

Hyperpigmented Nail Conditions

			
Disease	Nail Fungus (Onychomycosis)	Nail Lichen Planus	Median Canaliform Nail Dystrophy
Presentation	Yellow/brown nail region. Nail may be brittle or thickened over the fungus; may separate from nail bed.	Thin, split nail plate, pterygium, longitudinal ridging, subungual hyperkeratosis, lunular erythematous patches, onychorrhexis, onycholysis.	Longitudinal split along the midline of the nail Fir-tree pattern (ridges coming out from the paramedian canal or nail plate split).
Location	More common on toenails than fingernails. Begins under the tip of the nail; spreads and becomes deeper.	More common on fingernails than toenails.	More common on thumb nails (unilateral or bilateral).
Comorbidities	Immunosuppressed conditions (e.g. diabetes, psoriasis). Tinea pedis, peripheral vascular disease, venous insufficiency.	10% of lichen planus patients will have nail lichen planus.	Association with mental health conditions (e.g. depression). Patients on isotretinoin may be predisposed.
Population	All ages	More common in adults	All ages

Hyperpigmented Nail Conditions Continued

Disease	DISEASE 1	DISEASE 2	DISEASE 3
Causes	Fungi (most common: dermatophyte). Often through contact with fungi habitats (moist environments e.g. pool).	No known cause. Possibly T-cell-mediated autoimmune reaction (patients' cells attack their own skin and mucosal keratinocytes).	Microtrauma of nail matrix prevents keratinocyte adhesion (decreases nail plate's tensile strength). May also be iatrogenic (e.g. secondary to isotretinoin).
Treatments	First-line Treatments: Medicated nail polish (e.x. ciclopirox) for up to 1 year Medicated nail cream (e.x. Efinaconazole, tavaborole) for up to 1 year Nail removal may be required to apply antifungal medication Oral antifungal drugs (e.x. itraconazole) for 6-12 weeks	First-line Treatment: Corticosteroids Second-line Treatment: Corticosteroid-sparing immunosuppressants	First-line Treatments: Topical steroids, topical tacrolimus, phototherapy Cover nail with dressing to prevent agitation. Stop causative medications (e.g. isotretinoin).
Additional Images			

References

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9. Median canaliform nail dystrophy. DermNet. (n.d.). Retrieved August 10, 2023, from <https://dermnetnz.org/topics/median-canaliform-nail-dystrophy>
10. Quan, E. Y., & Johnson, N. M. (2022). Successful treatment of median canaliform nail dystrophy with topical tazarotene foam. *JAAD Case Reports*, 29, 70–71. <https://doi.org/10.1016/j.jdcrr.2022.08.051>

Image Citations

1. Onychomycosis Image 1: <https://www.boots.com/health/footcare-advice/nail-problems/toenail-fungus>
2. Onychomycosis Image 2: <https://skinsight.com/skin-conditions/onychomycosis/teen/>
3. Nail Lichen Planus Image 1: <https://www.mayoclinicproceedings.org/article/S0025-6196%2821%2900230-5/fulltext>
4. Nail Lichen Planus Image 2: <https://dermnetnz.org/images/nail-lichen-planus-images>
5. Median Canaliform Nail Dystrophy Image 1: <https://dermnetnz.org/topics/median-canaliform-nail-dystrophy>
6. Median Canaliform Nail Dystrophy Image 2: <https://dermnetnz.org/topics/median-canaliform-nail-dystrophy>