage, with a high growing rate. It has an important metastatic potential and a poor prognostic. This is the reason why early clinical suspect and diagnosis is extremely valuable.

Keywords: Malignant Melanoma, Oral Mucosa, Oral Cavity.

INTRODUCTION

Malignant Mucosal Melanoma (MMM) is a tumor arised frommelanocytes, wich are pigmented cells located in the basal epidermis of the skin and mucous membranes [1, 2]. They are mainly found in the ectodermal derivative mucosa, wich includes oral and nasal mucosa. This fact explains why mucosal melanomas are less frequent in endodermal mucosa, which includes the dygestive tube from esophageal to rectum mucosa [1].

Oral cancer represents about 3.5 to 5% of all cancers, being primary oral MMMextremely rare, representing just 0.5 to 3% of all melanomas [2, 3]. Oftenlocates in palate and gum, affecting almost four times higher the superior maxillary. Also it has been seen that men are more affected than women with a 2:1 rate and predominates in Caucasians [4]. MMM can occur at any age, however it presents mainly between sixties and eighties. The medial age is seventy [5].

In counterpart to the risk factors of its cutaneous presentation, such as prolonged sun exposure without proper ultraviolet protection (UV), those related to MMM are yet unclear. Probably genetic factors are linked. Recent studies have shown important differences in the frequencies of various genetic alterations in different subtypes of melanoma. Activating mutations in the c-KIT gene are detected in a significant number of patients with mucosal melanoma [6]. Many studies have proved that tobacco would be a risk factor to laryngeal malignant melanoma mucous cancer [7].

The differential diagnosis is made with another malignant entities: primary metastasis from another cutaneous or extracutaneoustumor, undifferentiated

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sinonasal squamous cell carcinoma, anaplastic lymphoma, mucous melanocytic nevus, blue nevus, natural killer T cell nasal lymphoma, rhabdomyosarcoma, Ewing´s sarcoma, Addison´s disease and PeutzJegher´s Syndrome [3, 7].

The airway and digestive tube MMM, have an agressive behavior and poor prognosis because its high metastatic rate. The five year survival rate is lesser than 30%. In contrast with the cutaneous melanoma, the Breslow and Clark index are not usefull for staging. It has been described that they can remain quiescent for long periods of time. This explains why recurrences may arise years after a patient was considered healed.

Figure 1: Nodular lesion, compatible with MMM of oral cavity.

Figure 2: Black in color, with a smooth surface. In the photograph we can appreciate tumor also in the vestibular side of the gum extending to the palate.

CLINICAL CASE

A fifty one year old male patient from Minas de Leuque, located in the 8th region in Chile, with history of untreated hypertension, consulted in Flor Pedreros Parra Cesfam (Primary Health Care System) on April 2015. He presented with a 3 month history of a painful tumor in the mucous oral cavity. The lesion had intermittent bleeding. He referred in previous dental health consultations he was diagnosed with a benign lesion called lentigo. The tumor presented with progressive growth and induration. In the physical exam we could appreciate a dark blue pigmented tumor, with 1.3 cm in diameter, proximal to the 1.3 dental piece. There was affection of the vestibular gum and palate. To the directed interrogation the patient referred sun exposed occupation during all his working life without proper UV protection. He denied having familiar history of cancer, also he denied smoke habits or alcohol consumption.

The clinic history showed multiple dental pieces restoration: 1.1, 2.1, 3.4, 2.7, 3.6 y 2.4, made between August 2008 and April 2009, without later controls. The patient had to use dental prosthesis because of dental pieces loss; which use was discontinued due to tumor growth.

In May 2015 he was transferred to a surgery hospital for an evaluation. Later he was referred to the base hospital of Chillán city for an incisional biopsy. The biopsy finally was made on June 2015. Histopathology examination showed atypical melanocytes proliferation, confirming the MMM diagnosis, and concludes “Mucosal Malignant Melanoma with infiltration of surroundings tissues”. Scan CT showed skull base infiltration. The patient was cataloged IV stadium, considering the local invasion and distance metastasis, leaving him out of possibilities for a surgical treatment. He was admitted for adjuvant therapy due to the bad prognosis, with poor results.

In August 2015 the patient was controlled in dental care, compromising the upper maxilla, right eye and mouth opening, showing orbitary compromise, double vision and decreased visual acuity, with an extensive black right malar skin tumor, with a depressed center, about 4 cm in diameter, indurated and painful to palpation. There were multiple black satellite papules, with variable size, sharp to palpation, well demarcated, spreading to the jaw angle. The last computed tomography showed an extensive skull base infiltration, superficial and deep cervical lymphatics and other

zones of head and neck. At this point the patient had restricted mouth opening. He was transferred to palliative care.

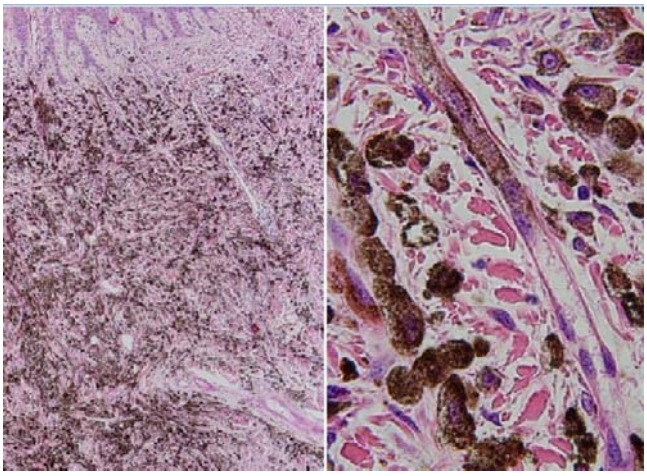

Figure 3: Mucous tissue. Pluristratified squamous epithelium with a high rate of melanocytes proliferation.Spreadin melanin. The left photo (10x) magnification, and the right photo (40x) magnification.

Figure 4: Melanoma, Lesión tumoral con compromiso extenso sobre piel de la cara. Extensive and deformating facial compromise.

DISCUSSION

Primary Mucosal Malignant Melanoma (MMM) of the oral cavity has variable presentations, sometimes like a little maculae with different colors or like a highly pigmented tumor with ulcers and/or hemorrhage, with a high growing rate. It has an important metastatic potential and a poor prognosis.

MMM of oral cavity is an extremely rare tumor and it is much more aggressive than its cutaneous counterpart.

The results and conclusions from our clinical case are supported by the literature.

Figure 5: Piel de cara con compromiso orbitario derecho, asociado a extensa tumoración ulcerada, en piel de maxilar superior derecha. Skin face with orbitary compromise, with an extended tumor.

Poor prognosis is explained by the local invasion and spreading of the cancer and metastasis to the local and distance lymphatics. The median survival, after the diagnosis is about 2 years, and the 5 year survival rate is less than 30% [3, 8, 9]. An 80% of oral cavity melanomas are located in palate and gum, in superior maxilar bone [6, 8], as well as our patient who presented a history and evolution similar to the majority of the reported cases in the literature [10-13].

It is very important to establish the diagnosis of primary MMM versus the differential diagnosis with pigmented lesions of the oral cavity because they differ in outcome and therapeutics. Also, there are many anatomic considerations that must be considered in MMM and metastatic oral cancer [14], which are described on Table **1**.

Poor prognosis was confirmed in our patient, because there was a late diagnosis and the tumor presented an aggressive behavior as described in the literature [10,14-16]. Patients tend to attend to the doctor when the lesions became symptomatic, had grown and expanded. This explains why at the moment

of diagnosis between 50 and 60% presented lymphatic compromise [15,16]. Yii *et al*. established 26%survival rate at five years following in 89 patients evaluated with head and neckMM. The survival rate was 0% when there was lymphatic compromise at the diagnosis [17]. Therefore, it is very important to follow closely pigmented oral mucous lesions [9, 13, 18]. As we observed in our clinical case it is imperative to treat and transfer patients on time. Usually the poor prognosis is explained by the late diagnosis, thedifficulty of making a wide local resection of the lesion, the anatomy of the region which makes hard to evaluate clinically the extension of the tumor, the rapid growth and early metastasis.

Table 1: Anatomic Considerations in MMM by Hicks and Flaitz

Primary melanoma of the oral mucosa
Frequent affection of palate and gingival
More frequent pigmented lesions (69%)
Overlying mucosa ulcered
Junctional activity
Invasion of epithelium
Vascular and perineural invasion uncommon
Invasion of minor salivary glands ducts
Pre-existing melanocytic lesions in one third of the cases (37%)
Metastasis of melanoma in the oral mucosa
Affectation of palate and gingival uncommon
Frequent affection of the floor of the mouth
Less frequent pigmented lesions (20%)
Overlying mucosa non-ulcered
Absence of junctional activity
Absence of epithelium invasion
Lymphocytes in band infiltrates

Hicks M, Flaitz C. Oral mucosal melanoma: epidemiology and pathobiology. Oral Oncol. 2000; 36: 152-69.

We report a case of mucosal malignant melanoma (MMM) of the oral cavity in a 51-year-old male who presented with gum tumor. Oral MMM is infrequent tumor with aggressive behavior and poor prognosis described in the literature and confirmed with our presented clinical case.Rarity of this lesion warrants its mention and emphasizes the importance of considering mucosal malignant melanoma among the differential diagnosis of tumors of oral cavity. In this patient history we appreciated that late diagnosis and the tedious specialist transfer system, which associated to an aggressive behavior ends in a very bad prognosis.

This is the reason why early clinical suspect, diagnosis and proper evaluation by specialist is extremely valuable.

REFERENCES

[1] Tocornal F, Krause F, Bermeo J, Mercado V, González P, Cevo T. Mucous Melanoma of head and Neck. Otorrhinolaryngology Head and Neck Cirgury 2004; 64: 183-189.

[2] Bagan J, Scully C. Oral Medicine and Pathology. Valencia 2007.

[3] Warszawik-Hendzel O, Słowińska M, Olszewska M, L. R. Melanoma of the oral cavity: pathogenesis, dermoscopy, clinical features, staging and management. Journal Of Dermatological Case Reports 2014; 8(3): 60-6. http://dx.doi.org/10.3315/jdcr.2014.1175

[4] Marx R, Stern D. Oral and Maxillofacial Pathology. Miami: Editorial Quintessence 2008.

[5] Stern S, Guillamondegui O. Mucosal Melanoma of the head and neck. Head Neck 1991; 13: 22-7. http://dx.doi.org/10.1002/hed.2880130104

[6] Seetharamu N, Ott P, Pavlick A,Mucosal Melanomas: A Case-Based Review of the Literature. Division of Medical Oncology, New York University Cancer Institute, New York, New York, USA.

[7] Ragin R, Modugno F, Gollin S. The epidemiology and risk factors of head and neck cancer: a focus on human papillomavirus. J Dent Res 2007; (86).

[8] Silverman S. Oral cancer. Hamilton London: Bc Decker Inc.fifth edition, editor 2003.

[9] Gandini S, Sera F, Catttaruzza M, Pasquini P, Abeni D, Boyle P, *et al*. Metaanalysis of risk factors for cutaneous melanoma: Common and atypical naevi. Eur J Cancer 2005; (41): 28-44. http://dx.doi.org/10.1016/j.ejca.2004.10.015

[10] Molgó M, Jaque A, Smith P, Uribe P. Update of prognosis factors in malignant melanoma. Chilean Dermatology Magazine 2008; (24): 328-33.

[11] Kumar S, Shuler C, Sedghizadeh P, J. K. Oral mucosal melanoma with unusual clinicopathologic features. Journal Of Cutaneous Pathology 2008; 35(4): 392-7. http://dx.doi.org/10.1111/j.1600-0560.2007.00830.x

[12] Symvoulakis E, Kyrmizakis D, Drivas E, Koutsopoulos A, Malandrakis S, Bizakis J, *et al*. Oral mucosal melanoma: a malignant trap. Head & Face Medicine 2006; 27-4.

[13] Babburi S, Subramanyam R, Aparna V, P. S. Intraoral malignant melanoma. Nigerian Medical Journal 2013; 54(4): 278-81. http://dx.doi.org/10.4103/0300-1652.119667

[14] Lachiewicz M, Berwick M, Wiggins C, Thomas N. Survival Differences Between Patients With Scalp or Neck Melanoma and Those With Melanoma of Other Sites in the Surveillance, Epidemiology, and End Results (SEER) Program. Arch Dermatol 2008; (144): 515-21.

[15] Garzino-Demo P, Fasolis M, Maggiore G, Pagano M, Berrone S. Oral mucosal melanoma: a series of case reports. J Craniomaxillofac Surg 2004; 32(4): 251-7. http://dx.doi.org/10.1016/j.jcms.2003.12.007

[16] Xi Y, Guo-xin R, Chen-ping Z, Guo-yu Z, Yong-jie H, Lai-ping Z, *et al*. Neck dissection and post-operative chemotherapy with dimethyl triazeno imidazole carboxamide and cisplatin

protocol are useful for oral mucosal melanoma. BMC Cancer 2010; 10623-631.

[17] Yii N, Eisen M, A´Hern R, Rhys-Evans P, Archer D, Henk J, *et al*. Mucosal malignant melanoma of the head and neck: the Marsden experience over half a century. Clin Oncol 2003; (15): 199-204. http://dx.doi.org/10.1016/S0936-6555(03)00068-2

[18] Türkmen A, Temel M, M. B. Primary mucosal malignant melanoma of the oral cavity. European Journal Of Plastic Surgery 2011; 34(5): 325-9. http://dx.doi.org/10.1007/s00238-011-0600-3

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