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Keratoacanthoma of the lower lip: still a matter of diagnosis

Ceratoacancoma do lábio inferior: ainda um problema de diagnóstico

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Abstract

Introduction: Keratoacanthoma is a lesion that may mimic squamous cells carcinoma clinically and histologically and the distinction between both lesions has been a matter of discussion. Typical lesions consist of a firm dome-shaped nodule, 1 to 2 centimeters in diameter, with a horn-filled crater in its center. Objectives: To present it was selected an atypical case of a 43-year-old woman who had a solitary keratoacanthoma (KA) of the lower lip with a history of two years of evolution and mistreatment and to discuss the difficulties of the diagnosis process. Conclusion: Because of the rarity of the lesion and its similarity with squamous cells carcinoma the general dentist must explain to the patient that the clinical aspects are not conclusive of the diagnosis and a correct acquisition of the surgical specimen is crucial to an accurate histopathological interpretation and conclusive diagnosis.

Key words: Carcinoma, squamous cell; Diagnosis; Keratoacanthoma; Oral cancer.

Resumo

Introdução: O ceratoacantoma é uma lesão que pode mimetizar clínica e histologicamente o carcinoma espinocelular, sendo discutível a distinção entre as duas lesões. As lesões típicas consistem em um nódulo firme, em forma de cúpula, com 1 a 2 centímetros de diâmetro e uma cratera central preenchida com queratina. Objetivo: Apresentar um caso atípico de uma mulher de 43 anos que apresentava uma lesão solitária de queratoacantoma no lábio inferior, com uma história de dois anos de evolução e erros de tratamento e discutir a dificuldade no processo de diagnóstico. Conclusão: Devido à raridade da lesão e sua semelhança com o carcinoma, o clínico geral deve explicar ao paciente que os aspectos clínicos não são conclusivos do diagnóstico e que a aquisição correta do espécime cirúrgico são cruciais para a análise histopatológica correta e para o diagnóstico conclusivo.

Descritores: Câncer oral; Carcinoma espinocelular; Ceratoacantoma; Diagnóstico.

Introduction

Keratoacanthoma (KA) is a unique cutaneous disease that is known for its rapid growth that can be followed by spontaneous regression[1]. Most solitary KA occurs in sun-exposed areas of the face and is thought to arise from epidermal cells of the skin appendages, primarily hair follicles. Oral KAs are uncommon lesions, comprise about 8 per cent of all keratoacanthomas and may occur on the vermilion border of the lower lip and, in a less frequency, mucous membranes and oral cavity[2].

These typical lesions consist of a firm dome-shaped nodule, 1 to 2 centimeters in diameter, with a horn-filled crater in its center. In general, three clinical stages are recognized in the natural history of KA: proliferative, mature and resolving[3].

KA may mimic squamous cell carcinoma clinically and histologically and the distinction between keratoacanthoma and squamous cells carcinoma (SCC) has been a matter of discussion since the first descriptions of KA, especially after 1950 when Rook and Whimster[4] separated both lesions. Certain authors consider KA to be a variant of SCC or to belong to a spectrum of neoplastic processes that comprise warts at one end and SCC at the other end[5].

Although it may regress spontaneously, KAs treatment is a matter of discussion and the lesions have been treated by excision, *laser*-radiation therapy and topical treatment with immunostimulators or intralesional injections of chemotherapy[6-9].

The purpose of this article is to present the clinical case of a solitary keratoachantoma of lower lip, discuss the process of diagnosis and its treatment choice.

Case report

A 43-year-old woman complained of a sore on the lower lip which she said it had been present for 2 years. She stated to self-medicate the lesion with sun block stick and topical antiviral ointment with no improvement of the clinical aspect. The patient had a history of sun exposure and the clinical examination revealed an early wrinkled face skin (Figure 1).

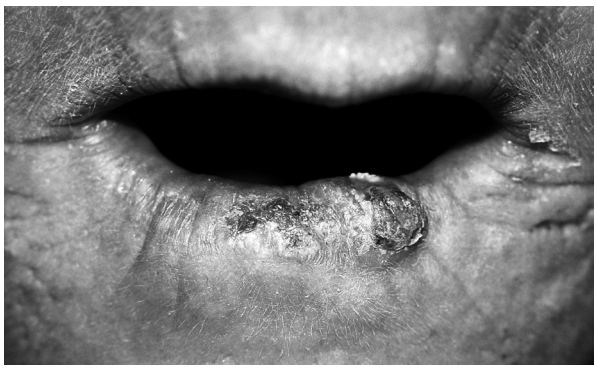

Figure 1: Clinical aspect of the keratoacanthoma at time of presentation

On the vermilion of the lower lip there was an indurated, localized nodule measuring 2 centimeters, with rolled margins presenting two brownish keratotic cores. Adjacent to the lesion the labial mucous membrane it presented leukoeritroplasic areas with unclear outline demarcation between skin and the vermilion border (Figure 2).

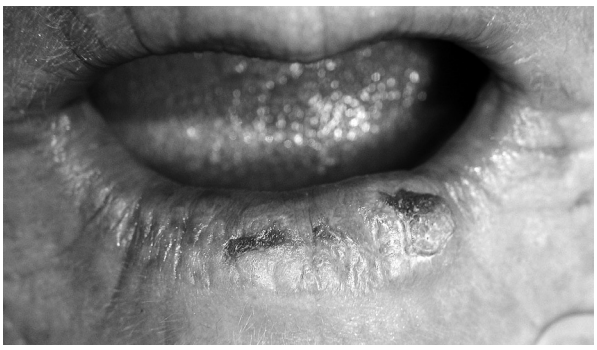

Figure 2: The lesion after incisional biopsy showing partial remission

The original hypothesis was of squamous cells carcinoma and we oriented the patient to stop the topical medication and we performed an incisional biopsy, which result was "pseudo-epiteliomatous hyperplasia with active chronic inflammation and presence of hyphae compatible with Candida sp". Surprisingly, after two weeks there was a significant improvement of the lesion clinical aspect and we suspected of keratoacanthoma (Figure 3).

An excisional biopsy was done, and this time the specimen consisted of a "mucosa covered by a stratified squamous epithelia characterized

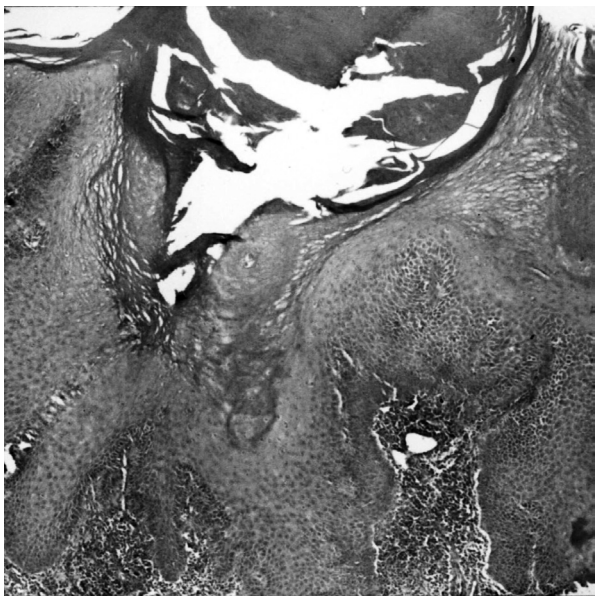

Figure 3: Low-power view of the specimen displaying an epithelial proliferation with arciform disposition, acanthosis and a crater filled with keratin. Note the intense perilesional chronic inflammatory infiltrate (Hematoxylin & Eosin, X40)

by an abrupt transition from normal mucosa to a proliferation rounded shaped mass with arciform disposition, central crater filled with keratin and sharp outline between the stroma and the epithelium. Clusters of keratinocytes were mildly pleomorphic, showed some degree of anaplasia, dyskeratosis and there were instances of inverse polarization of the basal cells. There was an intense perilesional chronic inflammatory infiltrate". The final diagnosis was of keratoacanthoma. After complete excision of the lesion, the patient is cured and returned to her normal activities.

Discussion

We presented a new case of lower lip keratoachantoma which was not a typical case, either in clinical characteristics or in histological findings.

The lesion had a 2-year history of evolution, with several unsuccessful empirical topical treatments such as sun block lipstick and antiviral ointment. This amount of time evolution is not compatible with KA that usually is a rapid developing lesion, characterized by exophytic keratin filled crateriform proliferation. Moreover, the lesion presented an atypical clinical aspect, such as two distinct keratotic plaques instead of the regular appearance of a solitary plaque rising from the vermilion of the lip. That is the reason our first clinical diagnosis was settled as SCC.

SCC is usually a more slowly evolving, endophytic, ulcerated lesion[1-3]. Our case did not show ulceration but presented mild infiltrative areas surrounded by areas of typical actinic keratosis, and this leaded us to suppose a malignant nature of the lesion. Otherwise, the remarkable improvement of the lesion with no topical treatment after incisional biopsy leaded us to a benign nature such as keratoachantoma, what was confirmed by the histopathological result.

KA treatment is controversial, although the lesion spontaneously resolves, de Visscher et al.[3] stated that KAs up to approximately 1.0 centimeter could rather easily be excised by a wedge excision followed by primary closure with the advantage of obtaining the entire lesion, thus permitting thorough a histological examination, increasing the possibility of a more accurate final histological diagnosis. Otherwise, the surgical removal of larger lesions usually requires some type of reconstructive surgery and in those cases, some authors state that radiotherapy is often preferred and gives more or less equally good results as surgical removal[3, 10]. However, this precludes the possibility of additional histological examination, and there is no consensus as to whether cancericidal doses or dose levels lower than those used in squamous cell cancer are necessary to induce resolution of KA. In our opinion, if possible, it is preferred not to expose the cells to a potentially mutagenic agent as ionizing radiation, especially in view of the real nature of keratoacanthoma is still to be elucidated[5, 11].

Entire surgical excision of our case was performed because of the favorable clinical aspect after the incisional biopsy and because the histological result, which discarded the possibility of a malignant disease. It could be an alternative for the patient to wait for spontaneous remission of the KA, but sometimes the entire process may

take several months, and due to anxiety of the patient to be cured we preferred to remove all lesion. There are several studies on the literature that recommend a more conservative approach for KA, using topical imiquimod, intra-lesional injections of 5-fluorouracil, alone or combined with laser therapy with good results[6-9], however, that is not our group's experience.

Histological diagnosis of KA is possible only when the specimen shows a major part of the architectural pattern of the lesion, preferentially with some inclusion of normal mucosa. Cribier et al.[5] evaluated the reliability of some of the criteria used to make a distinction between KA and SCC. The authors analyzed 296 fully excised tumors previously classified as SCC or KA using the following criteria: sharp outline stroma/proliferation, epithelial lip, ulceration, marked pleomorphism or anaplasia, mitoses, arciform disposition, keratin-filled crater, clear-cut demarcation epidermis/proliferation, intraepithelial elastic fibers, intraepithelial polymorphonuclear abscesses, lateral growth predominant, extension beyond sweat glands, parakeratosis and dyskeratosis. They concluded that a 100 per cent clear-cut distinction is impossible by histological analysis only and that only the first five criteria were of certain value in differentiating SCC from KA.

When KA is considered at the diagnosis, pathologists generally take the microscopic slide and with the naked eye, hold it up to the ambient light, draw a line from normal margin to normal margin. A SCC will fall below the line; a KA being exophytic will be primarily above the line. This is helpful in diagnosis.

As a practical recommendation, this lesion must be clinically considered a SCC until histopathologically proven otherwise and biopsy is mandatory, once the frequency of SCC is higher than oral KA, and so are the chances that the clinician is in fact dealing with a malignant lesion.

Conclusion

Although there are many studies on the subject, it remains difficult to distinguish KA from SCC, and a good general dentist must explain to the patient that the clinical aspects are not conclusive of the diagnosis, and a correct acquisition of the specimen using excisional biopsy or profound incisional biopsy is crucial to an accurate histopathological interpretation and conclusive diagnosis.

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