

# A Complication after Intralesional Methylprednisolone Acetate Application to Oral Mucosa: A Case Report

## SUMMARY

**Objectives:** The purpose of this case report is to evaluate an abscess formation due to intralesional methylprednisolone acetate application to a patient with erosive oral lichen planus.

**Case Report:** A 47 years old male patient with a histopathological and clinical diagnosis of erosive oral lichen planus (2x3cm) was treated with intralesional methylprednisolone acetate injection (5 injections of 0.1cc each around the lesion every 15 days). An infection developed after the third application. Magnetic resonance imaging (MRI) revealed an abscess formation, and the patient was hospitalized for further treatment.

**Conclusion:** Although systemic adverse effects are seldom seen in intralesional steroid application, mucosal atrophy is the main local side effect of this method. In this case, the cause of abscess formation could be an inoculation of the oral flora into submucosal tissues. Therefore, asepsis and oral disinfection are mandatory in intralesional applications.

**Keywords:** Intralesional steroid; Complication; Abscess Formation; Lichen Planus

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**Case Report (CR)**

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## Introduction

Oral lichen planus is a chronic inflammatory immunological reaction in which epithelial basal cell damage produces mucosal lesion of various types<sup>1</sup>. It tends to be chronic; complete remissions are either non-existent or infrequent, particularly in patients with erosive lesions, and exacerbations are unpredictable and common<sup>7</sup>.

The large number of medication that has been used in the management of the disease; however, not any agent could control the symptoms in all patients. The mainstay of the treatment of oral lichen planus remains on corticosteroids, which can be used topically, intralesionally, or systemically<sup>1,5,7,8,16</sup>. Of these treatment forms, intralesional injection of steroids can improve the symptoms<sup>7-15,17-19</sup>.

This study is to evaluate one possible complication of the intralesional corticosteroid injection to a patient with oral lichen planus.

## A Case Report

A 47-year-old male patient with a painful lesion of the left buccal mucosa was referred to the Department of Oral Diagnosis and Radiology, Faculty of Dentistry. Examination revealed an ulcerous lesion (2x3cm) with surrounding erythematous area and Wickham's striae (Fig. 1). An incisional biopsy specimen was taken from the lesion and histopathologically diagnosed as erosive oral lichen planus. The treatment plan included 10 intralesional injections of methylprednisolone acetate, each 0.1 cc and 1 cm apart, at intervals of 15 days.

An infection with an extraoral minor swelling of the left cheek developed after third application. As abscess findings were absent, it was thought to be sialoadenitis, and sipramycine (30000000 I.Ux2, rovamycine) tablets were prescribed (Fig. 2). The swelling increased, and phlegmonous appearance was detected after 2 days (Fig. 3). The patient was sent for MRI examination, and the medication was changed to amoxicillin/clavulanate potassium (klamoks BID, 2x1) and ornidasole (250 mg, 2x2) tablet combination.



Figure 1. Ulcerous lesion with surrounding erythematous area and Wickham's striae

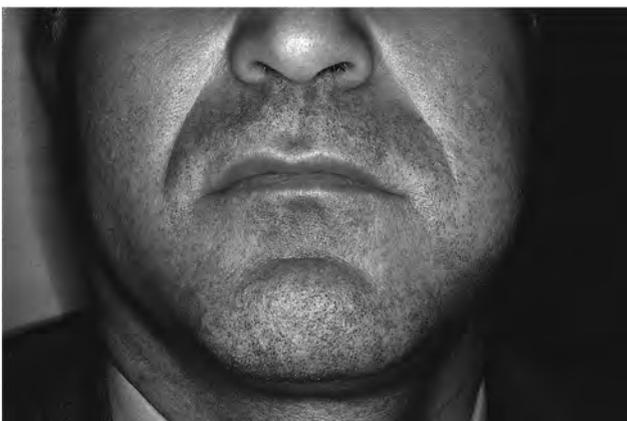


Figure 2. Minor swelling of the left cheek

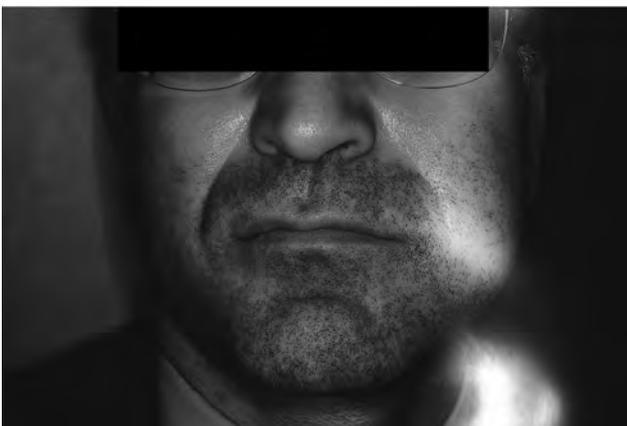
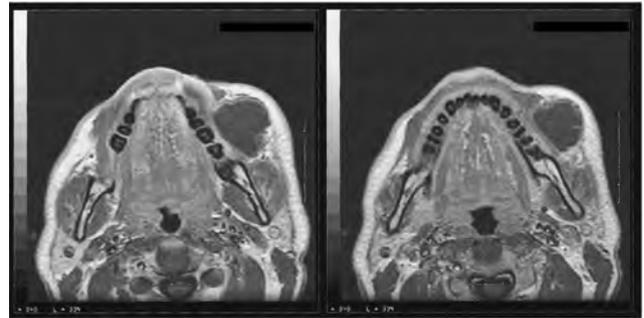
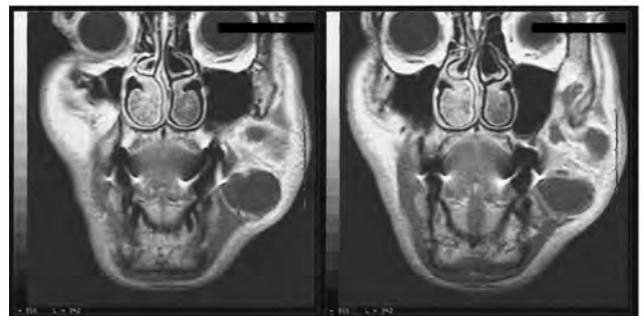


Figure 3. Extraoral view of the patient 2 days later

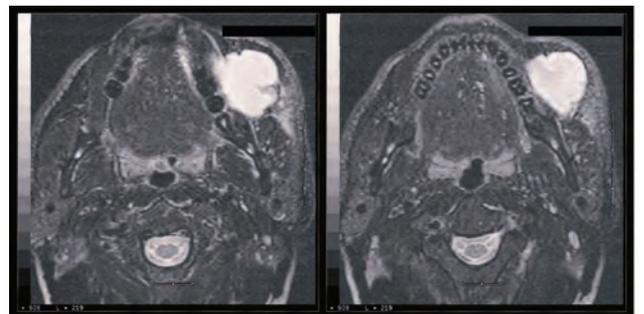


4a

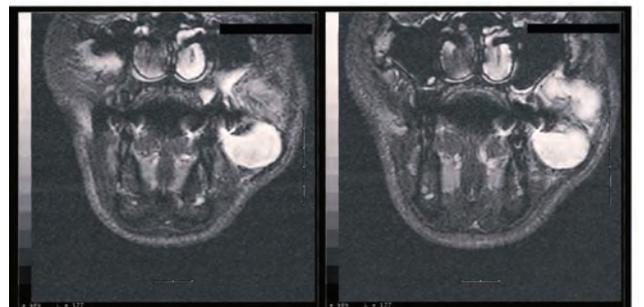


4b

Figure 4. MRI – axial (a) and coronal (b) plane T1W images



5a



5b

Figure 5. MRI - axial (a) and coronal (b) plane T2W images



Figure 6. Extraoral view of the patient before he has been hospitalized

MRI revealed an abscess formation (Figs. 4 and 5) between muscles (6x4 cm). Patient was hospitalized, and drainage of the abscess was performed (Fig. 6).

## Discussion and Conclusion

The main treatment for erosive and atrophic forms of the oral lichen planus is corticosteroid therapy<sup>1,4-12</sup>. It is reported that even complete healing can be observed after systemic corticosteroid application<sup>5,11</sup>. This kind of application is limited as the side effects of systemic corticosteroids are much more exerted than those after the other steroid treatments.

Successful results have been reported for local corticosteroid treatment of oral lichen planus<sup>1,3-5,16</sup>. However, it may be difficult to apply the drug to the proper sites in old patients. Optimal effect can be achieved with 5-10 applications a day<sup>10,11</sup>. Furthermore, swallowing and salivary wash-out can prevent the drug adhesion to the lesion. Thus, the absorption through the semi-permeable mucosa is decreased<sup>2-6</sup>.

Many studies have shown that intralesional therapy with steroid anti-inflammatory drugs is useful in controlling ulcerative and inflammatory oral mucosal diseases, especially oral atrophic and erosive oral lichen planus<sup>5,6,11-13</sup>. This local treatment of steroids is based on the concept that a high activity could be produced at the site of administration and, at the same time, the severity of systemic side-effects may be minimized or avoided<sup>2-7</sup>.

The most frequent side-effects in the intralesional application are tissue atrophy and candidiasis<sup>6,8,9,13,14,16-19</sup>. In this case, an abscess formation was the complication. This abscess formation may be due to the inoculation of the oral flora to the deep tissues during the injections. Antiseptic mouthwashes can help to prevent this complication and must be used during the treatment.

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