

Benefits and Pitfalls of Using in Vivo Reflectance Confocal Microscopy in Lentigo Maligna Diagnostics: Case Reports

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Introduction

The differential diagnosis between lentigo maligna (LM) and pigmented facial lesions (PFL) might be challenging clinically and dermoscopically, especially in its early phases, because early melanoma may exhibit only subtle malignancy clues and may have overlapping features with PFL [1,2]. Therefore, new diagnostic tools such as Reflectance confocal microscopy (RCM) to improve early detection of LM in its initial growth phases are crucial. Herein reported two cases of LM and two different approaches of using RCM.

Case Presentation

A 47-year-old man presented at our department for laser treatment of some facial brownish macules. During

routine examination using a dermatoscope a macule on the tip of the nose was noted (Figure 1A). Dermoscopically a structureless brownish color pigmentation and irregular grayish pigmentation around some follicles were present (Figure 1B). Due to the doubtful appearance in dermoscopy RCM examination was performed revealing the presence of several atypical melanocytes located mainly around hair follicles (Figure 1C). Based on confocal features, a total surgical excision was performed and a final diagnosis of LM was confirmed (Figure 1D). The patient refused the re-excision, and adjuvant therapy with Imiquimod 5% cream once daily for 6 weeks was started. After 2 years of follow up, no melanoma recurrence signs were noted.

A 61-year-old woman presented at our clinic for evaluation of a pigmented macule on the left cheek (Figure 2A). The patient had no previous history of melanoma. Both

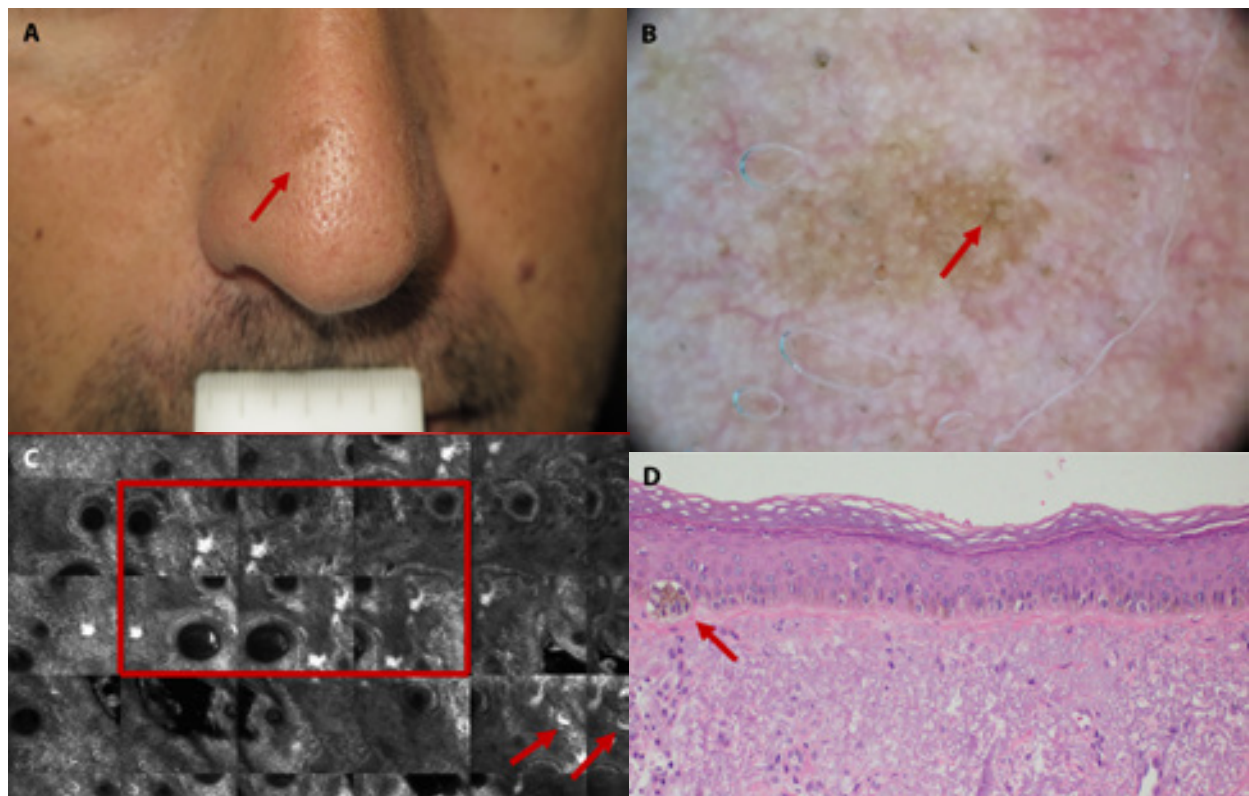


Figure 1. (A) Clinical appearance of a small brownish macule measuring 5 mm in diameter on the distal part of the nose (red arrow). (B) Dermoscopy showing light grey color around few hair follicles (red arrow). (C) RCM mosaic at level of the epidermis, showing infiltration of atypical melanocytes around adnexal structures (red square); pagetoid/dendritic melanocytes located mainly around hair follicles (red arrows). (D) Histopathology: a lentiginous intraepidermal melanocytic proliferation in the context a skin with severe actinic damage. A junctional nest is shown on the left (red arrow) (H&E, ×200).

clinically and dermoscopically (Figure 2B) the lesion looked suspicious. Under RCM examination atypical dendritic cells were visible at the level of the epidermis, they were not located around follicles nor infiltrating them. Melanocytic nests forming cords were visible at the level of the dermal-epidermal junction, with no obvious melanoma features (Figure 2C). However, due to the suspicious dermoscopic aspect, the lesion was excised and a final diagnosis of LM was confirmed by histology (Figure 2D). The patient is recurrence free after 2 years follow up.

Conclusions

In the first case presented, the lesion did not show any specific features for melanoma. On dermoscopy the only subtle suspicious clue was the presence of greyish color around some follicles. This clue shows high sensitivity to malignancy (85, 1%), but quite low specificity (39, 7%) [1]. RCM helped

us reveal characteristics suggestive of the melanocytic nature of the lesion.

In the second case the lesion both clinically and dermoscopically looked suspicious, however RCM findings were subtle. Indeed, on RCM, the lesion had regular epidermal architecture, which is noteworthy and in the early radial growth phase of melanoma, follicles were well defined without folliculotropism and widespread dendrites. In this case the confidence level of the dermatologist in making diagnosis of LM was higher with the dermatoscope. Therefore, this second case supported that clinical and dermoscopic criteria are extremely important for LM diagnosis.

In conclusion, LM diagnosis still remains challenging. A combined clinical/dermoscopic/confocal approach should be used for the management of PFL in order to provide a more conclusive pre-histological diagnosis leading clinicians to a correct management.

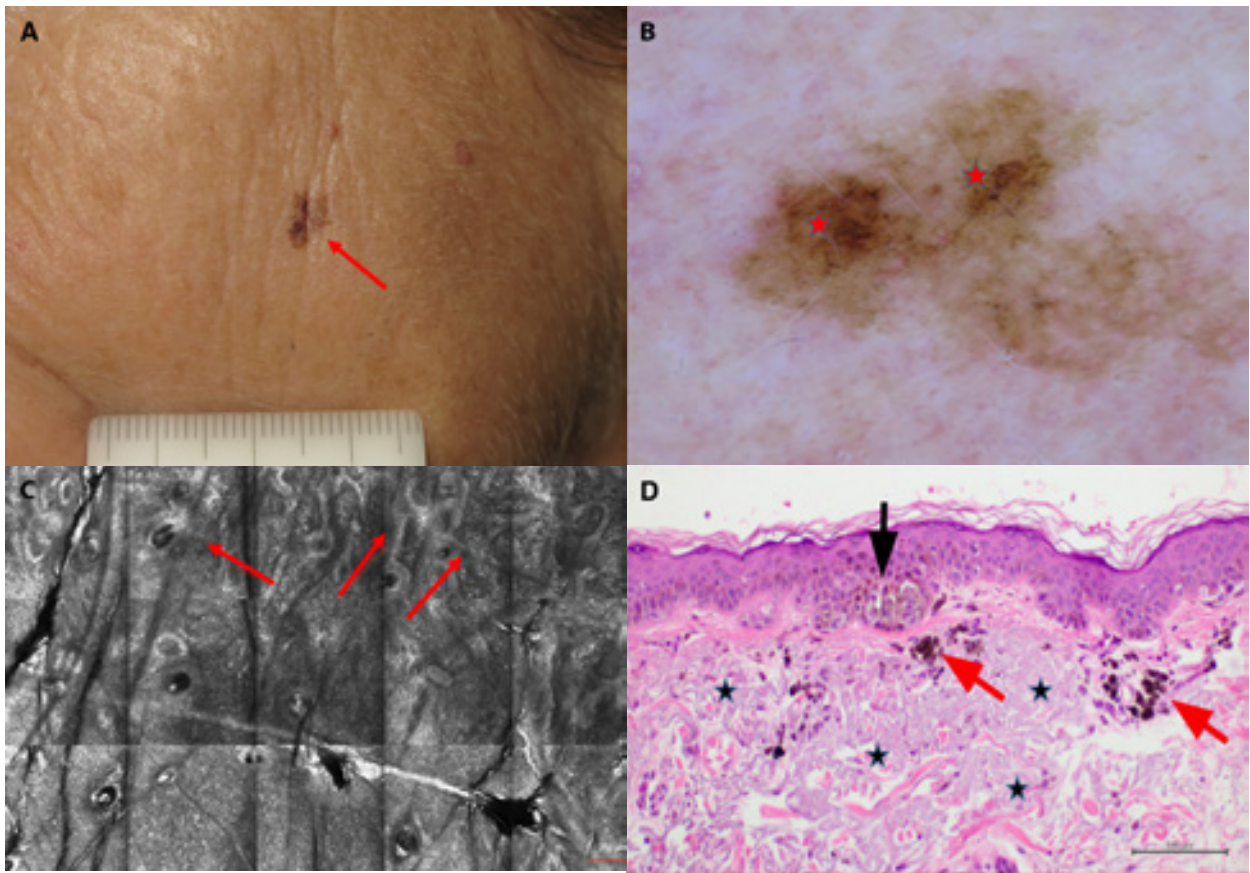


Figure 2. (A) Pigmented macule located on the left cheek (5 × 7 mm) with irregular borders and variegated color (red arrow). (B) Dermoscopy showing an asymmetric pigmented macule with atypical infiltration of interspaces and adnexal structures (red stars). (C) RCM mosaic (1.5 × 2.5 mm) at the level of the DEJ showing junctional nesting (red arrows) without colonization of atypical cells around hair follicles. (D) Histopathology: the sublesional dermis shows marked solar elastosis and increased melanophages (black arrow: melanocytic nest; red arrows: melanophages; black stars: solar elastosis) (H&E, ×200).