

Nail Melanoma in Situ in a Patient with Regular Ultraviolet Nail Lamp Exposure

Gabriel Salerni^{1,2}, Maria Macoc²

¹ Dermatology Department, Hospital Provincial del Centenario de Rosario - Universidad Nacional de Rosario, Argentina

² Grupo Centro, Rosario, Argentina

Citation: Salerni G, Macoc M. Nail Melanoma In Situ in a Patient With Regular Ultraviolet Nail Lamp Exposure. *Dermatol Pract Concept.* 2025;15(3):5607. DOI: <https://doi.org/10.5826/dpc.1503a5607>

Accepted: March 15, 2025; **Published:** July 2025

Copyright: ©2025 Salerni et al. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (BY-NC-4.0), <https://creativecommons.org/licenses/by-nc/4.0/>, which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.

Funding: None.

Competing Interests: None.

Authorship: All authors have contributed significantly to this publication.

Corresponding Author: Gabriel Salerni, Salta 2391. CP 2000. Rosario. Argentina. E-mail: gabrielsalerni@hotmail.com

Case Presentation

A 33-year-old woman at 8 months of pregnancy presented with a pigmented lesion on the nail of her left ring finger. She reported regular exposure to ultraviolet (UV) nail lamps used to cure the gel polish, averaging one session every three weeks over the preceding five years. The lesion was initially noticed as a pigmentation appearing on the proximal portion of the nail plate, exposed with the growth of the nail covered by the manicure gel. Dermoscopy examination revealed a triangular-shaped light brown-colored melanonychia in the proximal third of the nail plate. Given her pregnancy, biopsy was deferred, and follow-up was scheduled two months postpartum (Figure1).

At follow-up, the lesion evolved into a longitudinal pigmented band extending from proximal to distal portion of the plate; an increase in pigmentation and the appearance

of lines of different colors and thicknesses were observed. A biopsy of the nail matrix confirmed melanoma in situ.

Teaching Point

Although the link between UV radiation from manicure lamps and the risk of skin malignancy has been speculated, there is limited consensus in the literature [1]. Few well-documented cases exist, mostly consisting in squamous cell carcinoma [1,2]. This case highlights the potential carcinogenic effects of repeated artificial UV exposure in the development of nail unit melanoma.

Cosmetic practices like artificial nails may obscure early detection. Patients should be educated on these risks and encouraged to use sunscreen or UV-blocking gloves. This case emphasizes the importance of dermoscopy in early recognition of nail melanoma and the need for further research into artificial UV exposure as a risk factor.

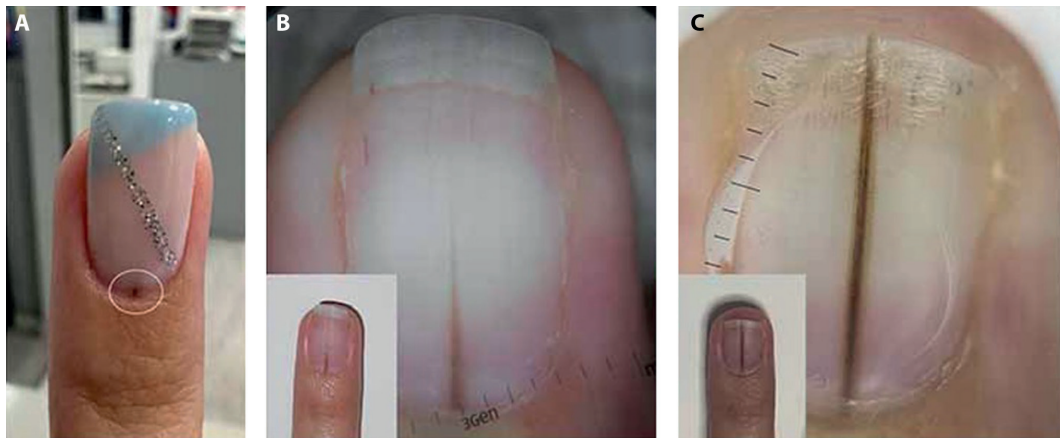


Figure 1. (A) Image taken by the patient when noticing the pigmentation in the proximal part of the nail plate appearing below the gel. (B) Clinical and dermoscopic image of the lesion at baseline (September 2024), light brown triangular melanonychia. (C) Clinical and dermoscopic image of the lesion at the 3-month follow-up (December 2024); longitudinal melanonychia from proximal to distal ends, with increased pigmentation and lines of different color and thickness. Note in both dermoscopic images the presence of splinter hemorrhages and damage to the nail plate attributable to trauma.

References

1. Metko D, Mehta S, McMullen E, Bednar ED, Abu-Hilal M. A systematic review of the risk of cutaneous malignancy associated with ultraviolet nail lamps: what is the price of beauty? *Eur J Dermatol.* 2024 Feb 1;34(1):26-30. DOI: 10.1684/ejd.2024.4616. PMID: 38557455.
2. Shihab N, Lim HW. Potential cutaneous carcinogenic risk of exposure to UV nail lamp: A review. *Photodermatol Photoimmunol Photomed.* 2018 Nov;34(6):362-365. DOI:10.1111/phpp.12398. PMID: 29882991.