

CASE REPORT

A Clinical Report of an Oral Lichen Planus associated to Epidermoid Carcinoma in Contact with Metallic Restorations

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ABSTRACT

The aim of this study was to relate the clinical case of a patient with oral lichen planus (OLP) and a history of epidermoid carcinoma associated with metallic restorations. The etiology of OLP is a mucocutaneous disease, which is poorly understood. Studies point to the potential of malignant transformation of OLP and its association with metallic restorations. The metallic restorations were replaced by crowns with a ceramic covering associated and osseointegrated implants in the edentulous areas. About 1 year later, it was observed a bilateral regression of the tongue lesions. The replacement of metallic restorations can contribute to improvement of OLP.

Keywords: Lichen planus, Contact dermatitis, Carcinoma.

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INTRODUCTION

Oral lichen planus (OLP) is characterized by a chronic systemic disease of established immune-mediated pathogenesis, with a prevalence rate of 1 to 2% of the population, occurring most frequently in middle-aged women.^{1,2} Although the cause of lichen planus is unknown, the disease can be associated to genetic predisposition, systemic diseases and psychological conditions.²

The most commonly affected sites in OLP are the buccal mucosa, the tongue and the gingiva.³ The lesions are usually multiple and have a bilateral and symmetrical distribution,

with the form of white papules that enlarge to form a reticular, annular or plaque-like pattern.¹ The reticular, erythematous, plaque and ulcerative type are the most common ones. Symptoms of burning or etching, painful sensations are present in the erythematous and ulcerative types.³

There is a controversy in the literature about the evidence that OLP is associated with an increased malignant transformation.⁴⁻⁶ The estimated malignant disorder rate is less than 0.5%, moreover, there are no reliable means to either predict or to prevent such event in an individual patient,³ whom should be encouraged to avoid or discontinue habits such as excessive tobacco and alcohol use that are likely to increase the risk of malignant transformation.⁷

According to some studies, OLP are associated to a hypersensitive reaction to mercury and an improvement can be seen after changing the amalgam restorations.^{8,9} Dunsche et al¹⁰ (2003) studied 134 patients who showed signs of some lichenoid reaction and found that 27.7% of them were positive for hypersensitivity to mercury or amalgam. They also verified an improvement in the lesions of 97.1% of cases where amalgam restorations were removed.

Thus, this article relates the clinical case of a patient with OLP and a history of epidermoid carcinoma of the tongue, which had her metallic restorations replaced by crowns with a ceramic covering.

CASE REPORT

A female patient, caucasian, 54 years old, attended the Fixed Partial Denture Clinic of the Araraquara Dental School Univ Estadual Paulista (UNESP), to change metallic restorations. She related that 2 years ago, a surgery had been carried out to remove an epidermoid carcinoma associated to a lichen planus lesion from the right side of the tongue. Few months previously, it had relapsed and further surgery had become necessary. In the clinical intraoral exam, a white plaque-like lesion with a reticular interspersed area was observed on the right side of the tongue, as well as the presence of a metal-plastic fixed prostheses from tooth 43 to 46 and a metal crown on tooth 47 (Fig. 1). On the left side of the tongue, we found a red lesion with white spots in the center, coinciding with the position of the metal crown on tooth 38 (Fig. 2).

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The patient was advised by her doctor to find a dentist and change the metallic restorations, which could be associated to the development of the lesion. Among the reports of the patient, it was stated that histopathological analysis of the biopsies previously performed by her doctor indicated the presence of chronic hypertrophic lichen planus and areas with neoplasia, characterized as epidermoid carcinoma. It was also stated that the patient had stopped smoking 15 years ago and did not drink alcohol.

All metallic restorations were replaced by crowns with a ceramic covering associated with osseointegrated implants (Emfils, Itu, SP, Brazil) in the edentulous areas (Fig. 3). About 1 year later, we found a bilateral regression of the tongue lesions (Figs 4 and 5). The patient is under observation to this day.

DISCUSSION

In agreement with literature, the majority of incidences of lichen planus occur in middle-aged white women.² This case involved a white woman of 54 years of age, being therefore, part of the higher incidence profile. Various studies show the potential of malignant transformation of OLP with a large variation in the percentage of malignance.^{11,12} Xue et al¹³ (2005) found a 0.65% prevalence rate for patients

with epidermoid carcinoma where they had previously been diagnosed with lichen planus. In other research, Lanfranchi-Tizeira et al¹⁴ found a result 10 times higher, i.e. 6.5%. In both cases, the authors stated how the atypical form of lesion, such as atrophic, erosive and plaque are those, which present the highest possibility of malignant transformation. The causes of this transformation are not clear, but some authors assume that the chronic inflammatory response creates an environment of cytokines, which can promote or facilitate carcinogenesis.¹⁵ There are also studies that have shown altered expression of certain proteins in lichen planus, similar to those found in tissues with epithelial dysplasia and squamous cell carcinoma, suggesting the malignant potential of the lesion.¹⁶

In this case, there was also close contact between the lesion on the tongue and metallic restorations, with a history of recurrence in the same area. Lichenoid lesions are associated to a hypersensitive reaction to mercury, as an improvement can be seen after changing the amalgam restorations.^{8,9} Henriksson et al¹⁷ (1995) also found a significant improvement in lichenoid lesions after the removal of amalgam restorations, thereby deducing that this is an etiologic factor in the disease. The authors indicate this course of action for cases where the restorations are



Fig. 1: White lesion in contact with metallic restorations



Fig. 2: Red lesion with white spots on the left side of the tongue



Fig. 3: Metal-ceramic crowns associated to osseointegrated implants



Fig. 4: Appearance of the lesion after prosthetic treatment (right side)



Fig. 5: Appearance of the lesion after prosthetic treatment (left side)

close to a lesion and in cases of atrophic or erosive lichen planus, where other forms of treatment had not worked. On the other hand, Martin et al¹⁸ (2003) carried out research, which verified that the presence of amalgam alone does not increase the risk of the development of lichen planus, but the corrosion of the amalgam or the presence of a galvanic current formed by various metals in the mouth increased this risk. According to Ditrichova et al¹⁹ (2007), the highest frequency of positive reaction to hypersensitivity tests occurred with mercury, followed by amalgam, but can also occur with nickel, palladium, cobalt, gold, chrome and Indian. Holmstrup²⁰ (1992) also advised that toxic or allergic reactions are not restricted to amalgam, but can occur with virtually any dental restorative material. Based on this evidence, we changed the metallic restorations and observed an improvement after this procedure.

Finally, it is very important to this patient to be seen frequently. Even though the probable cause has been removed, lots of care and attention should be taken when dealing with a lichenoid lesion, particularly when the patient has a history of dysplasia and carcinoma recurrence.

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