

Exogenous Pigmentation by Foreign Body Under Reflectance Confocal Microscopy Mimicking Recurrence of Lentigo Maligna

Piscazzi Francesco^{1,2}, Di giulio Sara^{1,2}, Ardigò Marco^{1,2}

1 Dermatology Unit, IRCCS Humanitas Research Hospital, Rozzano (MI), Italy

2 Department of Biomedical Sciences, Humanitas University, Pieve Emanuele (MI), Italy

Key words: Confocal reflectance microscopy, Lentigo maligna, Mimicker, Foreign bodies

Citation: Piscazzi F, Di Giulio S, Ardigò M. Exogenous Pigmentation by Foreign Body Under Reflectance Confocal Microscopy Mimicking Recurrence of Lentigo Maligna. *Dermatol Pract Concept*. 2024;14(4):e2024234. DOI: <https://doi.org/10.5826/dpc.1404a234>

Accepted: June 9, 2024; **Published:** October 2024

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Funding: None.

Competing Interests: None.

Authorship: All authors have contributed significantly to this publication.

Corresponding Author: Piscazzi Francesco, MD, Dermatology Unit, IRCCS Humanitas Research Hospital, Rozzano (MI); Department of Biomedical Sciences, Humanitas University, Pieve Emanuele (MI), Italy. Via Alessandro Manzoni, 56, 20089 Rozzano MI; Email: francesco.piscazzi@humanitas.it

Case Presentation

A 76-year-old woman visited our clinic with an oval neoformation at the base of her nose, which was dermoscopically suspected for lentigo maligna (LM). A conventional surgical excision followed by histological examination confirmed LM without involvement of the surgical margin, with three millimeters to the nearest margin. Six months post-operation, during a routine follow-up, a blue-grayish pigmentation was observed on the nasal scar (Figure 1A). Further dermoscopic analysis revealed a white surgical scar surrounded by a blue-grayish pigmentation (Figure 1B). The patient reported a nasal bone contusion and fracture four months earlier due to a fall. To address the nature of the pigmentation, reflectance confocal microscopy (RCM) was conducted, aiming to either rule out LM's persistence beneath the scar or detect any post-trauma exogenous pigmentation. RCM findings included a normal honeycomb pattern in the spinous granular layer (not shown)

and densely packed hyperreflective granules (Figure 1C and 1D) within the epidermis and dermis, indicative of exogenous pigmentation [1]. There were no clear signs of LM such as pagetoid cells, folliculotropic atypical cells, or atypical nest at the dermo-epidermal junction or in the dermis [2]. The final diagnosis pointed to exogenous pigmentation by asphalt.

Teaching Point

Under RCM examination, exogenous pigmentation from foreign bodies is characterized by densely packed hyperreflective granules in the epidermis and dermis, lacking the RCM features typically seen in pigmented tumors. RCM is crucial for differentiating between pigmentary skin disorders like melanocytic nevi, superficial spreading and lentigo maligna melanoma, seborrheic keratosis, pigmented actinic keratosis, and basal cell carcinomas, offering the advantage of diagnosing without performing surgical biopsy.

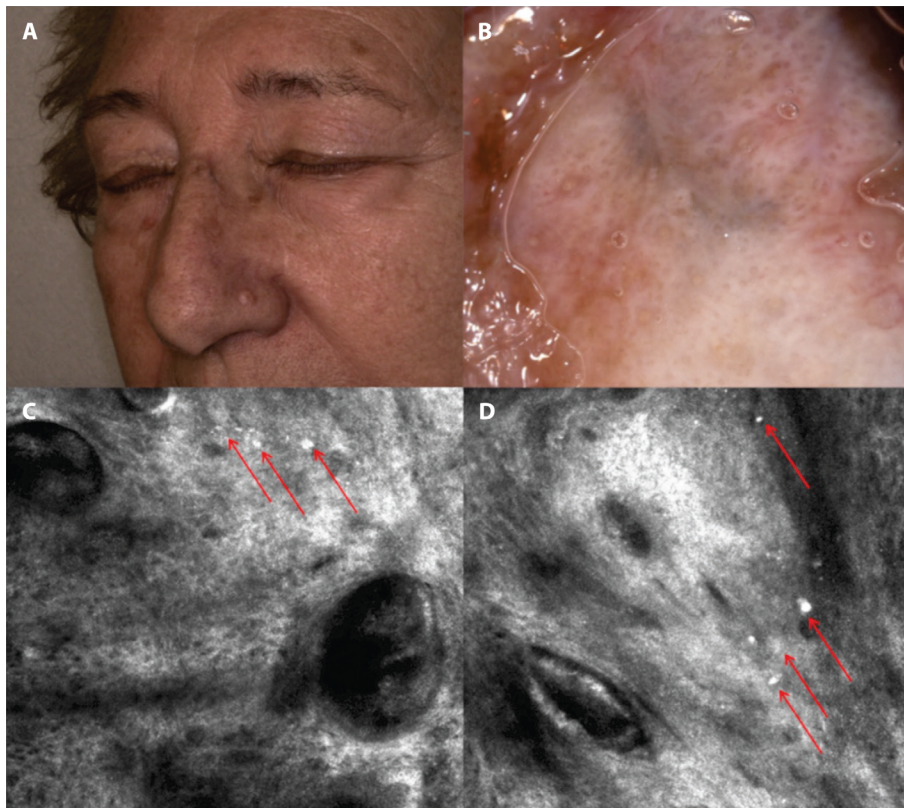


Figure 1. (A) Clinical picture showing a pigmented scar on the nasal bridge. (B) Dermoscopic picture showing a grayish-blue structureless area that encircles the white surgical scar. Reflectance confocal microscopy examination revealed many irregularly arranged, highly refractive pigment granules (red arrows) in the (C) epidermis and the (D) dermis, varying in size and with distinct boundaries but lacking the characteristics of lentigo maligna.

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