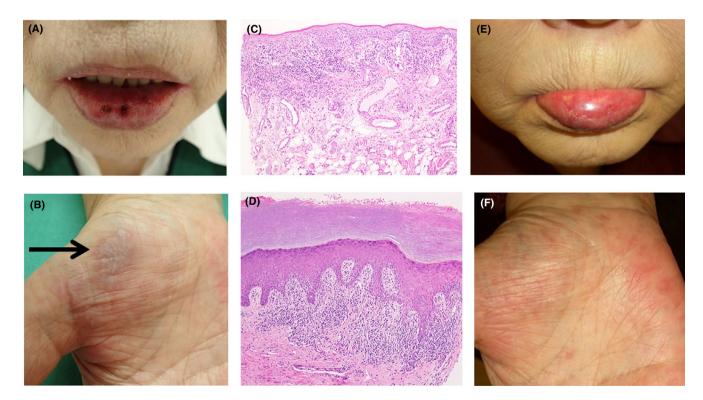
# Case of oral lichen planus treated successfully with irsogladine maleate

Dear Editor.

Lichen planus (LP) is a chronic inflammatory dermatosis involving the skin, mucous membranes, and nails. It is often intractable, recalcitrant to treatment, and frequently relapses, especially if the symptoms are oral. We report herein a case of lichen planus treated successfully with irsogladine maleate (IM).

A 77-year-old female patient presented with a 6-month history of plaques with pruritus on the hands and painful erythema on the tongue and lower lip. She had chronic hepatitis C and was receiving only oral ursodeoxycholic acid. Topical corticosteroid ointment (betamethasone butyrate propionate for the hands and

triamcinolone acetonide for the lips and mouth) was administered for 4 months without substantial effect (Figure 1A, B). A skin biopsy of her lower lip showed liquefaction and band-like, lymphocytic infiltrations beneath the mucosal epithelium (Figure 1C). A skin biopsy of a lesion on the right hand showed hyperkeratosis, acanthosis, thickening of the granular layer, liquefaction, and band-like lymphocytic infiltrations in the upper dermis (Figure 1D). Based on these findings, LP was diagnosed, and oral administration of IM 2 mg/d was begun. Topical triamcinolone acetonide was continued for the treatment of the lip but was switched to clobetasol propionate ointment for the hands. Pain in the lip and tongue improved 2 months



**FIGURE 1** A, Erythema with black crust and slight erosion on the lower lip. B, Reddish-brown plaque on the right hand (arrow). C, Liquefaction and band-like lymphocytic infiltrations in the mucosal epithelium (hematoxylin-eosin [HE], original magnification ×100). D, Hyperkeratosis, acanthosis, thickening of the granular layer, liquefaction, and band-like lymphocytic infiltrations in the upper dermis (HE, ×100). E, Erosion and crust were not observed on the lower lip. F, The plaque on the right hand has disappeared

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after changing the treatment regimen, and the topical medication was discontinued (Figure 1E). The erythema of the hands also improved (Figure 1F).

Corticosteroids, tacrolimus, and retinoid are normally used for topical treatment of LP. Systemic treatments include corticosteroids, immunosuppressants, retinoid, and hydroxychloroquine. However, oral medications should be used with particular attention to possible adverse effects. Mucosal LP is often refractory to treatment. Oral LP can also undergo a malignant transformation, which is more common in the erosive and atrophic forms. Treating inflammation is therefore paramount.

Irsogladine was developed for peptic ulcer and acute gastritis treatment.3 IM is safe and known to protect the gastric mucosa by enhancing the mucosal defensive ability through facilitating gap junction intracellular communication and suppressing inflammatory cytokines. Ri et al<sup>4</sup> reported 18 cases of oral LP treated with IM, of which 13 (72%) demonstrated improvement of the subjective symptoms and ten (56%) demonstrated improvement of the objective findings. The oral administration of IM produced no adverse effects and was recommended for up to 24 weeks. Tokura et al<sup>5</sup> reported the effectiveness of IM for LP of the oral cavity and nails. (Both reports are Japanese-language articles). 4,5 In our case, the symptoms improved within 2 months in line with the findings of these reports. IM may strengthen gap junctions and contribute anti-inflammatory effect in oral LP. The hand symptoms also improved, possibly as a result of using a more potent topical steroid. The effect of IM on the hand symptoms is outside the scope of the present discussion and may require additional study.

We experienced a case of LP which improved after IM treatment. Although not new, IM has relatively few adverse effects and deserves consideration as a treatment for refractory LP with oral symptoms.

## **CONFLICT OF INTEREST**

None declared.

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# **REFERENCES**

- Lehman JS, Tollefson MM, Gibson LE. Lichen planus. Int J Dermatol. 2009;48(7):682-694.
- 2. Alrashdan MS, Cirillo N, McCullough M. Oral lichen planus: a literature review and update. Arch Dermatol Res. 2016;308(8):539–551.
- 3. Akagi M, Amagase K, Murakami T, Takeuchi K. Irsogladine: overview of the mechanisms of mucosal protective and healing- promoting actions in the gastrointestinal tract. Curr Pharm Des. 2013;19(1):106–114.
- Ri S, Muraoka S, Kobayashi M, et al. Clinical evaluation of irsogladine maleate for oral lichen planus. J Jpn Oral Muco Membr. 2003;9(1):26– 33 Japanese.
- Tokura S, Kobayashi M, Abe S, et al. Therapeutic effect of irsogladine maleate on oral and nail lichen planus and recurrent aphthous stomatitis. Prog Med. 2007;27(7):1665–1669 Japanese.