



# The Dental Hygienist Role in Management in Oral Lichen Planus

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## ABSTRACT

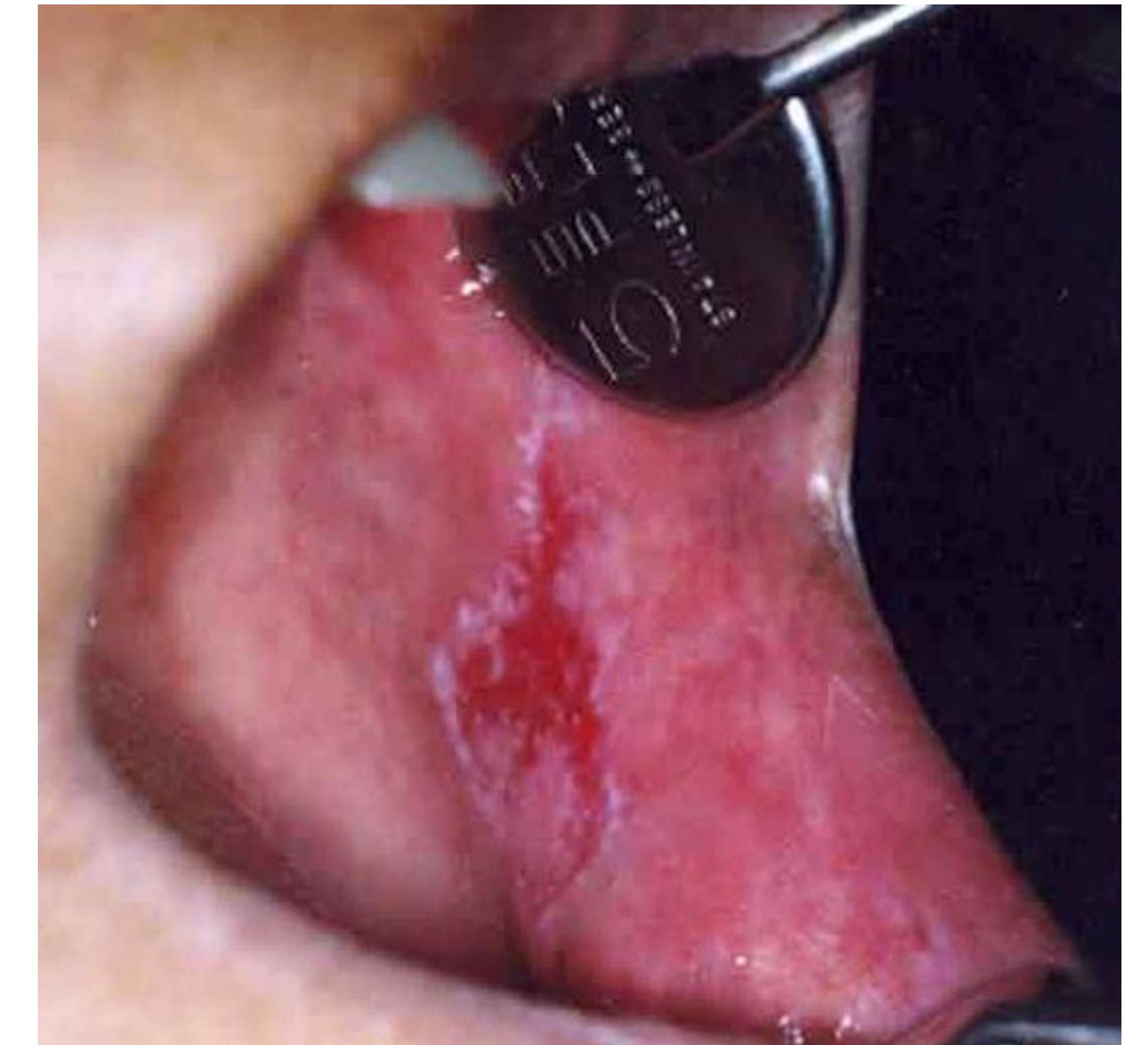
Objective: To understand the dental hygienist's role in the management of patients with oral lichen planus (OLP). Signs of OLP are clinically seen as lacy white, raised patches of tissue and/or as red, swollen, tender patches of tissue. These lesions are most commonly visible on the buccal mucosa; other common locations are the gingiva, tongue, alveolar mucosa, and the palate. Patients with OLP typically experience a burning sensation or pain in the area. Our patient presented with generalized slight to moderate plaque induced and localized non-plaque induced gingivitis evidenced by hypersensitivity involving the papilla, white and pale pink gingiva, blunted, and sloughing papilla. Raised white patches were clinically noted on the left buccal alveolar mucosa, the left buccal mucosa, and with similar but fewer patches on the right buccal tissues. Patient indicated being more symptomatic a couple weeks prior to her visit, but she was unsure why. She expressed that the inside of her cheeks felt very painful and these symptoms "come and go." Patient reported no history of medication. Her oral hygiene habits consist of brushing once a day with an electric tooth brush, flossing once a day, and using Listerine mouth rinse once a day. While there is no cure for OLP, current treatment includes systemic and topical corticosteroids. Palliative care during a dental hygiene appointment would include the use of topical and local anesthetics. When treating a patient with OLP, it is important that the dental hygienist recognizes the signs and symptoms in order to determine an appropriate care plan while keeping pain and discomfort to a minimum; and to provide the patient with the knowledge to care for lichen planus at home.

## RETICULAR ORAL LICHEN PLANUS



<http://www.doctoronline.com/dermatology-atlas.asp?c=4&id=24706&m=4>. Updated 2015. Accessed Feb. 20, 2015.

## ULCERATIVE ORAL LICHEN PLANUS



<http://www.doctoronline.com/dermatology-atlas.asp?c=4&id=24707>. Updated 2015. Accessed Feb. 20, 2015.

## ETIOLOGY

Oral lichen planus is a chronic inflammatory condition that is clinically visible on mucous membranes of the oral cavity. The etiology of lichen planus is unknown; however, the disease is classified as a cell-mediated immune response.<sup>1</sup> Since a specific antigen has not been identified, many researchers do not classify lichen planus as a true auto-immune disease. Research indicates that lichen planus affects approximately 2% of the population, with 57% or more being women over the age of 50.<sup>1</sup> Although oral lichen planus is not a contagious disease, it does have the potential to become malignant. Research indicates that patients with oral lichen planus have a higher risk (0.2%- 3.3%) for developing squamous cell carcinoma; particularly in patients with the atrophic, plaque and erosive forms.<sup>1</sup>

## CLINICAL SYMPTOMS

There are six forms of oral lichen planus. These include reticular pattern, plaque form, papular pattern, bullous form, atrophic form, and ulcerative form. The reticular pattern is the most common form of oral lichen planus seen in patients.<sup>1</sup> It consists of a white, lacy pattern known as Wickham's striae, and the patient may present asymptomatic and unaware of its existence. Plaque form lichen planus clinically presents as a thick plaque that may be smooth and appears lighter in color than the surrounding tissue. On the tongue it may appear as a "bald" area with denuded papillae. The papular pattern lichen planus presents itself as small, white, papules. The bullous form consists of vesicles; many times this form is seen after the vesicles have ruptured. The atrophic or erythematous form presents as diffuse red patches. The patient may complain of irritation or burning sensations. The ulcerative form clinically presents with one or several ulcers. This form is very painful for the patient and the sore tissues will affect eating and brushing of the teeth. A patient may present with one form or several forms at one time and the form may change as the lesions progress.

## DIAGNOSIS

Because oral lichen planus may have similar appearance and diagnosis of other oral conditions, diagnosis is challenging. Oral lichen planus resembles leukoplakia and has similar clinical appearances as pemphigoid, pemphigus, erythema multiforme, and lupus. Immunofluorescence and a histological biopsy are needed to differentiate between oral lichen planus and these others. Lichenoid reactions to dental materials must also be ruled out. Patch testing may be required to eliminate the potential of dental products and restorative materials such as amalgam causing sensitivity on oral tissues.<sup>1</sup>

## TREATMENT OF ORAL LICHEN PLANUS

Because it is a condition that it is recurrent and unpredictable, the main goal of treatment is to eliminate painful forms of oral lichen planus. One way this could be achieved is with the use of systemic and topical corticosteroids. Systemic corticosteroids are often used to treat oral lichen planus; however, signs tend to reoccur after treatment is terminated. Because long-term corticosteroid use often causes side effects, topical steroids are typically used as maintenance therapy. Although they are not as effective as systemic corticosteroids, topical steroids can result in improvements of signs and symptoms when combined with short-course systemic treatment. Signs of oral candidiasis and the possibility of malignancy need to be monitored while using these treatments.<sup>2</sup> Some other ways to eliminate the clinical signs and symptoms include eliminating spicy and acidic foods from their diets, keeping their stress and anxiety levels low, using alcohol-free mouth rinse, using flavor-free toothpaste, and practicing good oral hygiene. Research indicates that frequent professional cleanings are essential because dental cleanings assist in tissue maintenance and repair that are affected by oral lichen planus.<sup>3</sup>

## DENTAL HYGIENE MANAGEMENT FOR PATIENTS WITH ORAL LICHEN PLANUS

Detecting and evaluating clinical lesions are extremely important, indicating any changes to these lesions even more so. It is important to evaluate and biopsy any significant changes due to the malignancy potential of the condition. Systemic and topical corticosteroids are main treatments used for oral lichen planus; clinicians should be aware of the dental effects caused by these treatments in order to adequately manage and treat these patients. Because of the pain associated with lichen planus, the patient may not brush as well. This neglect can then allow debris and bacteria to remain on the teeth and tissue, thus forming dental plaque. The plaque, in turn, will exacerbate the already inflamed tissues affected by lichen planus. It is important for the dental hygienist to emphasize the importance of maintaining good oral hygiene to prevent the development new lesions. When a patient presents with oral lichen planus the dental hygienist should determine a treatment strategy so that the patient is not in pain. This could include the use of topical or local anesthesia, and suggesting the patient to use an alcohol-free mouth rinse and flavor-free toothpaste. After the prophylaxis, the condition may flare up and current lesions may worsen. Stressing the importance of the adequate oral hygiene regimen to alleviate these symptoms and getting a dental cleaning at least every 6 months is essential.

## REFERENCES

1. Burkhart, Nancy, BSDH, M. Ed. Ed. D. The Many Faces of Oral Lichen Planus. <http://www.dentalcare.com/media/en-us/education/ce313/ce313.pdf>. Updated March 25, 2010. Accessed Feb. 20, 2015. American Academy of Dermatology: Lichen planus. <https://www.aad.org/dermatology-a-to-z/diseases-and-treatments/i---l/lichen-planus>. Updated 2015. Accessed Feb 20, 2015.
2. Chainani-Wu, Nita, D.M.D., M.P.H., Silverman, Sol Jr., M.A., D.D.S., Lozadanur, Francina, D.D.S., M.S., M.P.H. Oral lichen planus, Patient profile, disease progression and treatment responses. JADA. 2001;132:901-909.
3. Burkhart, Nancy, RDH, Ed. D. Lichen planus of the lip. <http://www.rdhmag.com/articles/print/volume-29/issue-5/columns/oral-exams/lichen-planus-of-the-lip.html>. Updated 2015. Accessed Feb. 20, 2015.