CASE REPORT

The myriad presentations of lichen planus


Department of Oral Medicine and Radiology, Sree Mookambika Institute of Dental Sciences, Kulashekaram, Kanyakumari, Tamil Nadu, India

Abstract

Oral lichen planus is a chronic mucocutaneous disease of enigmatic etiology. It is a commonly encountered mucosal condition with a varied clinical presentation, where eruptions of oral lichen planus usually have characteristic clinical morphology and distribution but may also present a confusing array of forms which may pose a diagnostic difficulty. Lesions may clinically simulate other disorders and pose a diagnostic challenge. As such a potentially malignant condition certain variants of oral lichen planus may be associated with a higher rate of malignant transformation and management protocol varies from form to form. We present a series of three case reports in an attempt to illustrate the array of clinical presentations of oral lichen planus and discuss the management options available for the same.

Keywords: Lichen planus, precancerous condition, steroids

Introduction

Lichen planus is a chronic mucocutaneous disorder of uncertain etiopathogenesis that affects the mucocutaneous structure.[1] It is derived from the Greek word “leichen” which means tree moss and “planus” which in Latin means flat.[2] The pathology of this disease was first presented by Erasmus Wilson in 1866.[3] Darier was the first to describe the histopathological changes associated with lichen planus.[4] Lichen planus affects around 2% of the population and with oral lichen planus occurring more frequently than cutaneous; the dental practitioner needs to be aware of its clinical presentation and management.[5,6] We present a series of three case reports of these variations of oral lichen planus to illustrate its varying clinical presentation and discuss its forms, diagnostic algorithm and the various management options available to the practicing dentist.

Case Reports

Case 1

A 46-year-old female patient reported with the chief complaint of burning sensation of oral cavity since a month. It was insidious in onset and aggravated on consuming hot and spicy foods. She also complained of generalized pruritus. Intraoral examination revealed an erythematous patch of 2 cm × 3 cm with diffuse borders on the right posterior buccal mucosa interspersed with white striae and erythematous denuded areas surrounded by hyperpigmented areas. Similar lesions were observed on left posterior buccal mucosa, hard palate, and lateral borders of tongue. Based on the history and clinical features, we arrived at a provisional diagnosis of erosive lichen planus [Figure 1]. Following routine hematological investigations an incisional biopsy was carried out, and the specimen was sent for histopathological evaluation which showed discretely atrophic parakeratinized stratified squamous epithelium with surface erosions, certain areas of basal layer degeneration with saw tooth rete pegs and a dense chronic inflammatory infiltrate of lymphocytes and plasma cells were seen in connective tissue suggestive of erosive lichen planus [Figure 2].

Based on the history, clinical features and histopathological report a final diagnosis of erosive lichen planus were arrived at. The patient was prescribed topical 0.1% tacrolimus ointment four times daily for 2 weeks. 2 weeks follow-up showed a significant reduction in symptoms and 4 weeks follow-up showed complete resolution of the lesion following which the drug was discontinued.

Case 2

A 67-year-old male patient reported with the chief complaint of burning sensation in the right posterolateral part of the hard
palate since 15 days. It was aggravated on consuming hot and spicy foods. He was a smoker since 20 years and had quit smoking 6 months back. Intraoral examination revealed a solitary papular lesion approximately measuring 2 cm × 4 cm with well-defined borders seen in relation to right posterolateral part of the hard palate in relation to 17, 18 region surrounded by white striae. All the inspectory findings were confirmed on palpation.

Based on the history and clinical features, we arrived at a provisional diagnosis of papular lichen planus [Figure 3]. Following routine hematological investigations, an incisional biopsy was carried out, and the specimen was sent for histopathological evaluation showed hyperparakeratinized stratified squamous epithelium with acanthosis, basilar degeneration, and bulbous rete pegs. The underlying connective tissue showed a band of inflammatory infiltrate of lymphocytes, plasma cells, mast cells, and histiocytes suggestive of lichen planus [Figure 4].

Based on the history, clinical features and histopathological report a final diagnosis of papular lichen planus were arrived at. The patient was prescribed topical 1% triamcinolone acetonide four times a day for 2 weeks and reviewed after 2 weeks. 2 weeks follow-up showed significant regression of the lesion and patient was advised to continue the topical application for another week which resulted in complete resolution of the lesion.

Case 3
A 37-year-old male patient reported with the chief complaint of white discolouration in the left cheek region since 2 months. He gave a history of smoking since 8 years and had allegedly quit 2 months ago. Intraoral examination revealed irregular grayish white patch measuring 2 cm × 3 cm interspersed with fine white lace like striae present on the right and left posterior buccal mucosa.

Based on the history and clinical features, we arrived at a provisional diagnosis of recticular lichen planus [Figure 5]. Following routine hematological investigations, an incisional biopsy was carried out, and the specimen was sent for histopathological evaluation which showed parakeratinized squamous epithelium with focal areas of basal degeneration and saw-toothed rete pegs. Connective tissue showed subepithelial band of chronic inflammatory infiltrate of lymphocytes seen, suggestive of lichen planus [Figure 6].

Based on the history, clinical features and histopathological report a final diagnosis of recticular lichen planus were arrived at.
On eliciting the history, the lesion was not associated with pain or burning sensation. The patient was counseled regarding the presence of the condition, reassured and recommended periodic follow-up.

**Discussion**

Oral lichen planus is a common immunologically mediated disorder of unknown etiology. It is commonly seen during fifth to sixth decade of life and is twice as common in women as in men. Oral lichen planus is a painful and debilitating disease with a bilateral presentation, and the management is often aimed at palliation rather than cure. Oral lichen planus can be broadly classified into three types. Recticular lesions which include the papular, plaque like, and those with white lines; atrophic or erythematous type and the erosive type which includes ulcerative and bullous lesions. Commonly recticular lesions are asymptomatic and are discovered during routine examination whereas the erythematous forms cause discomfort to the patient. The etiopathogenesis of lichen planus is yet unclear however the speculated mechanism involves antigen presentation by keratinocytes and cell death due to cytotoxic T-lymphocytes. Oral lichen planus has a strong correlation with stress and high anxiety levels with a consequent increase in serum and salivary cortisol levels suggesting a strong association between stress and the disease. Degranulation of mast cells and matrix metalloproteinases activation also plays an important role. A number of causative and exacerbating agents exist for oral lichen planus and lichenoid reactions such as antimalarial drugs, antidiuretics, dental amalgam, chronic liver disease, genetics, and tobacco chewing. The most common area of clinical presentation are the buccal mucosa, gingiva, and tongue. In all the three cases reported here, the buccal mucosa was involved. In 15% of lichen planus cases, the oral mucosa is exclusively involved. In all three of our cases, no skin lesions were present. While managing a case of lichen planus, lichenoid reactions associated with drugs or restorative materials, leukoplakia, lupus erythematosus and chronic graft versus host disease must be considered in the list of differential diagnoses and must be ruled out. The diagnosis of oral lichen planus is arrived at by correlating clinical and histopathological features as was in all our case reports. Lichen planus is a potentially malignant condition, and the risk of malignant transformation varies between 0.4% and 5%. Erythematous and erosive forms are believed to be more likely to undergo malignant transformation and different intraoral sites such as the tongue also seem to have an increased propensity for malignant transformation although the evidence for the same is weak. To date no cure for lichen planus exists, the goal remains largely to relieve the symptoms and monitor for dysplastic changes rather than cure. Topical corticosteroids are indicated for treating mild to moderately symptomatic cases. 0.05% clobetasol propionate gel, 0.1-0.05% betamethasone gel and 0.1% triamcinolone acetonide ointment are used. In our case, we managed the symptoms using triamcinolone acetonide. Systemic steroids are reserved for patients who are recalcitrant to topical therapy. Dosage should be customized according to the symptoms and the patient’s weight and modified based on patient’s response. Necessary precaution such as morning dose, risk of peptic ulceration and adrenal suppression must be kept in mind while prescribing systemic steroids and must be used with caution. Topical tacrolimus 0.1% has been found to be effective in the management of symptomatic lichen planus due to its anti-inflammatory and immunomodulatory actions. However, systemic side effects with topical tacrolimus have been observed and increased theoretical risk of malignant transformation associated with tacrolimus does exist. Newer agents such as *Aloe vera*, curcuminoids, lycopene have been used in the management of lichen planus and have shown promising results.

**Conclusion**

We have presented three cases with three different clinical presentations of oral lichen planus and with different management strategies and discussed it with the aim of highlighting the diagnosis and management of this oft occurring oral lesion.
Clinical Significance

The chronicity of the condition and the risk of malignant transformation should be well informed to the patients diagnosed with oral lichen planus. The mainstay steroid therapy has shown promising results in various studies; the clinician should still be mindful about the cost-benefits and the safety profile of these drugs. The efficacy of alternative therapies has not been demonstrated yet. Since it is considered a potentially malignant condition, it should be monitored periodically even in asymptomatic patients.

References