

# Simultaneous Presentation of Plaque-like and Reticular Lichen Planus: Case Report

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## Abstract:

Lichen planus is a mucocutaneous lesion frequently observed in the dental clinic. In the oral cavity, several clinical forms can be observed, including reticular, papular, plaque, erosive, atrophic and bullous. The reticular form is the most commonly found. There is greater predilection for the female gender and from the 5<sup>th</sup> decade of life. The most affected site is the jugal mucosa. However, the other clinical forms can also present simultaneously, with other clinical features. The purpose of this article is to present a case of plaque-like lichen planus that affected the keratinized gingiva simultaneously with reticular lichen planus on the jugal mucosa of a patient.

**Keywords:** Lichen planus; Gingiva; Oral Diagnosis; Oral Pathology; Periodontics.

## Introduction

Lichen planus is a chronic inflammatory mucocutaneous disease, immune-mediated, that is relatively frequent in dental practice. It was first described by the British dermatologist Erasmus Wilson in 1869. The name lichen is of Latin origin, and refers to some species of plants, composed of symbiotic algae and fungi. Wilson named the lesions lichen, because of their similarity to plants<sup>1-7</sup>.

Several clinical forms are observed, among them reticular, papular, erosive, plaque-like, bullous, and atrophic. Sometimes the clinical forms may present simultaneously, with several other clinical features<sup>1-3,5,6,8</sup>.

Generally, there is greater predilection for females, beginning in the 5<sup>th</sup> decade of life<sup>1,6,9,10</sup>.

The etiopathogenesis is still unknown. However, the influence of stress and anxiety; due to drug iatrogenesis; as a result of systemic diseases, particularly immune compromise or diabetes; on the initiation or clinical course of the disease have been postulated. The role of stress and anxiety has not yet been well defined. The lesion is caused by a cell-mediated immune response, with interaction between lymphocytes and epithelial cells. Some drugs can induce lichen planus-like lesions. In this respect, depending on the region affected, the terms mucositis or lichenoid dermatitis, lichenoid reactions (lichenoid foreign body gingivitis) have been suggested<sup>2,3,6,7</sup>.

Lichen planus has a difficult clinical diagnosis because of its broad differential diagnosis. Sometimes the histopathological examination is not elucidative. It is clinically important because of possible malignant transformation process<sup>1,3,5,6</sup>.

The purpose of this article is to present a case of plaque-like lichen planus that affected the keratinized gingiva simultaneously with reticular lichen planus on the jugal mucosa of a patient.

## Case Report

A Caucasian female patient, 55-years-old, came to a private clinic complaining of gingival lesions.

Clinically the patient presented with a white, plaque-like, asymptomatic lesion on the buccal gingiva of the right upper premolars. Simultaneously, whitish, reticular-looking, asymptomatic lesions were observed on the jugal mucosa on both sides, which did not respond to scraping (Figures 1 to 3). The lesions had an evolution time of 6 months.



**Figure 1:** White, plaque-like, asymptomatic lesion on the buccal gingiva of the right upper premolars (frontal view).

**Figure 2:** Whitish, reticular-looking, asymptomatic lesions observed on the jugal mucosa on right side.

**Figure 3:** Discrete whitish lesions on the jugal mucosa on left side.

Regarding the systemic condition, no changes or diseases were reported. Dermatological involvement in other regions of the skin and mucous membranes has not been reported. Incisional biopsy was recommended. The patient agreed and signed a consent form for the procedure.

Excisional biopsy of the gingival lesion was performed under local anesthesia. The fragment of the lesion was fixed in 10% formalin and sent to the Laboratory of Surgical Pathology of the School of Dentistry of the University of São Paulo. The histopathological examination revealed a fragment of mucosa coated by hyperkeratosis and stratified pavementous epithelium showing short projections ("sawtooth") towards the connective tissue. The lamina propria, consisting of dense connective tissue, showed a chronic inflammatory infiltrate predominantly lymphocytic with justaepithelial localization. The diagnosis was lichen planus. The clinical features established the diagnosis of the plaque-like.

The patient was prescribed emollient base for topical use containing triamcinolone acetonide 1 mg for 15 days. After 20 days, remission of the lesion was observed. The patient was recommended to return to the clinic due to the possibility of recurrence of the lesion. The patient has been followed up for 20 months with no signs of recurrence.

## Discussion

In the oral cavity, lichen planus may present as typical or atypical forms. Generally, typical forms are asymptomatic and may regress to complete remission, requiring no treatment. They present as reticular, papular and plaque forms. In the reticular form, Wickham's striae are characteristic, as observed in the present case. Small whitish papules are observed at the periphery of the lesion. They are frequently observed on the jugal mucosa, and may also affect the gingiva, tongue, palate and lips. The papular form presents small papules, or observed in the periphery of Wickham's striae. Plaque-like lichen planus is clinically similar to leukoplakia. It presents irregular and slightly raised borders. It particularly affects the jugal mucosa and the lingual dorsum<sup>1,2,5-7</sup>. In the present report, the clinical features indicated reticular lichen planus on the jugal mucosa, and the clinical and histopathological features defined the diagnosis of plaque-like lichen planus on the gingiva.

The atypical forms are classified as atrophic, erosive or ulcerative, and bullous. Painful symptoms are a common feature of these forms, with burning and severe pain. Most of the time they are permanent, but may suffer exacerbations due to local or systemic interferences<sup>1,2,5,6,8</sup>. The atrophic form is characterized by red patches with very fine white striae, generally affecting the keratinized gingiva. In the erosive or ulcerative form, there is a dynamic process, in days, of change and variation of the clinical aspects of the ulcer. The bullous form is the rarest, in which blisters or vesicles precede ulceration. After the eruption of the vesicles, the thin membrane ruptures, causing the ulcerated surface to be extremely uncomfortable. It generally occurs in the posterior regions of the jugal mucosa, adjacent to the lower molars<sup>5-7</sup>.

In general, oral lichen planus is more prevalent in women, affecting patients from the 5th decade of life. The most affected region is the jugal mucosa, followed by the gingiva, oral floor, lip and palate<sup>1,5-13</sup>.

Diagnosis is difficult, based on clinical and histopathological features. Symptomatology is an important part among the clinical features. The atypical forms lead to diagnosis by symptomatology. However, typical forms are rarely symptomatic and diagnosis is sporadic<sup>2,5,7</sup>.

The clinical differential diagnosis is broad, comprising lichenoid reactions, Fordyce's granules, leukoedema, white spongy nevus, pseudomembranous candidiasis, geographic tongue, hyperkeratosis, leukoplakia erythroplakia, cheilitis, herpes, aphthous ulceration, desquamative gingivitis, psoriasis, benign mucosal pemphigoid, pemphigus, lupus erythematosus, erythema multiforme, Behcet's syndrome, epidermoid carcinoma and syphilis<sup>2,9,14</sup>.

The histopathological examination presents typical features, but not always specific. Some lesions, such as lupus erythematosus and lichenoid reactions, caused by drugs or other substances, may present a similar histopathological pattern<sup>2,5,7</sup>. In this perspective, the use of serological tests and direct and indirect immunofluorescence to determine the marking of antibodies involved in the immunopathological pattern of the disease may favour the diagnosis<sup>2,7,14</sup>.

The treatment for lichen planus is determined by the symptomatology. Therefore, the typical and asymptomatic forms generally do not require treatment. Sometimes the patient may present candidiasis, due to infection of *Candida albicans* on the lichen planus. In these cases, with mild burning, the administration of antifungal drugs may be necessary<sup>7</sup>. For atypical forms of lichen planus, the indicated therapy is corticotherapy, as it is an immunologically mediated disease<sup>2,5,6,9,12,14,16</sup>. Local therapy should be preferred to systemic therapy, due to the occurrence of side effects. Corticosteroids such as triamcinolone, fluocinonide, betamethasone, prednisolone and clobetasol have been indicated in daily applications ranging from 7 to 15 days<sup>2,4-6,12,17</sup>. In the present case, triamcinolone acetonide was chosen for its ease of application and for being less aggressive compared to dexamethasone and betamethasone. Other drugs were cited such as azathioprine, retinoids, cyclosporine, pimecrolimus, dapson, phenytoin, methotrexate, antimicrobials, antimalarials (hydroxychlorin) and griseofulvin<sup>2,4,6,7,10,15,16</sup>.

Additionally, the xenon laser (308 nm) was presented as a therapeutic option, by means of weekly applications, until the total involution of the lesions<sup>2,5,13</sup>. Surgical excision by CO<sub>2</sub> laser has been reported, but presenting a relative failure rate<sup>8</sup>.

The possibility of malignant transformation has been reported - particularly in the erosive form - ranging from 2 to 4%, demonstrated from the elevated expression of the p53 protein by means of immunohistochemical techniques<sup>5,7,9,10</sup>. From this perspective, clinical follow-up by annual or half-yearly assessments becomes fundamental<sup>1</sup>.

## Conclusion

Lichen planus is a mucocutaneous lesion frequently observed in the dental clinic. It can affect several regions of the oral cavity and is clinically presented in several forms, typical and atypical, sometimes making diagnosis difficult. Corticotherapy is the recommended treatment. The administration of corticosteroids should be considered by the dental surgeon. However, it should be pondered in view of possible side effects due to prolonged periods. In the present case, triamcinolone acetonide was chosen due to its easy application. It is a less aggressive corticosteroid, in comparison with dexamethasone and betamethasone. Clinical follow-up must be performed, justified by the possibility of malignant transformation.

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