



Case Report

Scrupulous management of Lichen planus with follow up

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ABSTRACT

Lichen planus is a chronic autoimmune disorder of mucosa and skin, affecting mainly females in the third decade of life and is rare in the young age group. The etiology of Lichen planus is still unknown with certain triggering factors which include mental stress, medicines, and systemic disorders. Oral Lichen planus is a painful disorder that mainly involves the buccal mucosa of the oral cavity. The reticular pattern is most common while an atrophic and erosive type of oral lichen planus is less common. Here we present a case of a lichen planus (reticular, pigmented, and annular types) involving buccal mucosa bilaterally, hard palate, and tongue without any cutaneous lesions in an 18-year-old female patient with a meticulous follow-up. Lichen planus patients need consistent follow up and physician reassurance in addition to medicinal management.

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1. Introduction

Oral lichen planus is a common chronic inflammatory mucocutaneous disorder that typically affects the oral mucosa and additionally, in some cases the skin. Lichen planus can affect other non-oral mucosal surfaces such as the genitals, anus, and pharynx. OLP is a T-cell-mediated chronic inflammatory oral mucosal disease of unknown etiology.¹

It is classified as Reticular, erosive, annular, pigmented, and plaque type. Desquamative Gingivitis can occur in all types without clinical differences. Desquamative gingivitis is a clinical term that is used to describe an erythematous, erosive, and ulcerated appearance of the gingiva. Patients with desquamative gingival lesions often complain of mucosal sloughing, gingival bleeding, and oral discomfort, especially on the consumption of acidic spicy foods or beverages.

Although the incidence of malignant transformation of OLP remains provocative; careful, steady, and longstanding follow-up of patients with OLP is required for the early

detection to prevent malignant transformation of OLP.

Long term follow up is a key to efficacious management of OLP. We intend to present a case of 18 years old female patient with lichen planus illustrating all the variants without cutaneous lesions with a meticulous follow-up and patient compliance.

2. Case Report

An 18-year-old female patient reported to the Department of Oral Medicine and Radiology at SGT Dental college with a chief complaint of burning sensation for 6 months. She was asymptomatic 6 months back when she experienced a burning sensation in the gums in the front teeth region of the upper jaw which exacerbated during times of increased psychological, emotional, or physical stress, and on ingestion of spicy foods. She rated 9 on the visual analog score for burning sensation. She also conveyed multiple episodes of reoccurrence of ulcer for 2 years. The ulcers were not preceded by fluid-filled blisters. She had difficulty in eating and swallowing, She also gave the history of typhoid 1 year back. She also reported secretion of white fluid from the vagina. No history of pain,

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fever, cough, cold, joint pain, and weight loss. No active medication was undertaken for the same. Menstruation history was normal. On general examination no cutaneous lesion was visible. There was no pallor with no changes in nails were evident. Extraoral findings were non-contributory concerning salivary glands and lymph nodes.

Intraoral examination revealed bright red gingiva with diffuse area of desquamation and erythema involving buccal aspect of free, marginal and attached gingiva in the region of 11, 12, 13,14,15 ,16, 17 ,21, 22, 23, 24,25,26,27,44,45,46,47 resulting in desquamative lesion .Faint white striae were visible bordering the areas of desquamation. An erythematous and inflamed labial gingiva with interspersed areas of normal gingiva with 11,12,21,22, and on palpation it was non-tender and non-scrapable. Similar clinical presentation was also observed on the buccal mucosa, palate, and ventral surface of the tongue.

On buccal mucosa, diffuse brownish pigmentation with whitish striae interspersed with the erythematous area was witnessed bilaterally extending from mesial aspect of 45 to the posterior retromolar pad region along the occlusal line wrt right buccal mucosa and from 35 to retromolar pad region along the occlusal line wrt left buccal mucosa. On palpation, lesions were non-scrapable, non-tender.

On palatal mucosa, mild blanching of the mucosa with a localized lesion of approximately 2x1.5 cm in size with ill-defined margins of purplish color with interspersed white striae extending from 1cm away from rugae area to the posterior part of the hard palate on the left side opposite to 2nd quadrant. The lesion was tender, soft in consistency and bleeding was absent on palpation.

On the ventral surface of the tongue an interlacing white keratotic stria with erythematous borders giving a web-like appearance evident in the left dorsal surface of the tongue, approximately measuring about 2 cm x 2 cm in dimension, extending from the midline to the left of 2 cm away from the lateroventral surface of the tongue and 1 cm behind the tip of the tongue to approximately 2 cm in front of the base of the tongue. On palpation, all the inspection findings of size, shape, site, margins, and extent on the tongue were confirmed. The lesion was non-scrapable, non-tender, with no evidence of pus discharge, and was soft in consistency Surrounding area was mildly erythematous.

Based on the clinical examination, the provisional diagnosis of Lichen planus (reticular, pigmented, and annular type) involving buccal mucosa bilaterally, palate, ventral surface of the tongue (pigmented), and annular type with desquamative gingivitis was given.

Hematological examination yielded negative results. Incisional biopsy from the ventral surface of the tongue was performed under local anesthesia and the H&E stain analysis showed epithelium is stratified squamous and is atrophic in a few areas. In few areas saw tooth rete ridges are seen. Basal cell degeneration is seen at some foci.

Underlying connective tissue was composed of a band of dense inflammatory cell infiltrate, which was masking the epithelial connective tissue junction. Connective tissue also showed collagen fibers, muscle bundles, adipose tissue, and blood vessels which were the analytical features of lichen planus. Hence, a final diagnosis of Lichen planus was given.

After comprehensive clinical examination and investigations, a regimen of anti-oxidant 8 mg Lycopene twice/day and topical corticosteroid triamcinolone acetone 0.1% three times/day smeared topically with the help of cotton swab on the lesion for fourteen days and a mouthwash (Coolora) 3 times a day for 2 weeks (without dilution, 10-15ml, before food, swish and spit) were given.

The patient was instructed not to eat spicy foods and take a healthy balanced diet involving fresh fruit and vegetables and recalled after 1 week.

After one week, the patient presented with improvement in the burning sensation with 30 percent of lesions resolved. Oral hygiene instructions were given to the patient and then she was recalled after 15 days for the re-evaluation of the lesion.

After 15 days, the patient reported a marked improvement in the burning sensation with the diminished lesion. She was again recalled after 15 days.

The recovery was satisfactory and following the duration of two months the lesion had healed completely and the patient was appeared normal with no burning sensation.

On further follow-up of 2 months interval till eight months the patient was monitored continuously. The patient showed drastic improvement as the lesions had healed completely.

She has been put on a sporadic recall so that her condition can be monitored and the recurrence of a lesion can be barred.



Fig. 1: Lesion on the left half of the palate

Table 1:

Follow up Visits	VAS	Measurement of involved mucosal surface (Subsite score)	Measurement of involved mucosal surface (Severity score)	Activity Score (subsite x severity score)	Total SCORE(activity score + pain score)
1 st	8	2	2	4	32
2 nd	7	2	2	4	28
3 rd	7	2	2	4	28
4 th	5	1	1	1	5
5 th	3	1	1	1	3
6 th	0	1	0	0	0
7 th	0	0		0	0

**Fig. 2:** Lesion on the left half of palate and ventral surface of tongue.**Fig. 4:** Lesion on the right buccal mucosa**Fig. 3:** Desquamative gingivitis**Fig. 5:** Immediately after biopsy

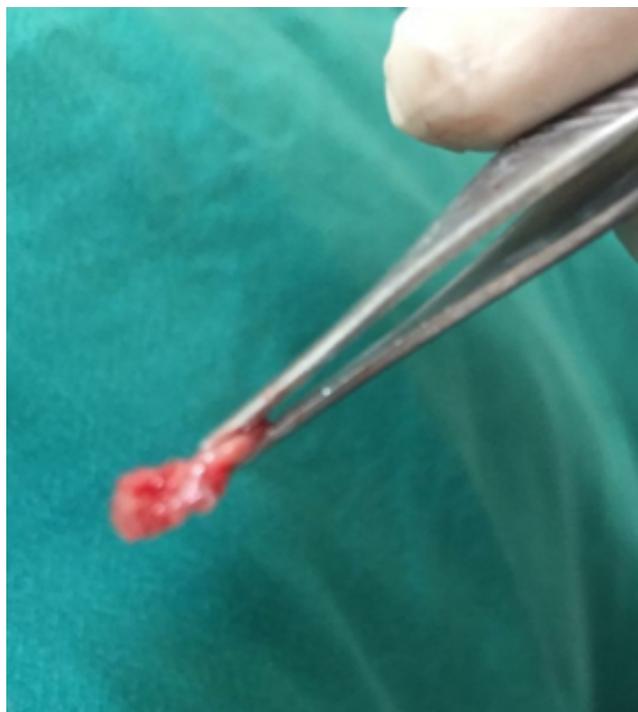


Fig. 6: Biopsy specimen from the ventral surface oftongue



Fig. 7: Follow up

3. Discussion

Oral lichen planus (OLP) prevalence rate is between 0.6 - 2.5 % and it mainly appears in the age range of 35 to 65 years. In the present case, the patient's age was 18years, which is conflicting with the data of oral lichen planus mentioned in the literature.

Oral lichen planus (OLP) is a T-cell-mediated chronic inflammatory oral mucosal disease of unknown etiology. OLP lesions contain few B-cells or plasma cells and minimal deposits of immunoglobulin or complement. There are no reliable serological changes associated with OLP. The oral mucosa in OLP is highly accessible for meticulous investigation. Hence, OLP is ideally positioned for the study of human T-cell-mediated inflammation and autoimmunity.² OLP is a T-cell mediated autoimmune disease in which the auto-cytotoxic CD8 + T cells trigger apoptosis of the basal cells of the oral epithelium³

Oral lichen planus affects women more often than men in a ratio of 2:3. It can present in several forms: reticular, papular, plaque-like, erosive, atrophic, and bullous.

The commonest type of oral lichen planus is a reticular form that appears as white keratotic striae; known as Wickham's striae. Buccal mucosa(62%) is mainly affected, followed by the alveolar mucosa (19%), tongue (14%), and lips (2%). In our presented case buccal mucosa, palate, and ventral surface of the tongue were involved which supports the percentage of occurrence in the oral mucosa⁴

Lichen planus commonly affects the oral mucosa, most often in the absence of skin lesions. Mucosal lesions are usually multiple and almost always have a bilateral, symmetrical distribution. They commonly take the form of minute white papules that gradually enlarge and amalgamate to form either a reticular, annular, or plaque-like pattern. A characteristic feature is the presence of slender white lines (Wickham's striae) radiating from the papules. In the reticular form there is a lacelike network of slightly raised gray-white lines, often interspersed with papules or rings. The plaque-like form may be difficult to distinguish from leukoplakia. In some patients, the lesions are erythematous or frankly ulcerated. Oral lesions of lichen planus may also include bullae, but these are rare. These different forms may merge or coexist in the same patient. The gingivae are commonly the site of erythematous/erosive OLP.⁵

Patients with OLP may have co-incident skin lesions that may exist as pruritic flat-topped violaceous papules then plaques, primarily on the flexor aspects of the wrists or ankles, extensor aspects of the lower legs, the skin of the lower center back, and the natal cleft. Some patients report genital involvement with features similar to skin lesions. Nail involvement shows pitting, distal splitting, raised central ridge, onychia(permanent nail loss), and onycholysis (parting of the nail plate from the nailbed). Scalp involvement causes follicular and perifollicular-

violaceous scaly pruritic papules, follicular plugging, bottle-brush hair formation, and atrophic scarring with permanent patchy hair loss. Rarely, there is also the involvement of the larynx, esophagus, and conjunctiva.⁶

The diagnostic process of OLP requires constant clinical follow-up after the initial biopsy with necessitating an additional biopsy for direct immunofluorescence study and/or histopathological evaluation to reach a final diagnosis.⁷

Desquamative Gingivitis is a term that indicates diffuse desquamation, erythema, and erosion of marginal and inserted gum, introduced by Pritz in 1932. It's a clinical sign of chronic evolution with periods of remission and exacerbation. It's a gingival alteration not associated with biofilm and is framed within the gingival manifestations of systemic conditions. The lesions affect the gingiva free and adhered mainly, and according to the clinical affectation can be distinguished into two types: mild and severe forms. Mild forms course is acute, characterized by the presence of erythema and mild desquamation without ulceration. They are localized lesions caused by allergic mechanisms or hypersensitivity to oral hygiene products, or trauma from parafunctional or aggressive brushing habits. Severe forms are a clinical manifestation of various mucocutaneous diseases. They have erythema, desquamation, and painful ulcerations that affect free and adhered gums.

Oral lichen planus can be differentiated from cheek bite, homogenous leukoplakia, and pseudomembranous candidiasis.⁸

The treatment aims of symptomatic oral lichen planus are to heal areas of painful ulceration or blistering with subsequent patient compliance. A stepwise approach should be adopted. Topical corticosteroid therapy is the mainstay of treatment for the ulcerative disease. As an adjunct to therapy, patients should also be advised of the need to maintain a high standard of oral hygiene, and any causes of mucosal trauma such as ill-fitting dentures, sharp cusps, and poor dental restorations should be eliminated. Patients should be informed that there is a very small risk of malignancy associated with oral lichen planus and that long term monitoring is appropriate.⁹

In the modern era because of stressful lifestyle especially among young people, increasing the risk of occurrence of oral lichen planus and it has to be managed first by counseling the patient and need to be followed up for at least 3 months. Care should be taken when informing patients about these issues to avoid the excessive worry that would only worsen the clinical picture.

Although oral lichen planus is a benign disorder, 1.4% of oral cavity lesions undergo malignant transformation within 7 years. Risk factors for malignant transformation include ulceration, location on the tongue, and female sex.¹⁰

A lichen planus patient, irrespective of symptoms and clinical presentation, should be monitored by semi-annual check-ups. As OLP is more recalcitrant than cutaneous

lichen planus, an early diagnosis can help in early intervention and hence better management.¹¹

So, an annual follow-up to assess for transformation and self-resolution is warranted.

4. Conclusion

Fortuitous management relies upon both oral physician and patient compatibility and faith of the patient in the doctor. The patient should abide by all the instructions given to him. In our case, methodical and systematic use of the steroid showed a drastic improvement in the healing of the persisting lesions completely. The diagnosis of oral lichen planus is initially based upon the clinical presentation of bilateral white patches with or without ulcers or blisters, typically affecting the buccal mucosa, ventral, lateral, and dorsal surfaces of the tongue and gingiva. So, the Clinician must explain the re-occurrence pattern and alarming sign of exacerbation to the patient and also keep a long term follow up of all intraoral lesions in histologically confirmed cases of oral lichen planus to evaluate the malignant potential. The patients should be motivated and counseled for mandatory semi-annual examination.

5. Conflicts of Interest

All contributing authors declare no conflicts of interest.

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None.

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