



## CLINICAL DIAGNOSIS AND CONSERVATIVE TREATMENT OF RETICULAR AND EROSIIVE ORAL LICHEN PLANUS: CLINICAL CASE REPORT

### DIAGNÓSTICO CLÍNICO E TRATAMENTO CONSERVADOR DE LÍQUEN PLANO ORAL RETICULAR E EROSIVO: RELATO DE CASO CLÍNICO

Jeniffer **Degasperi** , Letícia de Freitas Cuba **Guerra** \* 

Universidade Paranaense, Cascavel, PR, Brazil.

\*leticiacuba@prof.unipar.br

#### ABSTRACT

Oral lichen planus is an autoimmune pathology with predilection between the fourth and sixth decades of life, for females and leukoderms. This pathogenesis is uncertain, but it may be related to chronic liver disease, stress, hormonal disorders, etc. Its main forms of presentation are: reticular and erosive. The aim of this article is to report the case of a patient with reticular and erosive lichen planus in the oral cavity whose history and clinical aspects were crucial for the diagnosis and treatment. This is a case report of a male, 60 years old, leucoderma, who sought care referring burning in the cheek and gum when drinking wine and using vinegar, had gone through several professionals and multiple treatments without diagnosis or improvement of symptoms. In medical history, liver disease and chronic thrombocytopenia were reported. On physical examination, atrophic jugal mucosa was noted, with areas of ulceration and bilateral erosion, with the presence of reticular aspect white striae, whitish plaques on the lingual dorsum and striated crustal areas in the upper lip mucosa. In the clinical setting, 0.05% clobetasol propionate was prescribed and additional tests were requested (complete blood count, blood glucose, VSG, folic acid, B12, serum iron, TSH and anti-HCV). After 14 days, complete remission of the lesions and painful symptomatology were observed; no noteworthy alterations were observed in the complementary exams. Thus, the patient will follow periodic follow-up and upon relapse will resume corticosteroid therapy, and in the event of new abnormal clinical findings, incisional biopsy will be indicated.

**Keywords:** Autoimmunity. Corticosteroids. Erosive Lichen Planus. Oral Mucosa. Reticular Lichen Planus.

#### RESUMO

O líquen plano oral é uma patologia autoimune com predileção entre a quarta e a sexta décadas de vida, por indivíduos do sexo feminino e leucodermas. A patogênese do mesmo é incerta, pode estar relacionada com hepatopatias crônicas, estresse, distúrbios hormonais, etc. Suas principais formas de apresentação são: reticular e erosivo. O objetivo desse artigo é relatar o caso de um paciente com líquen plano reticular e erosivo em cavidade oral cuja história e aspectos clínicos foram determinantes para o diagnóstico e tratamento. Trata-se de um relato de caso de um indivíduo masculino, 60 anos, leucoderma, procurou atendimento referindo queimação na bochecha e gengiva ao beber vinho e usar vinagre, já havia passado por diversos profissionais e múltiplos tratamentos sem diagnóstico ou melhora dos sintomas. Na história médica relatou hepatopatia e plaquetopenia crônica. Ao exame físico, notou-se mucosa jugal atrófica, com áreas de ulceração e erosão bilateral, com presença de estrias brancas de aspecto reticular, placas esbranquiçadas no dorso lingual e áreas estriadas em crosta em mucosa labial superior. Diante do quadro clínico foi prescrito propionato de clobetasol 0,05% e solicitados exames complementares (hemograma, glicemia, VSG, ácido fólico, B12, ferro sérico, TSH e anti-HCV). Após 14 dias, observou-se remissão completa das lesões e da sintomatologia dolorosa, não foram observadas alterações dignas de nota nos exames complementares. Assim, o paciente, seguirá em acompanhamento periódico e mediante a recidivas retomará a corticoterapia, e, diante da ocorrência de novos achados clínicos anormais, a biópsia incisional será indicada.

**Palavras-chave:** Autoimunidade. Corticoide. Líquen Plano Erosivo. Líquen Plano Reticular. Mucosa Bucal.

## INTRODUCTION

Dermatological pathologies mediated by the immune system are conditions that occur due to its activation against constituents of the body itself, the mucocutaneous lesions are characterized by the production of antibodies against adhesion molecules, such as desmosomes and hemidesmosomes, responsible for adhesion, among these lesions are mentioned the oral lichen planus (OLP) (CARVALHO *et al.*, 2011).

OLP is an autoimmune dermatological disease that affects approximately 0.02% and 1.2% of the population, often affecting the oral mucosa of females, mostly white and with a greater occurrence between the fourth and sixth decade of life, the most frequent anatomical location is in the jugal mucosa, but they can affect the gums, tongue and other areas of the oral mucosa, in addition to being systemically present in the genital mucosa, skin, nails and scalp (SOUSA; ROSA, 2005; MATESANZ-PÉREZ; BASCONES-MARTÍNEZ, 2009; CANTO *et al.*, 2010).

Even though the term “lichen” suggests that the pathology is fungal, its evidence indicates that it is linked to autoimmunity, associated with T lymphocytes, which promote a lymphocytic assault on the keratinocytes of the basement membrane of the mucosa, inducing apoptosis and cell degeneration. There is knowledge about the pathogenesis of the disease, however, what leads to the beginning of this process is still not completely clear, being that stress, systemic diseases, such as hepatitis C, and ingestion of acidic or citric foods are related to periods of intense manifestation of the disease (DANIELLI *et al.*, 1981; ISMAIL; KUMAR; ZAIN, 2007; SOUSA; ROSA, 2008; CANTO *et al.*, 2010; NEVILLE, 2016).

The OLP has specific characteristics, presented in two main forms: reticular and erosive, the first characterized by white striations with a lacy aspect and described as asymptomatic, the second is more significant for the patient because it presents symptoms, varies from discomfort to episodes of intense pain (GONÇALVES; CRUZ; JÚNIOR, 2009).

The same characteristics mentioned by Gonçalves, Cruz and Junior (2013) were mentioned by Danielli *et al.* (1981), Ismail, Kumar, Zain, (2007) and Neville *et al.* (2016) adding the atrophic forms, plaque type, papular and bullous, which are rarer to be found, considered lesions often symmetrical and bilateral, or multiple.

The diagnosis of this pathology can be made based on clinical and histopathological exams, however lesions with classic characteristics can be diagnosed with their appearance. Neville *et al.* (2016) characterizes the erosive lichen planus with erythematous areas, atrophic and with degrees of irregular ulceration, and due to the presence of painful symptoms, this variation in OLP makes the patient look for more dental care. In the reticular variation, however, it is asymptomatic, characterized by Wickham striae, as thin white and lacy lines, generally surrounded by an erythematous border, usually in bilateral jugal mucosa (CANTO *et al.*, 2010; NEVILLE, *et al.*, 2016).

The histopathological aspect of OLP is characteristic, the presence of an epithelium in the form of "saw teeth", atrophic epithelium, acanthosis, hydropic degeneration of the basal layer and inflammatory infiltrate, in addition to the presence of T lymphocytes in the lamina propria (FERRISE, 2016).

To indicate the correct drug therapy, the anamnesis must be well written, the treatments for this pathology aim to reduce the duration and severity of the symptoms, the reticular form due to the absence of symptoms requires observation and surveillance, in the erosive form the use of topical corticosteroid usually are indicated, and when there is remission of lesions, the power of the corticosteroid can be reduced and when control occurs it must be interrupted (JUSTI, 2009; MATESANZ-PÉREZ; BASCONES-MARTÍNEZ, 2009).

The objective of this article is to present a case report of reticular and erosive lichen planus treated with topical corticosteroids, in which anamnesis and physical examination were decisive for the choice of conservative management.

## CASE REPORT

A 60-year-old male patient sought care referring to burning in gums and cheeks for about 6 months, the patient related the painful symptoms with the use of acidic foods such as wine and vinegar. According to the patient's information, he used Ad-Muc, flogoral, omcilon-A, bridilac and bepantol, noticing a slight improvement in the lesions. He had already consulted several professionals and multiple treatments without success.

In the medical history, he reports chronic thrombocytopenia, chronic liver disease, under medical supervision, minor skin rashes and is considered stressed with his work. When asked about the medical family history, the patient denied other comorbidities in the family, only his brother with intestine cancer. Patient denied smoking and drinking, as well as other harmful habits.

On extra-oral examination, lymphadenopathy was observed on the left side, with inflammatory characteristics, that is, painful, mobile, rounded and smooth lymph nodes, and ulcerated lesion covered by crust on the upper lip measuring 2 cm (Figure 1). On intra-oral examination was verified the presence of atrophic mucosa with striated white plaque areas, of reticular aspect, with areas of ulceration and erosion in bilateral jugal mucosa, being on the left side an ulcerated lesion close to the molar region measuring 1.5 cm, and on the right side the ulcerated lesion measures 4 cm (Figure 2). On the tongue, ventral and dorsal lingual region, it presented white plaques (Figure 3). Based on the findings, the hypothesis of clinical diagnosis was reticular and erosive lichen planus.

Considering the diagnostic hypothesis, screening laboratory tests were requested, these being a complete blood count, blood glucose, ESR, folic acid, vitamin B12, serum iron, TSH and Anti-HCV, as well as preoperative tests, such as PT and APTT. The therapeutic management was the prescription of topical corticosteroids, clobetasol propionate 0.05% and requested a return within 15 days to evaluate the exams and collect material for histological analysis and confirmation of the clinical diagnosis. Contact was also made with the patient's doctor for more information regarding the systemic conditions related to the reported liver disease, and he informed the team that the patient's condition is due to an episode of hepatitis B in childhood and is controlled, without clinical repercussions.

Upon return, the patient had exams without changes, reports absence of symptoms with the proposed treatment, still reports that he is eating normally, the intra-oral examination reveals complete remission of the lesions (Figure 4; Figure 5; Figure 6). Thus, in view of the complete remission of the lesions, the incisional biopsy that was scheduled was suspended for the time being, as well as the use of the topical corticosteroid was interrupted. Considering the chronic characteristic of the disease and its dynamic course, the patient is in quarterly clinical control without recurrences of the lesions for 1 year.

**Figure 1** - Initial clinical aspect of the lip lesion



Source: the authors.

**Figure 2** - Initial clinical aspect of lesions in the jugal mucosa R and L



**Source:** the authors.

**Figure 3** - Initial clinical aspect of the dorsum of the tongue



**Source:** the authors.

**Figure 4** - Clinical aspect of the lip after 15 days of treatment



**Source:** the authors.



**Figure 5** - Clinical aspect of lesions in the jugal mucosa R and L after 15 days of treatment



**Source:** the authors.

**Figure 6** - Initial clinical aspect of the dorsum of the tongue after 15 days of treatment



**Source:** the author.

## DISCUSSION

Oral lichen planus has a greater predilection for females, white, between the fourth and sixth decade of life, and the anatomical location most frequently is the jugal mucosa, according to data obtained by Souza and Rosa, (2008) when they analyzed that, of 79 patients, 62 were women (78.48%), and both in men (64.7%) and women (80.64%), there was a predilection for the white race. 53.43% of the patients analyzed were between the fourth and sixth decade of life, and 60.76% of the lesions were diagnosed in the jugal mucosa. The data obtained in this research corroborate that mentioned by Nafas-Alfaro *et al.* (2003) and Neville *et al.* (2016) and contrasts, in parts, with the reported patient, because this, despite being white, is between the fourth and sixth decade of life and has lesions in the jugal mucosa, is male.

There are numerous causal factors that can trigger a lymphocytic assault on the keratinocytes of the basal layer of the oral mucosa, the main leukocyte of this process is the T lymphocyte, which promotes cellular apoptosis, providing the appearance of reticular lichen planus, the mechanisms involved in the etiopathogenesis are known and cited by authors as: Scully *et al.* (1998); Souza and Rosa (2008), Canto *et al.* (2010) and Carvalho *et al.* (2011), however, more is known about lymphocytic assault than the etiological factors that lead to the beginning of this process. The most cited by the authors are systemic diseases, such as chronic liver diseases, especially hepatitis C, the intake of acidic foods and condiments, and periods of stress may be related to the exacerbation of the disease.

As reviewed by Pires (2016), periods of tension, anxiety and stress have been associated with the presence of OLP, since patients associate negative and stressful events with the onset and progression of the disease. Stressful events induce a reaction in additional physiological systems, such as the immune system, justifying the association of stress with numerous diseases, however, stress as an etiological factor of OLP has not yet been precisely established.

When reviewing data in his research, Justi (2009) cites the important study by Koray *et al.* (2003) who analyzed, through the case-control method, the relationship between anxiety and saliva cortisol levels in patients with OLP, the forty patients studied had already been diagnosed with OLP through its clinical characteristics and, in some cases, histopathological, the others were part of the control group. Saliva was collected at a specific time and the analysis of cortisol levels was performed with Cortisol EIA with the competitive immunoenzymatic test method. At the end of the study, the conclusion obtained was that the cortisol levels in the control group patients were significantly lower than in patients with OLP, suggesting that this pathology is related to psychological disorders. These data corroborate the clinical case presented, since the patient related the onset and recurrence of the disease to periods of stress.

Silva *et al.* (2017) in their retrospective study and clinical case point to a strong association between OLP and HCV infection. The literature reports since 1991 the association between both, in this study an etiological relationship between OLP and a cell-mediated immune system response against HCV was cited. There are reports that the more aggressive lymphocyte infiltration in the lamina propria of patients with both diseases, however the same study cites controversies between the association of the two pathologies, since authors also conclude the non-association of OLP with hepatitis.

There is still controversy about the influence of the hepatitis B or C virus in cases of OLP. Llorens *et al.* (2004) carried out a research whose objective was to analyze the relationship between chronic viral hepatitis B and C and oral lichen planus, of the 100 individuals selected and infected with the HCV or HBV virus, none presented OLP, as a conclusion of this analysis there was no relationship of the virus with the OLP. According to Neville *et al.* (2016), especially in Mediterranean countries, there is a greater association of OLP with hepatitis C, which does not occur in countries such as the United States or Great Britain. However, Souza and Rosa, (2008) highlights that according to the geographic disparity, the relationship between hepatic committed patients and patients with OLP sometimes increases, sometimes decreases, due to the prevalence of the virus in some populations.

Even not having a consistent relationship, it is necessary to verify the presence of antibodies against the hepatitis C virus in patients with OLP, as this may have an important role in the evolution, which corroborates with the patient of the reported clinical case, as he was a carrier of hepatitis B, in their complementary exams there were no abnormal findings proving HCV infection, hepatitis C virus, however in cases of patients who already have a diagnosis of chronic liver disease, it is necessary to ascertain this disease, and in undiagnosed patients include serology for the hepatitis C.

ESR, although unspecific for OLP, is indicated for the investigation of chronic inflammatory diseases and their monitoring. The investigation of possible vitamin deficiencies is justified by the direct relationship with ulcerated lesions of the oral cavity, in addition cases of anemia should be

investigated through the complete blood count, thus helping in the differential diagnosis of OLP with other ulcerated lesions of the oral cavity (SOARES *et al.*, 2012; NEVILLE, 2016).

Studies show that hormonal diseases, such as thyroid, were significantly more prevalent in patients with erosive OLP than in the control group, which suggests a strong association between LP and autoimmune diseases. Therefore, it is prudent that evidence of TSH testing is part of the investigation of the OLP (MIRANDA *et al.*, 2014).

The diagnosis of oral lichen planus can be performed with clinical and histological exams, however lesions with classic characteristics can be diagnosed only with appearance. According to Ambrosio and Pia (2004) there are three clinical criteria that can assist in the diagnosis of this pathology, the first being the presence of bilateral lesions, and especially if these are symmetrical, the presence of white or reticular-papular striation and, finally, atrophic lesions, erosive and plaques. Canto *et al.* (2010) reported six clinical forms of intraoral lesions of the oral lichen planus, which are: reticular, erosive, atrophic, plaque type, papular and bullous. However, Souza and Rosa (2008), choose the reticular form as the most frequent, lesions of this type present Wickham striae, characterized as fine white and lacy lines, which in general are surrounded by an erythematous border, reticular lesions usually found in bilateral jugal mucosa, but may involve the back and side of the tongue, gums and palate, are not symptomatic.

The clinical characteristics of reticular lichen planus were mentioned by Neville *et al.* (2016) who agrees with Souza and Rosa (2008), on the assumption that the reticular form is the most common in patients with OLP, although the lesions that stand out in studies and research is the erosive form, either because it is symptomatic or the greater number of referrals to academic centers. Erosive lichen planus appears as erythematous areas, atrophic and with degrees of irregular ulceration that can vary, the periphery of these lesions can be surrounded by fine irradiated white striations, the pain caused by this lesion can be from discomfort to severe pain. All data presented are consistent with those written by Souza and Rosa (2008), Canto *et al.* (2010) and Neville *et al.* (2016).

Santana *et al.* (2017) reports that although the erosive form is not as common as the reticular one, it is more significant for the patient, as they are symptomatic, this symptomatology can vary from simple discomfort to episodes of intense pain, the data presented by this author can be related to the patient, as he had erosive lesions and reported a burning sensation when he ate food with vinegar or drank wine.

The patient in the reported case has reticular and erosive lichen planus, the clinical characteristics and the history of the disease predisposed to the diagnosis were concise and effective, since, after the complete remission of the lesions prior to histopathological examination, there is no justification for surgical procedure. In the intraoral inspection, bilateral jugal mucosa was examined, which presented Wickham striae, being a common finding in patients with reticular lichen planus. However, there was still a report of painful symptoms and a burning sensation, which are not common in the reticular presentation. In the continuity of the intraoral examination, the presence of atrophic areas with surface ulceration and erosion was verified, in the jugal mucosa on the left side the ulcerated lesion was located close to the molar and measured 1.5 cm, on the opposite side the ulceration measured 4 mm, suggesting the presence of erosive lichen planus.

In the differential diagnosis, the lichenoid reaction, also called contact stomatitis, could be considered. Its aspect is similar, clinically and histopathologically, with the OLP, but it shows a difference in the evolution. When patients with true OLP are examined, the lesions migrate and do not exhibit a direct correlation with contact with dental materials (NEVILLE *et al.*, 2016). Therefore, since in the case described amalgam restorations were not observed, the hypothesis of OLP was maintained.

In accordance with what was proposed by Nico, Lourenço and Fernandes (2011) when they explained that lesions on the back of the tongue tend to be isolated and keratotic, due to the epithelial characteristics of the tongue, they can be centralized in plaques, as seen in a ventral and dorsal lingual area with white plates on the patient.

Rocha *et al.* (2016) in his review approached oral lichen planus as a pathology of clinical diagnosis. The histopathological examination for biopsies being used only to confirm diagnoses in atypical cases, or in persistent lesions that do not respond to treatment. In these cases, the biopsy should be performed to discard the possibility of dysplasia, its data corroborate with the reported patient, as exposed the diagnosis of oral lichen planus was carried out with the clinical findings, and the biopsy will be indicated only if the lesion has recurrence with atypical characteristics and if these did not respond to the proposed treatment.

Justi (2009) proposed that to indicate an appropriate therapy the patient's anamnesis must be careful, Matesanz-Pérez and Bascones-Martinez (2009) report that the treatment of OLP aims to reduce the duration and severity of symptoms, and therefore the reticular form only requires observation and surveillance. Topical corticosteroids are usually used to treat this condition in order to obtain a quick response, the application must be carried out several times a day and the patient should be instructed to leave in contact with the lesion as much time as possible. As the remission of the lesions and the decrease in the symptoms start, the power of the corticoid must be reduced, and when the control occurs the treatment must be stopped. Carbone *et al.* (2009), in their randomized study, concluded that clobetasol propionate is the most used topical corticoid in the treatment of OLP, and the result of their research, whose objective was to compare clobetasol propionate 0.05% of the concentration 0.025%, was that there are no significant differences in the different formulations, a higher concentration of the molecules cannot further improve the therapeutic findings or optimize the results significantly. In the patient, the proposed treatment was clobetasol propionate 0.05%, which showed effective action, since the patient returned to the consultation after 15 days with complete remission of the lesions, but reported this remission prior to the second consultation period.

Regarding the potential for malignancy of OLP, it remains a matter of debate in the literature, while some authors accept this possible malignant transformation, others are opposed to this data. Shirasuna (2014) reports in his article that insufficient documented evidence was found to affirm that OLP is a pre-malignant condition, both due to the lack of specific and universally accepted diagnostic criteria, and by the hypothesis that some cases of OLP that developed to carcinoma may have been misdiagnosed as OLP from the beginning. Therefore, the reported patient will be followed up periodically, considering new recurrences with clinical characteristics with an abnormal aspect, the biopsy of the lesion for histopathological analysis will be performed.

According to Scully *et al.* (1998) less than 1% of the cases of non-reticular lesions can present malignant transformation, therefore, the biopsy of the lesion of the reported clinical case is not an excluded hypothesis, however it must be performed in face of new abnormal clinical findings, since with the proposed treatment for OLP, the patient presented a favorable prognosis with remission of the lesions. The same author refers to the disease as a condition with a tendency to persist in the oral cavity, therefore, patients with OLP must continue with periodic monitoring, as indicated.

## CONCLUSION

In the face of socio-cultural changes in current society, stress and anxiety are more and more frequent, thus, diseases related to these conditions are also present in the dentistry routine. The dental surgeon must know the etiopathological and clinical aspects of immunologically mediated diseases such as OLP, in order to establish a correct diagnostic and adequate treatment, or, minimally, recognize changes in the mucosa and refer the patient to a stomatologist, thus avoiding inefficient treatments and compromising the patient's quality of life.



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