Clinical Research on Foot & Ankle

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Nail Dystrophies and Its Systemic Problems

William John*

National and Kapodistrian University of Athens, Medical School, Laboratory for Experimental Surgery & Surgical Research, NS Christeas, Greece

Abstract

50% of patients have koilonychia (concave, spoon-shaped nails). Yellow nail syndrome is a rare condition characterized by slow-growing, thickened, hypercurved, yellow nails. This condition typically occurs in patients with lymphedema and/or chronic respiratory disorders. Chronic bronchial infections are present in about half of reported cases. Half-and-half nails (Lindsay nails) occur usually with renal failure; the proximal half of the nail is white, and the distal half is pink or red-brown. Half-and-half nails occur in 20 to 50% of patients who have chronic kidney disease; however, this nail abnormality has been reported in various other chronic diseases including Crohn disease, cirrhosis, pellagra, and Kawasaki disease. This abnormality also occurs in healthy people.

Keywords: Nail dystrophies; Onychomadesis; Cirrhosis

Introduction

Terry nails are characterized by whiteness of about 80% of the nail bed with a 0.5- to 3.0-mm brown-to-pink distal band. Terry nails are often associated with cirrhosis, chronic heart failure, and adult-onset diabetes mellitus. Differentiation from half-and-half nails can be difficult [1].

White nails occur with cirrhosis, although the distal third may remain pinker. Intensely white nails, also called Terry nails, can be present in patients with chronic liver or kidney failure, heart failure, or diabetes [2]. Terry nails are a type of leukonychia; the abnormality is not in the nail itself but rather the nail bed, causing the nail the appear white [3]. In Terry nails, nearly the entire nail is opaque white and the lunula is not visible. There is a thin zone of normal pink nail bed at the distal edge of the nail. Terry nails may sometimes occur as part of normal aging [4].

Beau lines are horizontal grooves in the nail plate that occur when nail growth temporarily slows, which can occur after infection, trauma, systemic illness, or during cycles of chemotherapy [5]. Onychomadesis similarly results from temporary growth arrest of the nail matrix and differs from Beau lines in that the full thickness of the nail is involved, causing a proximal separation of the nail plate from the nail bed [6]. Onychomadesis most frequently occurs several months after hand-foot-and-mouth disease but can occur after other viral infections. Nails affected by Beau lines or onychomadesis regrow normally with time [7].

Nail deformities associated with dermatologic conditions. In psoriasis, nails may have a number of changes, including irregular pits, oil spots (localized areas of tan-brown discoloration), separation of part of the nail from the nail bed (onycholysis), and thickening and crumbling of the nail plate [8]. Nail psoriasis is independently associated with treatment-resistant psoriatic disease and is a risk factor for development of psoriatic arthritis. Treatment of nail psoriasis is challenging, but immunomodulatory agents are the most effective Topical therapies can lead to modest improvement. Device-based therapies (eg, laser, light) need more study to judge their effectiveness [9].

Lichen planus of the nail matrix initially causes potentially reversible nail changes, including longitudinal ridging, fissuring, erythema of the lunula, and distal splitting of the nail [10]. Over time, scarring and irreversible changes may occur, including nail atrophy, pterygium formation, and total nail loss. Lichen planus of the nail unit requires management early in the disease to prevent permanent disfigurement [11]. Treatment options include topical, intralesional, and systemic corticosteroids. However, relapse may occur after therapy in some patients. Pterygium of the nail, which is caused by lichen planus, is characterized by scarring from the proximal nail outward in a V formation, which leads ultimately to nail loss [12].

Discussion

Alopecia areata can be accompanied by regular pits that form a geometric pattern. Pits are small and fine. Alopecia areata may also be associated with severe onychorrhexis (brittleness with nail breakage) [13]. Treatment options include intralesional and topical corticosteroids and topical sensitizers such as squaric acid dibutylester. Newer therapies including tofacitinib and apremilast have shown some promise [14].

Dystrophic Nails (Onychogryposis, Onychomycosis). Deformed nails in elderly and diabetic patients can be difficult to manage at best and catastrophic at worst, especially when associated with an insensitive foot. Having a small double-action rongeur and nail splitter-cutter in the office is recommended. These nails can be reduced quickly and safely with these instruments.

Other than reduction of the nail mass, onychomycosis, or fungal infection of the nails, can often be treated with benign neglect because its main effect is a cosmetic one. If treatment is desired to eradicate the fungal infection, referral to a dermatologist may be warranted for confirmatory testing through appropriate cultures followed by cost-effective medical treatment, either by topical or oral agents [15]. Mostv treatment regimens are prolonged because it is difficult for various medications to penetrate the nail. Many of the oral medications have serious side effects, and patients should be appropriately monitored for these side effects. The efficacy of laser therapy for onychomycosis

***Corresponding author:** William John, National and Kapodistrian University of Athens, Medical School, Laboratory for Experimental Surgery & Surgical Research, NS Christeas, Greece, E-mail: johnwilliam@edu.uk

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remains controversial [16]. Lasers are approved by the US Food and Drug Administration (FDA) for "temporary increase of clear nail in patients with onychomycosis," but laser treatment has resulted in lower cure rates than oral and topical therapies. Hence, laser treatment is not regarded as a first line treatment for onychomycosis.

Conclusion

Causes dystrophic nails? Dystrophic nails happen when an infection or injury damages your nail or nailbed. Causes of dystrophic nails include Infections from nail trauma or ingrown nails. Mycotic nails or other types of toenail fungus. Trauma to your nail, such as slamming your finger in a door or dropping something heavy on your foot. Tests will be done to diagnose dystrophic nails? Your healthcare provider may identify dystrophic nails after looking at your nails. The next step is diagnosing the cause or ruling out health conditions. Tests that can help determine the cause of dystrophic nails includes. Blood tests your healthcare provider may test your blood to look for signs of certain health conditions like infections. They'll collect a sample of your blood with a needle and send it to a lab for analysis. Nail biopsy your healthcare provider takes a small sample of your nail. They send the sample to a lab, where a lab technician looks at it under a microscope. Your healthcare provider may perform this test to check for psoriasis or other skin conditions that affect nails. Physical exam during a physical exam, your healthcare provider examines you and evaluates your overall health. You'll discuss how you feel and any health conditions you have.

References

1. Richter M, Wippermann B, Krettek C, Schratt HE, Hufner T, et al. (2001) Fractures and fracture dislocations of the midfoot: occurrence, causes and long-term results. Foot Ankle Int 22: 392-398.
2. Frink M, Geerling J, Hildebrand F, Knobloch K, Zech S, et al. (2006) Etiology, treatment and long-term results of isolated midfoot fractures. Foot Ankle Surg 12: 121-125.
3. Griffiths D L (1948) The management of acute circulatory failure in an injured limb. J Bone Joint Sur 30: 280-289.
4. Cascio BM, Wilckens JH, Ain MC, Toulson C, Frassica FJ (2005) Documentation of acute compartment syndrome at an academic health-care center. JBJS 87: 346-350.
5. Frink M, Hildebrand F, Krettek C, Brand J, Hankemeier S (2010) Compartment syndrome of the lower leg and foot. Clin Orthop Relat Res 468: 940-950.
6. McQueen MM, Christie J, Court-Brown CM (1990) Compartment pressures after intramedullary nailing of the tibia. J Bone Joint Surg 72: 395-397.
7. McQueen MM, Christie J, Court-Brown CM (1996) Acute compartment syndrome in tibial diaphyseal fractures. J Bone Joint Surg 78: 95-98.
8. Singh R A, Trickett R, Hodgson P (2015) Early versus late surgery for closed ankle fractures. J Orthop Surg 23: 341-344.
9. Konrath G, Karges D, Watson JT, Moed BR, Cramer K (1995) Early versus delayed treatment of severe ankle fractures: a comparison of results. J Orthop Trauma 9: 377-380.
10. Schepers T, De Vries MR, Van Lieshout EM, Van der Elst M (2013) The timing of ankle fracture surgery and the effect on infectious complications; a case series and systematic review of the literature. Int Orthop 37: 489-494.
11. Estebe J (2011) Complications of tourniquet use.
12. Seybold EA, Busconi BD (1996) Anterior thigh compartment syndrome following prolonged tourniquet application and lateral positioning. Am J Orthop (Belle Mead NJ) 25: 493-496.
13. Pedowitz RA (1991) Tourniquet-induced neuromuscular injury: a recent review of rabbit and clinical experiments. Acta Orthop Scand 62: 1-33.
14. Konrad G, Markmiller M, Lenich A, Mayr E, Rüter A (2005) Tourniquets may increase postoperative swelling and pain after internal fixation of ankle fractures. Clin Orthop Relat Res 433: 189-194.
15. Elazab A, Abd-Elgawad A, Attia M (2018) Peripheral Nerve Block: Does it Affect Pain Perception in Acute Compartment Syndrome? A Systematic Review. J orthop rheumatol 12: 72-77.
16. Mar GJ, Barrington MJ, McGuirk BR (2009) Acute compartment syndrome of the lower limb and the effect of postoperative analgesia on diagnosis. Br J Anaesth 102: 3-11.