

# Palmoplantar lichen planus successfully treated with itraconazole pulse therapy

Iran J Dermatol 2023; 26: 237-239

DOI: 10.22034/ijd.2023.375965.1638

## Dear Editor,

Lichen planus (LP) and lichenoid eruptions are a group of inflammatory skin diseases exhibiting diverse clinical morphology but sharing uniform histopathological characteristics<sup>1</sup>. Palmoplantar LP is a localized and rare variant that lacks the classical clinical features of LP, such as polygonal lesions and Wickham's striae<sup>2,3</sup>. It typically manifests as erythematous and scaly lesions but can also appear as pitted plaques, vesicle-like or umbilical papules, and ulcers<sup>2,3</sup>. It may be hard to distinguish from psoriasis, syphilis, punctate porokeratosis, and keratoderma<sup>2,3</sup>. Despite the multiple therapeutic options available, it is typically recalcitrant, with no effective treatment firmly established<sup>2</sup>.

Treatment options for palmoplantar LP include corticosteroids, topical retinoic acid, acitretin, enoxaparin, cyclosporin, topical tacrolimus, and surgical excision with grafting<sup>2</sup>. Although some results have been promising, data are limited because they are based primarily on case studies<sup>2</sup>. In certain lichen

variants, systemic antifungals such as griseofulvin and itraconazole have been reported to be beneficial, but the level of evidence is low, and no data on their efficacy in palmoplantar LP is currently available<sup>4-8</sup>.

We describe a 48-year-old male patient complaining of thickened skin over his right palm for the last six weeks. Examination revealed skin-colored hyperkeratotic papules with erythematous borders in his palmar region. These papules tended to coalesce along palmar creases, with their long axis running parallel to the creases (Figure 1A). Furthermore, the patient had reticular LP in the oral mucosa (with amalgam fillings) and lichenoid papules around the ankle, which he was unaware of. A thorough skin examination, including the oral mucosa, palmoplantar area, fingernails, toenails, and toe webs, revealed no indication of an active fungal infection.

Two punch biopsies were performed, one in the palmar region and one in the ankle. Both were devoid of any signs of a fungal infection and demonstrated the classic histopathological features of lichen planus



**Figure 1.** The patient's right palmar region. (a) At the time of presentation, yellowish and skin-colored hyperkeratotic papules with peripheral erythema were observed in the right palmar area. These papules tended to cluster together, with their long axis parallel to the palmar lines. (b) Complete flattening of the lesions was observed in the sixth week (after two itraconazole pulses). The arrow indicates the previous biopsy site. (c) At the nine-month follow-up, the lesions had completely regressed, and the biopsy site had healed.

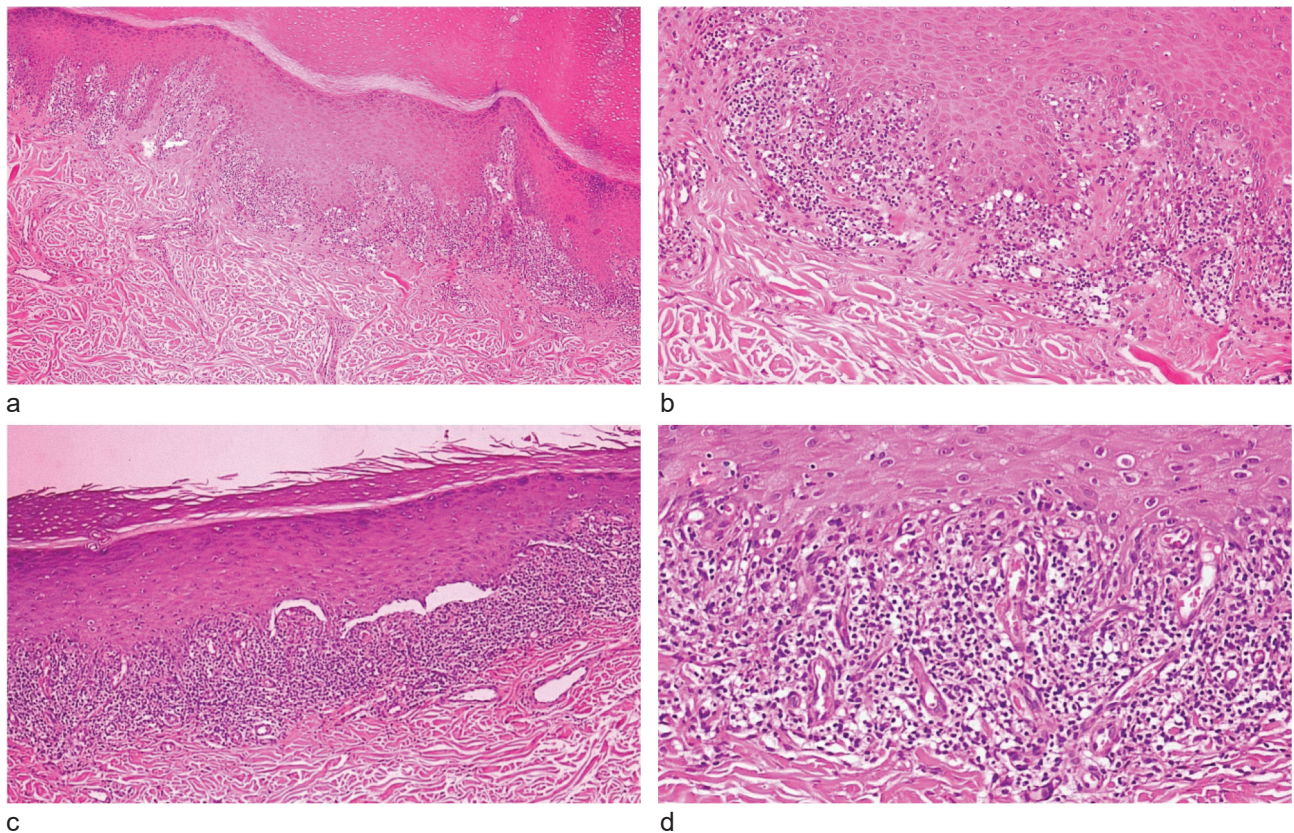


(Figure 2). The patient was started on a seven-day course of oral itraconazole (200 mg BID) pulse therapy. Three weeks later, the lesions in the palmar region and the ankle had somewhat improved. A second seven-day pulse therapy was administered to the patient. After three weeks, the lesions completely flattened, leaving only minor pigmentary changes (Figure 1B). The patient was lost to follow-up after the nine-month visit, where we observed that all of his palmar and perimaleolar lesions had completely healed, but the oral lesions persisted and remained unchanged from the baseline (Figure 1C).

A small case series evaluating the efficacy of itraconazole on LP attributes its success to the drug's immunomodulatory effects (such as inhibition of IL-4, IL-5, and increased production of IL-12p40) rather than its antifungal actions<sup>5</sup>. Another report involving four classic LP patients revealed that two patients had complete and two had partial clearance<sup>6</sup>. Regarding other antifungals, case series suggest that griseofulvin is effective in the diffuse papular form<sup>7</sup>, partially

effective in the hypertrophic form<sup>7</sup>, but ineffective in the oral erosive LP<sup>9</sup>. Oral terbinafine and topical ciclopirox were also proven to be beneficial in two patients with concomitant dermatophyte infections, and it was speculated that LP may have developed as a result of antigenic stimulation<sup>8</sup>.

The etiology of LP is complex; this uncertainty is reflected in treatments, making it difficult to identify a consistently effective regimen<sup>1,4</sup>. Furthermore, LP may regress spontaneously, so determining the efficacy of therapy is challenging. The persistence of lesions in the oral mucosa may be related to amalgam fillings. However, our patient did not have a clinically apparent fungal infection, and whether the regression of the lesions was due to the alleviation of the fungal antigenic stimulation or to other non-antifungal effects of itraconazole is unclear. Itraconazole may be an effective alternative therapy for LP, particularly the palmoplantar variant. However, controlled studies are required to obtain more consistent results.



**Figure 2.** Skin samples from the palm (A-40×, B-100×) and the ankle (C-40×, D-100×) were stained with hematoxylin and eosin. Both specimens displayed classical histopathological features of lichen planus, i.e., orthokeratosis, hypergranulosis, sawtooth-shaped acanthosis, and band-shaped lymphocytic infiltration at the dermo-epidermal junction.

### Author Contributions

- Approval of the final version of the manuscript: YO, SGT, EE
- Critical literature review: YO, SGT, EE
- Data collection, analysis and interpretation: YO
- Effective participation in research orientation: YO, SGT
- Intellectual participation in propaedeutic and/or therapeutic management of studied cases: YO, SGT, EE
- Manuscript critical review: SGT
- Preparation and writing of the manuscript: YO, EE
- Statistical analysis: Not applicable.
- Study conception and planning: YO

### Acknowledgments

The subject provided written informed consent to publish the case details and associated images.

### Funding source

This report did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

### Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

**Conflict of Interest:** None declared.

Yunus Ozcan, MD \*

Sumeyye Gunes Takir, MD

Elif Eris, MD

Department of Dermatology, Duzce University Medical Faculty, Duzce, Turkey

\*Corresponding author:

Yunus Ozcan

Department of Dermatology, Duzce University Medical Faculty, Duzce, Turkey

E-mail: yunusozcan@duzce.edu.tr

Received: 8 December 2022

Accepted: 14 May 2023

### REFERENCES

1. Tziotzios C, Lee JYW, Brier T, et al. Lichen planus and lichenoid dermatoses. *J Am Acad Dermatol*. 2018;79:789-804.
2. Feily A, Yaghoobi R, Nilforoushzadeh MA. Treatment modalities of palmoplantar lichen planus: a brief review. *Adv Dermatology Allergol*. 2016;6:411-415.
3. Velez AMA, Howard MS, Pereyo N. Palmar and plantar lichen planus: a case report and review of the literature. *An Bras Dermatol*. 2015;90:175-177.
4. Thandar Y, Maharajh R, Haffeejee F, et al. Treatment of cutaneous lichen planus (part 2): a review of systemic therapies. *J Dermatolog Treat*. 2019;30:633-647.
5. Khandpur S, Sugandhan S, Sharma VK. Pulsed itraconazole therapy in eruptive lichen planus. *J Eur Acad Dermatol Venereol*. 2009;23:98-101.
6. Libow LF, Coots NV. Treatment of lichen planus and lichen nitidus with itraconazole: reports of six cases. *Cutis*. 1998;62:247-248.
7. Levy A, Stempler D, Yuzuk S, et al. Treatment of lichen planus with griseofulvin. *Int J Dermatol*. 1986;25:405.
8. Click JW, Wilson BB. The use of oral terbinafine or topical ciclopirox for lichen planus. *Cutis*. 2009;84:42.
9. Naylor GD. Treating erosive lichen planus with griseofulvin: a report of four cases. *Quintessence Int*. 1990;21:943-947.