

Resident's Focus

My journey into the world of onychology: A nail-biting adventure

Ananya Arya, MBBS.¹, Prateek Nayak, MD.¹

¹Department of Dermatology, Venereology, Leprology, All India Institute of Medical Sciences, Nagpur, Maharashtra, India.

Dermatology, as a field, is remarkably vast and diverse and encompasses many subspecialties. The skin and hair, with their prominent aesthetic implications, often command our primary focus, though the intricate world of nails, despite its crucial role in health and disease, frequently remains overshadowed and underappreciated. While I've always had a casual interest in nails (aesthetically), it was my senior's persistent encouragement to participate in the Nail Society of India's (NSIs) 13th Annual National Conference, ONYCHOCON 2024 and the intensive preparation for the Annual ONYCHOCON Nail Quiz that truly ignited my passion for onychology.

Initially, I found the idea of diagnosing and managing nail disorders daunting. However, as I immersed myself in the seminal texts of Baran and Dawber, complemented by the comprehensive NSI Textbook of Onychology, my perspective shifted. The experience of representing my college, feeling the thrill of competition and testing my knowledge under pressure, pushed me to dive deeper into the fascinating world of onychology.

One particularly memorable moment was confidently answering the Nail Lichen Planus Severity Index (NALSI) scoring question, a topic I had prepared extensively for. It was incredibly satisfying to see my preparation pay off! On the flip side, histopathology proved to be my Achilles' heel, a humbling reminder of the vast knowledge yet to be acquired. The rapid-fire round, however, was an undisputed highlight – we truly 'nailed it'!

Quizzing, as many have observed, transforms learning from passive absorption to active engagement. The challenge inherent in quizzing can be a powerful motivator, turning the acquisition of knowledge into an engaging pursuit. The preparation for the quiz, coupled with a successful performance on the day, deepened my appreciation for the complexities of nails and ignited a passion for onychology that I am eager to nurture. I can't wait to continue exploring this fascinating field and hopefully, make meaningful contributions to it.

Inspired by this experience and in appreciation of the NSI's commitment to advancing the field through initiatives such as this journal, the annual ONYCHOCON and the Nail Quiz, I leave the readership of the *Journal of Onychology and Nail Surgery* to explore some intriguing questions from the world of onychology.

QUESTIONS

1. A 54-year-old woman had a painful growth under her toenail, presenting as a bulbous lesion at the nail base, accompanied by onycholysis and nail plate destruction. Histopathology revealed an acanthotic epidermis with large glassy keratinocytes. The patient had a history of cutaneous manifestations characteristically evolving through three stages. What rare genodermatosis is suspected in this patient?
2. Characterised by the triad of growth plate arrest, proximal paronychia and xanthochromia, this distinctive clinical entity was first delineated in 2008 by de Berker *et al.* What is the name of this condition?
3. Samitz's sign, characterised by a dystrophic, ragged or moth-eaten appearance of the cuticle, is a recognised manifestation of which disease?
4. Defined as the transitional zone between the nail bed and the hyponychium, this anatomical structure is often more readily visualised in the context of nail disorders such as pterygium inversum unguis. What is the name of this structure?
5. Considered the grandfather of European onychology, he is credited with the first descriptions of numerous nail conditions, including onychopapilloma, onychomatricoma, Bidet nail and nail degloving syndrome. Who is this legendary onychologist?
6. Onychopapilloma is a benign tumour of the distal matrix and nail bed characterised by localised distal subungual keratosis. A recent prospective cohort study has revealed

***Corresponding author:** Prateek Nayak, Department of Dermatology, Venereology, Leprology, All India Institute of Medical Sciences, Nagpur, Maharashtra, India. nayakprateek@rocketmail.com

Received: 22 December 2024 **Accepted:** 27 February 2025 **Epub Ahead of Print:** 03 May 2025 **Published:** XXXXX DOI: 10.25259/JONS_36_2024

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2025 Published by Scientific Scholar on behalf of Journal of Onychology and Nail Surgery

an association between multiple onychopapillomas and a specific cancer genodermatosis. This syndrome carries an elevated risk of melanomas, basal cell carcinoma, and various internal malignancies. The presence of multiple onychopapillomas may serve as a novel cutaneous marker for which cancer syndrome?

7. Described by two leading figures in onychology, this syndrome encompasses three overlapping clinical presentations, typically characterised by thimble-shaped nail shedding. What is the name of this syndrome?
8. Yellow nail syndrome (YNS) classically presents with a triad of nail changes, lymphoedema and respiratory tract involvement. Which common metal is associated with YNS cases, often involving dental or orthopaedic implants?
9. A recently described matrical tumour of the nail bed presents with pachymelanonychia, a term reflecting its dual clinical features of nail thickening and pigmentation. The tumour can also manifest without pigmentation and exhibits three histopathologic variants: Acanthotic, papillomatous and keratogenous, with retarded maturation. What is the name of this tumour?
10. This diagnostic technique, originally involving the use of a 3-mm punch through a softened nail lesion followed by the application of a Hemocult stick, has been recently modified to utilise hydrogen peroxide. What is the name of this technique, and what is its primary indication?
8. Titanium. YNS almost always involves upper and lower airways, giving rise to sinusitis and cough. It may be caused by the galvanic release of titanium ions by other metals, by the oxidative release of titanium ions by fluorides, or by the uptake of titanium dioxide from the digestive tract. The presence of titanium in the nails confirms the diagnosis, even in the absence of characteristic nail changes.^[8]
9. Onychocytic Matricoma. It is a recent and rarely described tumour arising from the nail matrix epithelium. Several subtypes have been proposed according to both histological features (acanthotic type, acanthotic and papillomatous type, keratogenous type with retarded maturation and germinotropic variant) and pigmentation (pigmented, melanocytic and non-pigmented).^[9]
10. Haneke's technique. It is used to differentiate between subungual hematoma from subungual pigmentation. It involves driving a 3 mm punch through the softened nail without anaesthesia. Patient discomfort guides the depth of penetration. The punched-out section of the nail is then scrapped and analysed with a Hemocult stick (or urinalysis reagent strip). If the strip changes colour, then this indicates haematoma.^[10]

ANSWERS

1. Subungual tumour in Incontinentia pigmenti. It is a late presentation of the disease which may be associated with bony destruction of the underlying phalanges.^[1]
2. Retronychia. It represents proximal ingrowth of the nail that occurs when the nail embeds backward into the proximal nail fold. The nail is thickened, yellow and with swelling most prominent at the intersection of the lateral horns and proximal nail fold. Nail plate avulsion with supplementary medical management is curative.^[2]
3. Dermatomyositis.^[3]
4. Nail Isthmus.^[4]
5. Dr Robert Baran.^[5]
6. BReast CAncer gene 1-associated protein (BAP1) tumor predisposition syndrome.^[6]
7. Nail degloving syndrome was first described by Baran and Perrin.^[7] It presents anatomically in three overlapping ways: Thimble-shaped shedding with the nail plate and the surrounding skin, partial sloughing of the nail plate and adjacent tissue and shedding of the entire nail unit while sparing the distal digit epidermis. Lichen planus, toxic epidermal necrolysis and digital tip gangrene are common causes.

Authors' contributions: AA: Data Curation, Writing - Original Draft, Writing - Review & Editing. PN: Conceptualization, Data Curation, Writing - Original Draft, Writing - Review & Editing, Supervision.

Ethical approval: Institutional Review Board approval is not required.

Declaration of patient consent: Patient's consent is not required as there are no patients in this study.

Financial support and sponsorship: Nil.

Conflicts of interest: Views expressed by the authors are entirely personal.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation: The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

REFERENCES

1. Montes CM, Maize JC, Guerry-Force ML. Incontinentia pigmenti with painful subungual tumors: A two-generation study. *J Am Acad Dermatol* 2004;50 2 Suppl: S45-52.
2. De Berker DA, Richert B, Duhard E, Piraccini BM, André J, Baran R. Retronychia: Proximal ingrowth of the nail plate. *J Am Acad Dermatol* 2008;58:978-83.
3. Samitz MH. Cuticular changes in dermatomyositis. A clinical sign. *Arch Dermatol* 1974;110:866-7.
4. Oiso N, Kurokawa I, Kawada A. Nail isthmus: A distinct region of the nail apparatus. *Dermatol Res Pract* 2012;2012:925023.
5. Holzberg M, Elewski B, Daniel CR 3rd, Jellinek NJ, Lipner SR,

- Piraccini BM, *et al.* A tribute to Dr Robert Baran: The grandfather of European onychology. *J Am Acad Dermatol* 2024;91:e63-4.
6. Lebensohn A, Ghafoor A, Bloomquist L, Royer MC, Castelo-Soccio L, Karacki K, *et al.* Multiple onychopapillomas and BAP1 tumor predisposition syndrome. *JAMA Dermatol* 2024;160:838-45.
 7. Baran R, Perrin C. Nail degloving, a polyetiologic condition with 3 main patterns: A new syndrome. *J Am Acad Dermatol* 2008;58:232-7.
 8. Berglund F, Carlmark B. Titanium, sinusitis, and the yellow nail syndrome. *Biol Trace Elem Res* 2011;143:1-7.
 9. Perrin C, Cannata GE, Bossard C, Grill JM, Ambrossetti D, Michiels JF. Onychocytic matricoma presenting as pachymelanonychia longitudinal. A new entity (report of five cases). *Am J Dermatopathol* 2012;34:54-9.
 10. Poudyal S, Elpern DJ. Simple diagnostic tests for subungual pigmentation. *Dermatol Res Pract* 2009;2009:278040.

How to cite this article: Arya A, Nayak P. My journey into the world of onychology: A nail-biting adventure. *J Onychol Nail Surg*. doi: 10.25259/JONS_36_2024