

# Idiopathic 20 Nail Dystrophy Treated Successfully with Topical 0.1% Tacrolimus Ointment

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20 nail dystrophy or trachyonychia is a term used to describe the roughness of all 20 nails. It can be a manifestation of a pleomorphic group of disorders such as alopecia areata, lichen planus or can be idiopathic.<sup>1</sup> There is no universally accepted treatment for this chronic disorder. Various modalities of treatment have been tried for this condition such as griseofulvin, systemic, topical, intralesional corticosteroids and are found largely unsuccessful.<sup>2</sup>

A 41-year-old male patient, a businessman by occupation, otherwise apparently normal, presented with chief complaint of yellowish discoloration and roughness of all of his fingernails and toenails simultaneously since 3 years. The roughness of the nails gradually increased over the years. At the time of presentation, the nails were dull, yellow, lustreless, and opaque with excessive longitudinal ridging and had a rough surface. There were no skin lesions elsewhere on the body. Potassium hydroxide smear and fungal culture of the nail scrapings revealed dermatophyte growth, for which topical and systemic anti-fungal was given for 6 months. There was no response with anti-fungal. A 5 mm punch biopsy from the nail matrix of the left ring finger was taken. The biopsy sections showed epidermis displaying compact orthokeratosis, focal hypergranulosis, irregular acanthosis and minimal spongiosis and subepithelial chronic inflammation. There were no interface changes. Sections did not stain positive for fungal elements. Subsequent fungal cultures were negative. All other blood investigations are within normal limits. Since the underlying cause could not be identified, we considered it to be idiopathic trachyonychia.

After explaining the chronic and unpredictable course of the disease and that there is no definitive treatment to this condition, we decided to treat the patient with 0.1% tacrolimus ointment twice daily. In 2 months, we could notice the growth of normal looking healthy nails in proximal one-third of the nails. In 4 months, there is decreased roughness of all the nails (Figures 1 and 2).

## Points to Ponder

- Tacrolimus is a topical immunomodulator used in a



Figure 1: (a) Nail dystrophy in hands: Before treatment, (b) after treatment with topical 0.1% tacrolimus ointment: In hands



Figure 2: (a) Nail dystrophy in legs: Before treatment, (b) after treatment with topical 0.1% tacrolimus ointment: In legs

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variety of dermatological conditions including nail lichen planus

- Tacrolimus could prove to be a safer, cost-effective treatment option in trachyonychia with no side effects as the systemic absorption of the drug is very minimal.

## REFERENCES

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