

# Isolated Lichen Planus of the Lower Lip

Thomas C. Yu, MD; Susan C. Kelly, DO; Jeffrey M. Weinberg, MD; Noah S. Scheinfeld, MD, JD

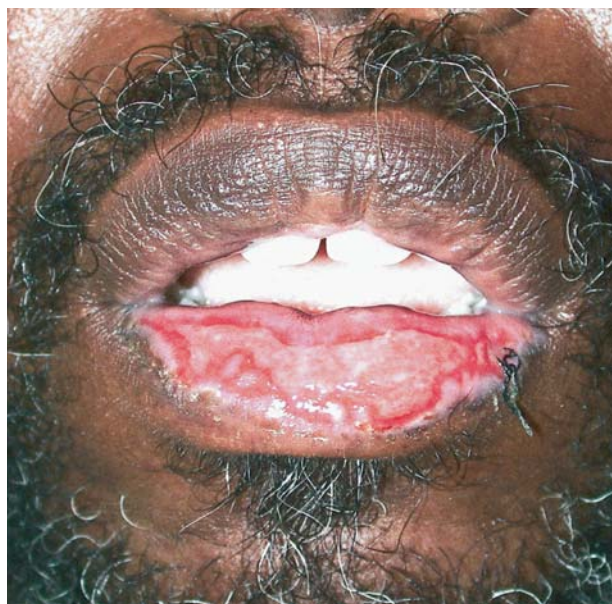
*An idiopathic inflammatory dermatosis, lichen planus (LP) involves the skin, mucosa, or both, in a variety of clinical forms. The involvement of the mucous membranes is seen frequently and usually is asymptomatic, but occasionally, LP can be complicated by extensive painful erosions. We report the case of a 44-year-old man who presented with a 3-year history of isolated lower lip erosions, for which the diagnosis of LP was made. This report represents only the fourth case of LP exclusively localized on the lower lip.*

Lichen planus (LP) is an idiopathic inflammatory dermatosis that involves the skin, mucosa, or both, in a variety of clinical forms. Its estimated prevalence is from 0.9% to 1.2% of the population.<sup>1</sup> LP has been associated with a variety of disorders, especially hepatitis C infection.<sup>2</sup> The involvement of the mucous membranes frequently is seen and usually is asymptomatic, but occasionally, LP can be complicated by extensive painful erosions. The oral mucosa may be affected, as well as genital, conjunctival, esophageal, laryngeal, and anal mucosae.<sup>3</sup>

Oral LP may be subdivided into 6 clinical patterns: reticular, plaques, papules, atrophic, erosive, and bullous.<sup>4</sup> Differential diagnosis of oral LP includes squamous cell carcinoma, herpes infection, cicatricial pemphigoid, pemphigus vulgaris, plasma cell process, and discoid lupus. Altman and Perry<sup>5</sup> reported oral mucosa involvement in 65% of patients with cutaneous LP. In their series of 307 patients with LP, only 25% of cases had mucosal involvement alone, and only one patient had LP isolated to the lip.<sup>5</sup> To our knowledge, this report represents only the fourth case of LP exclusively localized on the lower lip.<sup>6-8</sup>

## Case Report

A 44-year-old man presented with a 3-year history of isolated lower lip erosions. The patient noted lower



**Figure 1.** Lichen planus with crusting over a swollen lower lip.

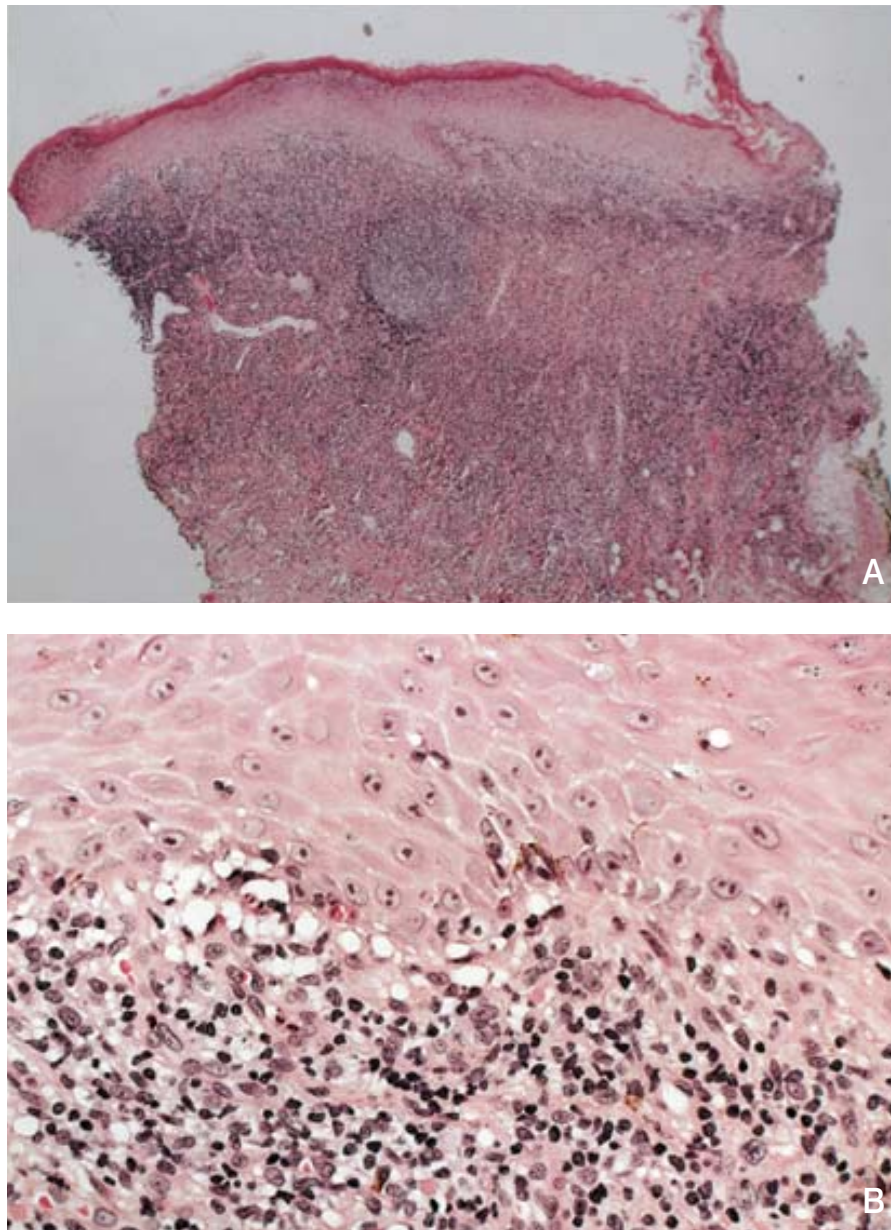
lip edema and burning pain. He was otherwise healthy, except for a diagnosis of diet-controlled hypertension. He denied taking prescription or herbal medications, smoking tobacco, using alcohol, or having a history of herpes. Findings from the physical examination revealed crusting over a swollen lower lip (Figure 1), and normal findings on the remainder of the mucosal surfaces, as well as on the skin, nails, and hair.

A punch biopsy of the lower lip was performed and revealed a dense, bandlike lymphohistiocytic infiltrate in the papillary dermis extending into the midreticular dermis (Figure 2A). Compact orthokeratosis, wedge-shaped hypergranulosis, as well as irregular, jagged epidermal hyperplasia, were noted. On higher magnification, vacuolar alteration at the dermoepidermal junction was shown, with occasional necrotic keratinocytes (Civatte bodies) at and above the dermoepidermal interface (Figure 2B). A diagnosis of LP was made.

A complete resolution of the lower lip lesions, with some postinflammatory pigment alteration, was observed after 6 weeks of treatment with high-

Accepted for publication December 2, 2002.

From the Departments of Dermatology, St. Luke's-Roosevelt Hospital Center and Beth Israel Medical Center, New York, New York.  
Reprints: Jeffrey M. Weinberg, MD, Department of Dermatology, St. Luke's-Roosevelt Hospital Center, 1090 Amsterdam Ave, Suite 11D, New York, NY 10025 (e-mail:jmw27@columbia.edu).



**Figure 2.** A dense, bandlike lymphohistiocytic infiltrate in the papillary dermis extending into the midreticular dermis. Compact orthokeratosis, wedge-shaped hypergranulosis, as well as irregular, jagged epidermal hyperplasia, were noted (A). On higher magnification, vacuolar alteration at the dermoepidermal junction was demonstrated, with occasional necrotic keratinocytes (Civatte bodies) at and above the dermoepidermal interface (B)(H&E, original magnifications  $\times 10$  and  $\times 40$ ).

potency topical steroid (clobetasol propionate 0.05% gel) applied twice daily (Figure 3). Serology testing was negative for the hepatitis C virus. There was no evidence of recurrence at the 16-week follow-up visit.

#### Comment

In contrast to cutaneous LP, oral LP is much more persistent and highly resistant to topical treatments. Our patient responded well to 6 weeks of treatment with high-potency topical steroid applied twice daily. At the 16-week follow-up visit, there was no evidence of recurrence. A

short course of topical steroid can be effective, but it can lead to relapse. Systemic treatment with oral steroids and retinoids may be used for recalcitrant cases, but side effects often limit their prolonged use. Topical tacrolimus ointment has shown promise in treating recalcitrant, erosive mucosal LP.<sup>9</sup> Tacrolimus is a macrolide with strong inhibition of T-lymphocyte activation, and its topical form currently is approved for the treatment of atopic dermatitis. The efficacy of tacrolimus in oral LP supports the idea that T lymphocytes play an essential part in the pathogenesis of this disease.



**Figure 3.** Complete resolution of the lower lip lesions, with some postinflammatory pigment alteration, was observed after 6 weeks of treatment with high-potency topical steroid applied twice daily.

Since Hallopeau<sup>10</sup> first reported a case of oral LP with malignant degeneration in 1910, retrospective studies have reported frequency of malignant transformation in oral LP ranging from 0% to 10%.<sup>11</sup> Although controversies still exist as to whether oral LP has an inherent predisposition to malignancy, currently, it is classified as a precancerous condition requiring subsequent follow-up visits of at least 3 times a year, with extremely meticulous clinical examinations.

## REFERENCES

1. Arndt KA. Lichen planus. In: Fitzpatrick TB, Eisen AZ, Wolff K, et al, eds. *Dermatology in General Medicine*. 3rd ed. New York, NY: McGraw-Hill; 1987:967-973.
2. Sanchez-Perez J, de Castro M, Buezo GF, et al. Lichen planus and hepatitis C virus: prevalence and clinical presentation of patients with lichen planus and hepatitis C virus infection. *Br J Dermatol*. 1996;134:715-719.
3. Thorn JJ, Holmstrup P, Rindum J, et al. Course of various clinical forms of oral lichen planus: a prospective follow-up of 611 patients. *J Oral Pathol Med*. 1988;17:213-218.
4. Kaplan B, Barnes L. Oral lichen planus and squamous carcinoma. case report and update of the literature. *Arch Otolaryngol*. 1985;111:543-547.
5. Altman J, Perry HO. The variations and course of lichen planus. *Arch Dermatol*. 1961;84:179-191.
6. Itin PH, Schiller P, Gilli L, et al. Isolated lichen planus of the lip. *Br J Dermatol*. 1995;132:1000-1002.
7. Allan SJR, Buxton PK. Isolated lichen planus of the lip. *Br J Dermatol*. 1996;135:145-146.
8. De Argila D, Gonzalo A, Pimentel J, et al. Isolated lichen planus of the lip successfully treated with chloroquine phosphate. *Dermatology*. 1997;195:284-285.
9. Vente C, Reich K, Rupprecht R, et al. Erosive mucosal lichen planus: response to topical treatment with tacrolimus. *Br J Dermatol*. 1999;140:338-342.
10. Hallopeau H. Sur un cas de lichen de Wilson gingival avec néoplasie voisine dans la région maxillaire. *Bull Soc Fr Derm Syph*. 1910;17:33.
11. Duffey DC, Eversole LR, Abemayor E. Oral lichen planus and its association with squamous cell carcinoma: an update on pathogenesis and treatment implications. *Laryngoscope*. 1996;106:357-362.