

## Case 8

A 24-year-old woman from Nakhonratchasima.

**Chief complaint:** Abnormalities of fingernails for 2 years.

**Present illness:** The patient has noticed changes in her fingernails for 2 years. The painless lesions gradually developed and finally involved nearly all of her fingernails. She has visited a dermatological clinic, where she was given a 6-month course of oral antifungal, but to no avail.

**Past history:** She has never had any medical condition.

**Family history:** None of her family members has similar symptoms.

**Physical examination:**

HEENT: No oral lesions. No abnormalities of hair.

Skin: No lesions.

Nails: Longitudinal ridging, diffuse thinning of nail plates, and dorsal pterygium on all fingernails except both thumbnails and left index fingernail. No lesions on toenails.



Fig. 8.1



Fig. 8.2

**Histopathology:** (S09-10844) (Fig. 8.3, 8.4)

- Atrophy of nail matrix epithelium with scarring tissue in the underlying dermis.

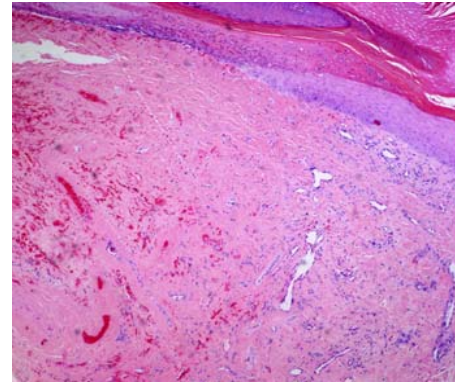


Fig. 8.3

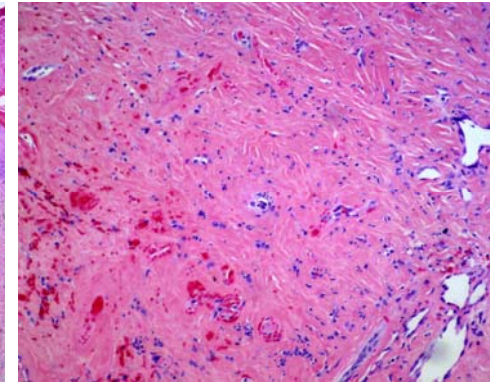


Fig. 8.4

**Diagnosis:** Lichen planus

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**Discussion:**

Nail changes are present in approximately 1-10% of patients with lichen planus. Abnormalities of the nails may be present with or without skin and mucous membrane involvement.<sup>1</sup> Onset may occur at any age; however it is most common in the fifth to sixth decades of life. Fingernails are more commonly affected than toenails.<sup>1, 2</sup> Nail abnormalities that are highly suggestive of lichen planus includes dorsal pterygium, diffuse thinning and splitting of nail plate.<sup>5</sup>

Depending on the nail structure involved, various changes of nail are possible. Matrix disease may vary in extent and severity, presenting as small atrophic foci or extensive destruction with potential scarring. Focal disease of proximal matrix produces onychorrhexis, with longitudinal grooves alternating with normal nail plate.<sup>1</sup> Nail plate

thinning and splitting are consequences of diffuse and mild involvement of the nail matrix by lichen planus.<sup>5</sup>

Pterygium is the late sequelae of matrix scarring that is relatively specific for lichen planus. This change may also occur secondary to trauma or peripheral vascular impairment, as is seen with scleroderma. A pterygium may be located centrally (dorsal pterygium), laterally, or both.<sup>1,3</sup>

Atrophy of the nails is a rare variety of nail matrix lichen planus, characterized by acute and progressive nail destruction leading to diffuse nail atrophy with or without pterygium.<sup>6</sup>

If the nail bed is affected, non-specific changes such as subungual hyperkeratosis and onycholysis develop.<sup>4</sup> When extensive, marked nail plate elevation may develop as collected subungual debris, pushing up the nail plate in a manner similar to that seen in psoriasis or tinea unguium.<sup>1</sup>

Various diseases can cause changes that strongly resemble lichen planus of the nails: lichenoid drug eruption, graft versus host disease, amyloidosis, lichen sclerosus et atrophicans, alopecia areata, psoriasis, atopic eczema, sarcoidosis, and Darier disease.<sup>3</sup>

The definitive diagnosis of nail matrix lichen planus requires a nail biopsy. As in lichen planus of skin, hyperkeratosis, hypergranulosis, vacuolar degeneration, necrotic keratinocytes, Civatte bodies, and a bandlike infiltrate of lymphocytes and histiocytes at the dermo-epidermal junction accompanied by melanophages can be seen.<sup>2</sup>

Nail matrix lichen planus requires oral or intramuscular treatment with systemic steroids, which induce remission of the disease in most cases. Intralesional corticosteroid injections should be considered in patients with involvement of fewer than three digits. Dorsal pterygium is not reversible and should not be treated, if present as the sole manifestation.<sup>6</sup>

Other potential treatment options exist. Oral etretinate and topical PUVA was found to be effective in a case report.<sup>1</sup>

## References

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