

Acute-Onset Reticulated White Lip



Figure 1. Reticulated White Striae on the Lower Lip

Jeffery B. Shackelton, MD

Joseph C. English III, MD

A 62-YEAR OLD WOMAN RETURNS TO YOUR OFFICE WITH A DIFFUSE, PRURITIC rash on her lips, palms, and upper back 2 weeks after starting lisinopril. Her medical history is significant only for hypertension. She has not had any dental restorative work, has never used intravenous drugs or had a blood transfusion, and has no known history of hepatitis C. On physical examination there are fine, white, intertwined, lacy reticulations on her lower lip, extending onto her buccal mucosa (FIGURE 1). Violaceous flat-topped papules and plaques are also apparent on her palms and upper back.

What Would You Do Next?

- A. Do nothing, the rash will resolve over time
- B. Obtain skin biopsy and discontinue lisinopril
- C. Prescribe oral antihistamine and continue lisinopril
- D. Prescribe topical antifungal medication and discontinue lisinopril

See www.jama.com for online Clinical Challenge.

Author Affiliations: Department of Dermatology, University of Pittsburgh, Pittsburgh, Pennsylvania.

Corresponding Author: Joseph C. English III, MD, Department of Dermatology, University of Pittsburgh, 200 Lothrop St, Ste 3880, Presby South Tower, Pittsburgh, PA 15213 (englishjc@upmc.edu).

JAMA Clinical Challenge Section Editor: Huan J. Chang, MD, Contributing Editor. We encourage authors to submit papers for consideration as a JAMA Clinical Challenge. Please contact Dr Chang at tina.chang@jama-archives.org.

Diagnosis

Lichenoid drug eruption (LDE)

What to Do Next

B. Obtain skin biopsy and discontinue lisinopril

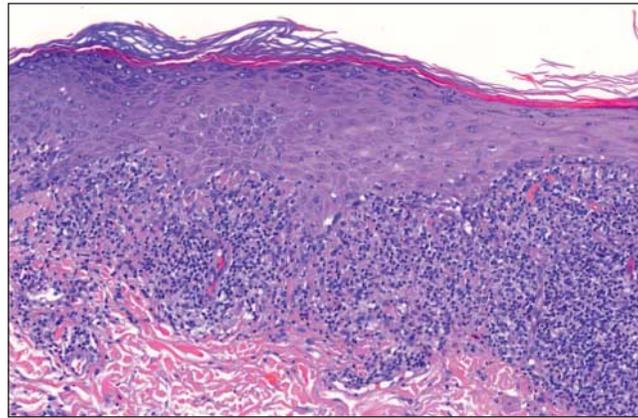
The key clinical feature to recognize in this case is the fine white reticulated pattern, or Wickham striae, on the patient's lower lip that is characteristic of lichen planus (LP). Angiotensin-converting enzyme inhibitors are commonly implicated in inducing this eruption.¹ The preferred course of action is to obtain a skin or mucosal biopsy and discontinue lisinopril.

Comment

Lichenoid drug eruption should be considered in all patients with clinical features of LP. Lichenoid drug eruption may appear clinically and histologically identical to LP. Numerous medications have been associated with LDE, the most commonly implicated including angiotensin-converting enzyme inhibitors, thiazide diuretics, β -blockers, gold salts, antimalarial agents, and penicillamine.¹ The mean age at onset is around 60 years, approximately 10 years later than idiopathic LP.² Lichenoid drug eruption has a variable latency period of weeks to years that is likely dependent on multiple factors, including medication class, dosage, prior exposure, concurrent treatment with other medications, and the particular reaction pattern observed.² Although the pathogenesis of LDE is unclear, offending medications likely alter epidermal proteins, acting as haptens to induce an immune response.

Idiopathic LP is characterized by monomorphic, violaceous, shiny, flat-topped papules and plaques, characteristically with a fine reticulated pattern of white scale. The flexural surfaces of the wrists, anterior lower legs, and mucous membranes are often affected. Lichenoid drug eruption is often more polymorphic and may include lesions with a more eczematous, scaly appearance.² Lichenoid drug eruption

Figure 2. Skin Biopsy Demonstrating Histologic Features of Lichen Planus



Biopsy taken from a lesion on the patient's upper back (hematoxylin-eosin, original magnification $\times 10$).

tion is also more likely to present with an atypical distribution of lesions, especially truncal or photodistribution, and to resolve with more pronounced hyperpigmentation.²

Although spontaneous resolution usually occurs within a few weeks of discontinuing the implicated medication, a prolonged course of 2 to 3 months is not unusual.¹ The main therapeutic challenge in LDE lies in correctly identifying the offending medication, which can be a difficult task given the ever-expanding list of possible triggering agents and lack of close temporal association between medication exposure and both the onset and resolution of the eruption. Additional features, such as photodistribution (often observed in LDE due to thiazide diuretics) and mucosal involvement (reported with a more select number of drugs such as angiotensin-converting enzyme inhibitors), may be helpful in correctly identifying the responsible agent.²

In symptomatic patients or those with an extended course, treatment is identical to that for idiopathic LP. Potent topical corticosteroids are the first-line treatment for oral and cutaneous lesions.³ Oral corticosteroids may be used to provide prompt relief in patients with extensive symptomatic involvement.³ Among nonsteroidal agents, the oral retinoid acitretin is now considered first-line therapy.⁴

Characteristic histologic features of idiopathic LP were identified in this case (FIGURE 2). A dense band-like lymphocytic infiltrate at the epidermal-dermal junction, damage to the basal layer, colloid bodies (eosinophilic hyaline bodies originating from apoptosed keratinocytes), irregular acanthosis with "saw-toothed" rete ridges, and overlying hypergranulosis were observed. Although no histologic features can reliably distinguish between idiopathic LP and LDE, certain findings such as the presence of eosinophils, plasma cells, focal parakeratosis, and a deeper perivascular infiltrate may support a diagnosis of LDE.^{2,5}

Conflict of Interest Disclosures: Both authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

REFERENCES

1. Ellgehausen P, Elsner P, Burg G. Drug-induced lichen planus. *Clin Dermatol*. 1998;16(3):325-332.
2. Halevy S, Shai A. Lichenoid drug eruptions. *J Am Acad Dermatol*. 1993;29(2 Pt 1):249-255.
3. Zakrzewska JM, Chan ES, Thornhill MH. A systematic review of placebo-controlled randomized clinical trials of treatments used in oral lichen planus. *Br J Dermatol*. 2005;153(2):336-341.
4. Laurberg G, Geiger JM, Hjorth N, et al. Treatment of lichen planus with acitretin: a double-blind, placebo-controlled study in 65 patients. *J Am Acad Dermatol*. 1991;24(3):434-437.
5. Van den Haute V, Antoine JL, Lachapelle JM. Histopathological discriminant criteria between lichenoid drug eruption and idiopathic lichen planus: retrospective study on selected samples. *Dermatologica*. 1989;179(1):10-13.