

# Onychopapilloma: does free edge confocal microscopy of the nail improve the diagnosis?

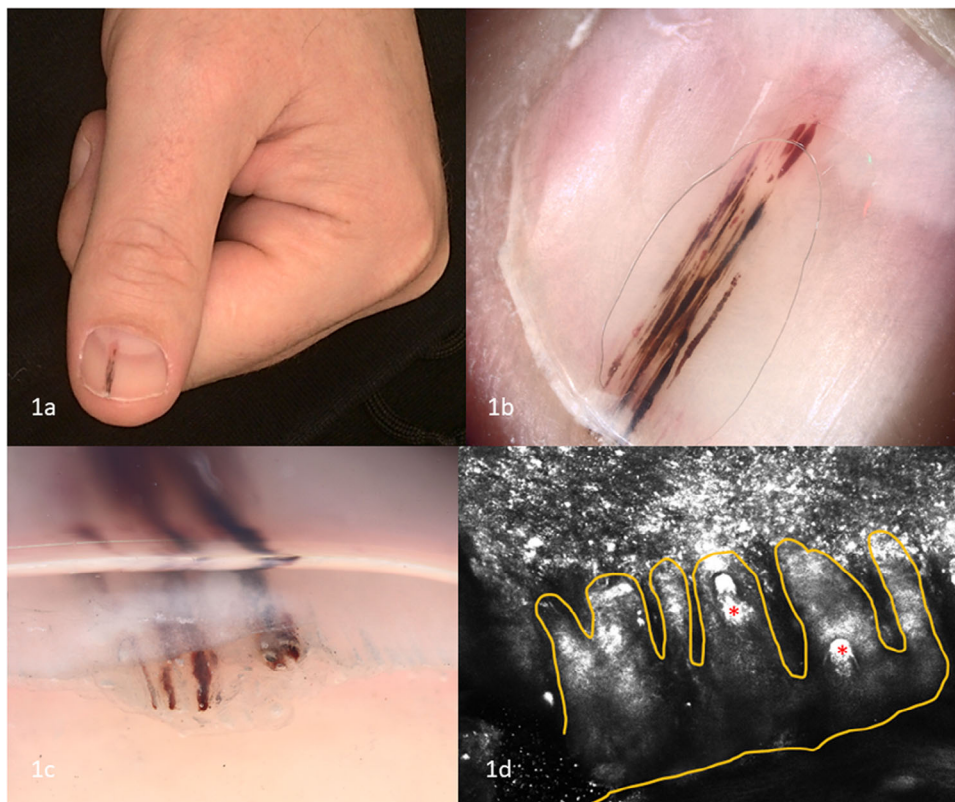
Dear Editor,

Onychopapilloma is a relatively common benign *nail unit tumor* arising from the nail bed or the distal matrix, first described by Baran and Perrin in 1995.<sup>1</sup> It usually affects one single nail, presenting as longitudinal erythronychia, slightly onycholytic with or without a distal V-shaped appearance. It may also present as longitudinal leukonychia, melanonychia or xanthonychia.<sup>1</sup>

Due to the various clinical presentations mimicking many other nail tumors, the diagnosis of onychopapilloma might be challenging, while the non-invasive imaging techniques could have a positive impact

helping the differential diagnosis.<sup>2</sup> In literature, the dermatoscopic evaluation of the nail unit and its components (onychoscopy), as well as the ultrasonography, have demonstrated to be useful in studying and diagnosis the adnexal pathologies, in particular those of the nail unit.

Onychopapilloma' onychoscopy typically shows splinter hemorrhages described as purple-black interrupted lines and hyperkeratotic subungual papule at the free edge of the nail plate.<sup>1</sup> High-frequency ultrasound up to 24 MHz and ultra-high frequency ultrasound up to 71 MHz report a subungual distal hyperechoic mass without vascular flow on doppler signal, corresponding to the hyperkeratotic spur.<sup>3</sup>



**FIGURE 1** (A) Linear fringed erythro-melanonychia band of the left thumb with proximal focal alteration of the lunula. (B,C) Onychoscopy: proximal erythema of the lunula, fine red band with purple/black splinter hemorrhages up to the free edge of the nail plate. (D) Reflectance confocal microscopy of the nail plate free edge: hyperreflective digitiform structures (yellow line) and focal ovoid white areas (red asterisks).

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In addition, other ultrasound features are reported both for the nail bed and plate, such as the upward displacement, thickening and the hyperechoic focal spots/irregularities, respectively.<sup>4</sup>

At histology, onychopapilloma shows papillomatous acanthosis of the nail bed, nail matrix metaplasia, subungual hyperkeratosis, and hemorrhage.<sup>5</sup> The accuracy of the histological analysis could be improved when a longitudinal tangential excision is performed.

We report the case of a onychopapilloma presented as longitudinal erythro-melanonychia at the thumb of a 56-year-old male Caucasian patient (Figure 1A). Onychoscopy (20× magnification) shows a fine red band with purple/black splinter hemorrhages, proximal erythema of the lunula (Figure 1B) and subungual keratotic mass at the level of the free edge (Figure 1C). A vivo reflectance confocal microscopy (RCM) examination with Vivascope 1500 is performed showing a focal subungual mass with hyperreflective digitiform structures and focal white areas (Figure 1D), presumably corresponding to epidermal papillomatosis and hemorrhages. According to our experience, RCM examination of the nail plate free edge could support and add informative features to dermoscopy in order to make a final specific diagnosis. The hyperreflective focal subungual mass with digitiform structures, together with the classical onychopapilloma' clinic and dermoscopy, support the diagnosis. Further studies are needed to validate this observation.

#### ACKNOWLEDGMENTS

The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

#### CONFLICT OF INTEREST STATEMENT

The authors have no relevant financial or non-financial interests to disclose.

#### DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

#### PATIENT CONSENT STATEMENT

The patient was informed about the use of his clinical information according to the Declaration of Helsinki principles and photos for a publication intent. The informed consent was appropriately obtained during the medical examination.

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