

Melanocytic nevus in the buccal mucosa: A case report

Nevo melanocítico em mucosa jugal: relato de caso

Abstract

Objective: The aim of this study was to report a case of an oral melanocytic nevus located in the buccal mucosa, demonstrating the clinical and pathological aspects of this lesion.

Case description: This article presents a case of a 23-year-old female patient, presenting a nodular lesion with brownish pigmented surface, situated on the buccal mucosa, with regular edges, sessile, and painless on palpation diagnosed as an melanocytic nevus of the intramucosal type and accompanied after the removal of the specimen without evidence of recurrence.

Conclusion: Pigmented lesions on the oral mucosa are uncommon, and when detected, should be investigated in order to rule out malignancy or to initiate a specific treatment, if necessary.

Key words: Oral melanocytic nevus; pigmented nevus; oral nevus

Resumo

Objetivo: O objetivo deste estudo foi reportar um caso de nevo melanocítico oral localizado em mucosa jugal, demonstrando os aspectos clínicos e patológicos desta lesão.

Descrição do caso: Este artigo relata um caso de uma paciente de 23 anos de idade, sexo feminino, apresentando uma lesão nodular com superfície pigmentada acastanhada, situada na mucosa jugal, com bordas regulares, séssil e indolor à palpação, diagnosticada como um nevo melanocítico do tipo intramucoso e acompanhada após a remoção do espécime sem evidência de recidiva.

Conclusão: Lesões pigmentadas na mucosa oral são raras e, quando detectadas, devem ser investigadas a fim de descartar a possibilidade de malignidades ou para iniciar um tratamento específico, se necessário.

Palavras-chave: Nevo melanocítico oral; nevo pigmentado; nevo oral

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Introduction

Melanocytic nevus are lesions defined by their histopathologic description as collections of pigment-producing cells of melanocytic origin, reported in the literature as restricted to the epidermis or dermis, or involving both sites (1). The occurrence of such lesions in oral mucosa is rare (2).

Clinically, melanocytic nevus are often found in skin as macular, papular or nodular forms composed by hyperchromatic nevus cells. According to the location of nevomelanocytes, these lesions can be classified histologically as intradermal or intramucosal, junctional, compound and blue or pigmented spindle-cell nevus, which has considerable tendency to suffer malignant transformation (2,3).

In junctional nevi, there is a proliferation of benign melanocytes along the basal cell layer. On the other hand, in compound nevi, benign neoplastic melanocytes are found in the basal cell layer and in the superficial lamina propria. Finally, in intramucosal nevi, the nevomelanocytes are located in the lamina propria without a junctional component (4).

Different from normal melanocytes, which are regularly interspersed as single cells among basal keratinocytes, forming the so called “epidermal-melanin unit”, nevomelanocytes tend to cluster in compact so called theques (5).

In relation to the etiology and pathogenesis, it is now clear that melanocytic nevi constitute benign neoplasms of cutaneous melanocytes, which frequently harbour oncogenic serine/threonine-protein kinase B-Raf (BRAF) or, less commonly, neuroblastoma ras viral oncogene homolog (NRAS) mutations. Probably, oncogenic mutations drive the initial hyperproliferation that results in the formation of the nevi, while a subsequent growth-arrest response with the features of oncogene-induced cellular senescence accounts for the cessation of further growth (6).

The occurrence of melanocytic nevus is rare in oral mucosa and, when it occurs, the more commonly site of affection is the palatal mucosa in the form of blue nevus (2). The location in the buccal mucosa is uncommon (7). The aim of this study was to report a case of melanocytic nevus in the oral mucosa, demonstrating the clinical and pathological aspects of this lesion.

Case Description

A 23-year-old feoderm woman, was attended in the clinic of Diagnostics of FUNORTE-MG complaining of “a smudge on her cheek” with approximately 15 years of evolution.

During the anamnesis, the patient reported good general health. Extraoral physical examination revealed no anomalies. However, intraoral clinical examination, showed nodular lesion with pigmented brownish surface, located in the left buccal mucosa, with approximately 5mm in its largest diameter, regular edges, sessile and painless on palpation (Fig. 1).

On the basis of this clinical presentation and the history of the lesion, the diagnostic hypothesis was intramucosal

nevus. Subsequently, it was realized the excisional biopsy of the lesion (Fig. 2 and 3).



Fig. 1. Intraoral image showing a nodular lesion in the buccal mucosa of the left side.



Fig. 2. An elliptical incision was performed for excisional biopsy.



Fig. 3. Macroscopic overview of the specimen showing the superficial pigmentation.

Histopathologic analysis revealed the presence of an atrophic stratified squamous epithelium involving a proliferation of benign hypermelanotic nevus cells arranged in compact nests so called theques and localized in the subjacent connective tissue. These microscopic findings confirmed the diagnosis of intramucosal melanocytic nevus (Fig. 4 and 5).

After one week that the biopsy was realized, the sutures were removed (Fig. 6) and the patient was kept under follow-up for a period of 6 months, with no evidence of recurrence.

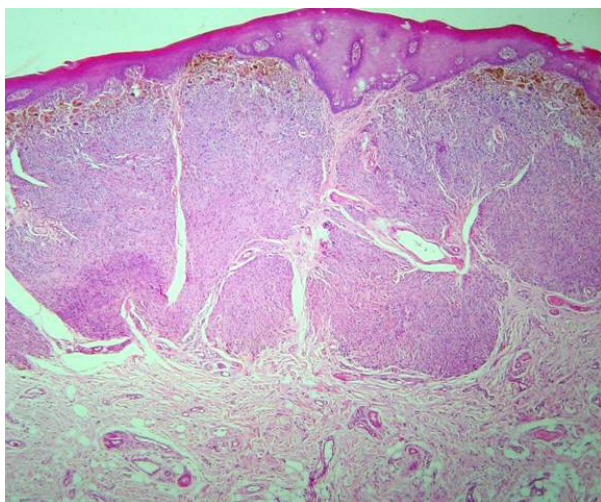


Fig. 4. Panoramic microscopic view demonstrating the proliferation of nevus cells arranged in theques and localized in the connective tissue. (HE, 40X).

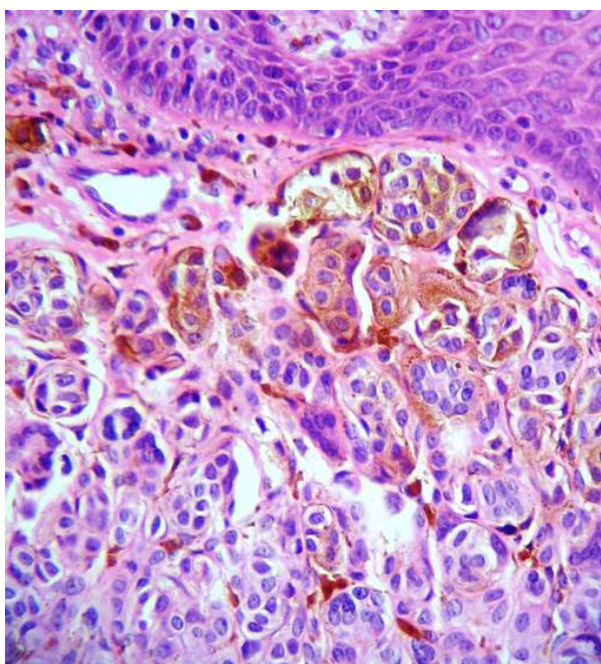


Fig. 5. Microscopic view showing hypermelanosis in some nevus cells. No junctional activity was observed (HE, 100X).



Fig. 6. Aspect of the buccal mucosa one week after the surgical procedure.

Discussion

Oral pigmentation can be physiological or pathological, and exogenous or endogenous. Color, location, distribution, and duration as well as drugs use, family history, and change in pattern are important for the differential diagnosis. In this perspective, dark or black pigmented lesions can be focal, multifocal or diffuse macules, including entities such as racial pigmentation, melanotic macule, melanocytic nevus, blue nevus, smoker's melanosis, oral melanoacanthoma, pigmentation by foreign bodies or induced by drugs, Peutz-Jeghers syndrome, Addison's disease and oral melanoma (4).

Pigmented nevi of the oral mucosa are rare benign melanocytic tumours and are usually discovered during routine dental examinations. The hard palate is the most common subsite affected by these lesions, followed by mucobuccal fold and gingiva. In addition, it is believed that oral melanocytic nevus were more frequently biopsied in females (F:M=1.5:1) (8). In the present case it was observed a rare presentation of melanocytic nevus located in the buccal mucosa of a female patient.

Regarding morphogenesis, the melanocytic proliferation can be divided into three phases: proliferation of benign neoplastic melanocytes along the submucosal-mucosal junction (junctional nevus); migration of these cells to the underlying mesenchymal tissue (compound nevus); and loss of the junctional component of the nevi, so that all remaining nevomelanocytes are located within the subepithelial connective tissue stroma (subepithelial nevus) (5).

Meleti et al (8) suggested that junctional and combined nevi are mostly found in young individuals (patients under 40 years of age), whereas the peak incidence of diagnosis of subepithelial nevi is in the fifth decade. In this perspective, although our case reported corresponds to a 23 year old patient with intramucosal melanocytic nevus, the lesion showed a long period of clinical evolution. So, these data also support that melanocytic nevi go through a junctional and a compound phase before they become subepithelial (7-9).

In a study realized by Castro et al (3), oral melanocytic nevus was evaluated in a group of precancerous lesions, which 93.3% are characterized as brown/black macules. In general, oral lesions with blackened appearance, have little ability to suffer malignant transformation to oral cancer, but in some cases, melanosis, amalgam pigmentation and oral melanocytic nevus may mask a melanoma.

There are no reports of malignant transformation of intraoral nevi even in patients who have had multiple or congenital nevi. Biopsy is advisable for any new oral pigmentation because an early melanoma may be mistaken for a melanocytic nevus (10). In this case, we chose the complete excision of the lesion, because of its solitary aspect and small extension.

When located in other body regions, most cases of malignant transformation of melanomas occurs in short periods of time, ranging from 3 to 6 months (11) and the changes are generally associated with alterations in color, size, topography and ulcerations. Histologically, it has been observed that at least 50% of all diagnosed cutaneous melanomas arise from nevus (12). Similarly, Luemo-Aguilar (13), consider cutaneous melanocytic nevus as lesions that may develop into melanomas, or even contain lodge tumors.

The differential diagnosis can be performed by observing the histological characteristics of the lesion, taking into account the Breslow's index and Clark's levels of infiltration, as well as the observation of ulceration, evaluation of mitotic index and presence of ganglion and distant metastasis (14). To improve diagnostic accuracy, it is recommended to execute complete excisional biopsies, because the histological diagnosis is based on the architecture and biological behavior of the lesion (15).

In conclusion, we emphasize that diagnosis of pigmented lesions located in oral tissues is challenging, but the clinicians should be aware to their presence and in order to appropriately treat the patients.

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