

## Case Report

# Oral lichen planus with linear lichen planus: a rare association

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### ABSTRACT

Lichen planus (LP) is a papulosquamous disorder with both cutaneous and mucosal manifestation. Linear lichen planus is rare variant of lichen planus which occurs in the extremities. Oral lichen planus is another variant of lichen planus. Coexistence of linear lichen planus with oral lichen planus is rare and only one case has been reported before this case. A 35 year old female presented with hyperpigmented linear lesion in the leg and whitish plaques in the oral cavity. Biopsy of the skin lesions showed features of lichen planus. The patient was started on topical steroids and oral hydroxychloroquine. Patient responded to treatment.

**Keywords:** Oral lichen planus, Linear lichen planus, Hyperpigmented linear lesion

### INTRODUCTION

Lichen planus (LP) is an inflammatory papulosquamous disease that frequently has a chronic course with characteristic clinical and histopathologic features. Besides the skin and adjoining mucous membranes, hair and nails are also involved. Several variants of this disease have been described. Oral lichen planus is a unique variant that has a chronic course and varied prognosis.<sup>1</sup> The oral lesions can be associated with cutaneous lichen planus.<sup>2</sup> The occurrence of linear lichen planus with oral lichen planus is rare and intriguing.

We report a female with oral lichen planus and coexistent linear lichen planus and discuss this rare association.

### CASE REPORT

A 35 year old female presented with burning sensation in mouth for the past 2 months. The patient was unmarried. She had no history of previous dental treatment or

tobacco chewing. She was not on any treatment for medical illness.

#### *On examination*

Oral examination revealed white lacy plaques on the buccal mucosa and erythema of gingiva. There were no ulcers in the oral cavity. A linear hyperpigmented plaque was seen extending from the heel to the thigh was also present in her. She was otherwise normal.

The hemogram was normal. Her biochemical parameters were normal. Biopsy from both the lesions revealed features of lichen planus. Oral lesions showed parakeratosis, hypergranulosis, basal cell degeneration and mononuclear infiltrate in upper dermis.

The patient was treated with topical triamcinolone oral paste and topical betamethasone for skin. Patient was also treated with hydroxychloroquine orally in the dosage of 500 mg daily for 4 weeks.



**Figure 1: Whitish oral lesions.**



**Figure 2: Linear lesions on the leg.**

## DISCUSSION

Lichen planus can affect both mucosa and skin. The cutaneous lesions different clinical subtypes based on the morphology of the lesions and the site of involvement. The cutaneous lesions based on the pattern are divided into linear lichen planus. Linearly oriented lesions can be caused by the Koebner phenomenon, but this pattern is not considered as the true linear form. They are seen along with lesions of classical lichen planus. The true linear form is more extensive and follows the lines of Blaschko.<sup>3</sup> They are very rare and contribute to less than 0.2% of lichen planus cases that occur. Rarely lichen planus presents in a dermatomal pattern, and is called as zosteriform LP.<sup>4</sup>

Rarely lichen planus can occur at the site of healed herpes zoster lesions (wolf isotopic response) or de novo in normal skin. The exact etiology of the zosteri form subtype remains debatable.<sup>5</sup> Linear lichen planus (LLP)

has to be differentiated from other linear lesions such as lichen striatus, inflammatory linear verrucous epidermal nevus (ILVEN), linear psoriasis, linear darier-white disease, nevus unius lateris. These lesions can be differentiated based on their characteristic histopathology.<sup>2</sup>

The cause of LLP is unknown. Cases associated with blaschko-like distributions have been proposed to be because of postzygotic somatic mutations.<sup>5</sup> These mutations may predispose vulnerable cells to developing LLP after a specific immunologic trigger. Other authors have reported LLP lesions after administration of ibuprofen, associated with dental metal allergy, recurring after multiple deliveries, as an isotopic response in areas of prior zoster and related to HCV infection.<sup>5</sup>

Lichen planus is an autoimmune disease mediated by T cells. There are numerous triggers described for lichen planus such as stress/anxiety, hepatitis C virus (HCV), autoimmune diseases, internal malignancies, dyslipidemia, and viral infections.

Our patient did not have any known trigger. In our case linear lichen planus was associated with oral lichen planus, which is rare and has been reported only once in literature. That patient had coexistent HCV infection but our patient had no such infection.<sup>3,4,6</sup>

This coexistence is puzzling as linear lichen planus and oral lichen planus do not have a common mode of pathogenesis.

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