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LETTER

WILEY

Reflectance confocal microscopy of large penis pigmentation: A clue for detection of genital melanosis

Dear Editor,

In vivo reflectance confocal microscopy (RCM) is a non-invasive imaging technique that provides microscopic visualization of the skin, representing a useful tool for differentiating melanomas from other pigmented and non-pigmented skin lesions. It is extremely effective for special sites such as nails, acral skin, face, and mucosa where a clinical diagnosis can be difficult and RCM could be useful to spare biopsies often associated with discomfort or pain. Several RCM features and diagnostic patterns have been progressively described in the literature for lesions located in the genital area[1]; however, reports about the diagnostic use of RCM for pigmented penile lesions are very limited. We herein describe RCM features of large pigmented penile lesion, finally diagnosed as melanosis. A 34-year-old patient was referred to our clinic for a large irregular hyperpigmented macule on the penile shaft. This lesion was first noted 1 year before and rapidly increased in size. On clinical examination, we observed a brown to black, asymmetric, 3.0 × 0.6 cm hyperpigmented macule on the penis with partially blurred margin (Figure 1A). The pigmentation was asymptomatic and was not preceded by any sign of inflammation (infection, trauma, or dermatoses). Dermoscopic evaluation revealed a parallel pattern combined with a brown network at the periphery and some structureless blue–gray areas (Figure 1B). RCM examination with Vivascope 1500 was carried out, showing a ringed pattern characterized by round polycyclic papillae with hyperreflective basal layer honeycomb pattern and no atypical cells (Figure 1C). A final diagnosis of penile melanosis was performed. Differential diagnosis between benign and malignant lesions in genital sites is often challenging, and non-invasive techniques represent an important tool to avoid biopsies when not needed.[1] Maatouk et al.[2] proposed an algorithmic approach for the management of pigmented macules on the genital areas mainly based on their dermoscopic appearance. In this study, the coexistence of blue, white, or gray color should be considered suspicious for melanoma and biopsied, while the pattern of parallel brown lines or circles (ring-like) is highly suggestive of melanosis. Lesions that should be followed presented the homogeneous/structureless pattern with the presence of brown and/or black color.[2] In the literature, additional dermoscopic features suggestive of mucosal melanoma were multicomponent patterns, polymorphic vessels, red areas, reticular depigmentation, atypical networks or streaks, irregular black–brown dots, multilateral blackheads, and ulceration.[3] Limitation is that most of the criteria are derived from small retrospective case series and single case reports, and few of them have been validated.[3] In doubtful cases,

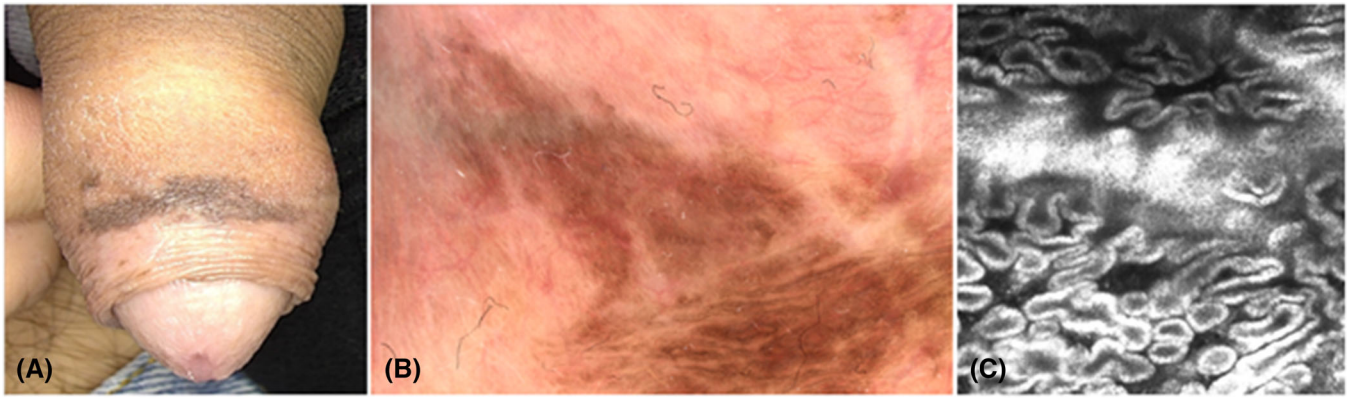

FIGURE 1 (A) Clinical presentation of the penile melanosis showing a large irregular hyperpigmented macule; (B) dermoscopic presentation with a parallel pattern combined with a brown network at the periphery and some structureless blue–gray areas; (C) confocal microscopy with a ringed pattern characterized by round polycyclic papillae with hyperreflective basal layer honeycomb pattern of the epidermis and no atypical cells.

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RCM increased non-invasive diagnostic accuracy. Cinotti et al.[4] first described RCM features in vulvar melanoma and melanosis.[4] Melanosis presented the epithelium-chorion papillae rimmed by small and monomorphous hyperreflective cells with a roundish shape (ringed pattern) or an elongated shape (draped pattern). These patterns indicate the benign hyperpigmentation of basal keratinocytes of the mucosa.[4] Non-homogeneously distributed papillae and architectural disarrangement, numerous hyperreflective dendritic cells around and between the papillae, presence of pagetoid intraepithelial bright cells, and proliferation of atypical cells in the chorion were clues to the presence of malignancy.[4] In a review of 56 mucosal pigmented macules, Debarbieux et al.[5] reported other melanosis' features, such as the presence of sparse dendritic cells in the basal layer. In this work, we reported a case in which the diagnosis was challenging based on the clinical and dermoscopic presentation but clear at the RCM examination. To conclude, even if this technology is expensive and not available in most centers, in doubtful cases, patients should be referred to selected clinics to provide an innovative approach for cost-effective patient management.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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DATA AVAILABILITY STATEMENT

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

ETHICS STATEMENT

The patient in this manuscript and his parents have given written informed consent to publication of their case details.

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