

Prominent Skin Markings on the Dermoscopic Evaluation of Melanocytic Lesions: The Importance of Context

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Introduction

Prominent skin markings (PSM) have been proposed as a new dermoscopic sign for melanoma [1]. However, this sign is controversial [2] since PSM are also found in photodamaged skin [3]. Our aim was to present two cases of patients presenting melanocytic lesions with PSM, with either benign or malignant results, and highlight the importance of the context when evaluating pigmented lesions.

Case Presentation

The first case is a Caucasian 45-year-old female with a family history of melanoma (sister) who attended our dermatology clinic for full body examination. On physical examination, she had Fitzpatrick phototype III and presented

with >100 pigmented lesions, many of which located on her legs. The dermoscopy of these lesions showed brown macules with a pigmented network with prominent skin markings (Figure 1A, 1B). Comparing the digital dermoscopy images present in the system, we did not identify any significant changes in these lesions for the last years, and routine yearly follow-up was proposed due to the family history of melanoma.

The second case is a Caucasian 51-year-old female, also with a family history of melanoma (mother), who was in follow-up due to multiple (>100) melanocytic nevi. The predominant dermoscopic pattern was brownish regular pigmented network, and no PSM were observed. After 10 years of follow-up, a slight growth was detected in one of the nevi located on the right ankle as well as the development of PSM (Figure 2). Excisional biopsy was performed with the result of melanoma in situ.

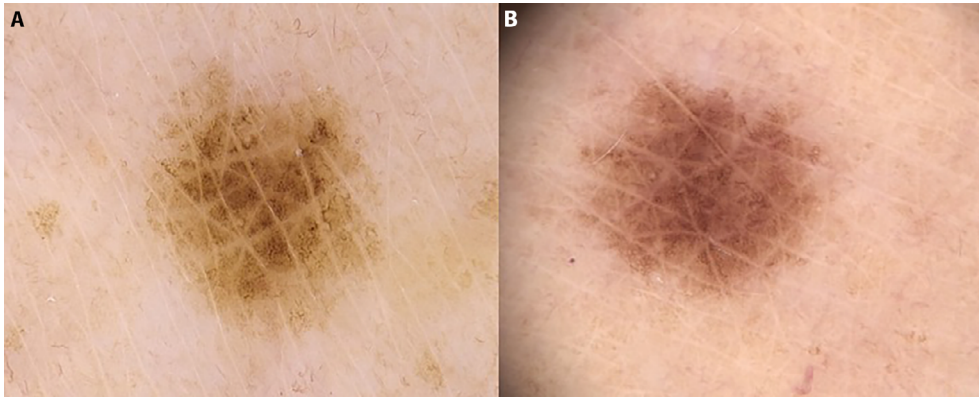


Figure 1. Digital dermoscopy images of several nevi located in the lower limbs of patient 1. Note that pigmented network and prominent skin markings is the predominant pattern; however, the lesion were stable after years of follow-up.



Figure 2. Digital dermoscopy image of a melanoma in situ located in the ankle of patient 2 showing prominent skin markings. Besides these dermoscopic findings, note that the lesion was new and was growing, thus suggesting malignancy.

Discussion

PSM has been described as a dermoscopic indicator of melanoma, as seen in patient 2. However, this feature cannot be interpreted alone, since we also know that PSM can occur in lentiginos [2], and we have also shown they can occur in melanocytic nevi on the legs (case 1). It has been hypothesized that PSM occur due to an alteration in rete ridges with areas showing fewer melanocytes [4]. Hence, morphology, particularly in the case of PSM, needs to be assessed in the adequate context. Besides analytical evaluation, it is crucial to compare each lesion clinically and dermoscopically (comparative recognition) to assess whether a lesion is new or not (history) and whether it is an outlier (differential recognition) [5], and also to ask the patient's opinion, since gestalt and gut feeling of the patient and the physician have been described to have a very high positive predictive value for malignancy [6].

Conclusion

With the cases we have presented, we want to highlight the complexity in diagnosing melanoma, since pure morphology alone is sometimes not enough to render a correct diagnosis, and all available information is crucial to decide whether a lesion needs to be excised or not.

References

1. Lallas A, Longo C, Manfredini M, et al. Accuracy of Dermoscopic Criteria for the Diagnosis of Melanoma In Situ. *JAMA Dermatol.* 2018;154(4):414-419. doi:10.1001/JAMADERMATOL.2017.6447
2. Rishpon A, Marchetti M, Marghoob A. Wide skin markings pattern: melanoma descriptor or patient-related factor? *Br J Dermatol.* 2018;178(5):1224-1225. doi:10.1111/BJD.16420
3. Korn V, Surber C, Imanidis G. Skin Surface Topography and Texture Analysis of Sun-Exposed Body Sites in View of Sunscreen Application. *Skin Pharmacol Physiol.* 2016;29(6):291-299. doi:10.1159/000450760
4. Bassoli S, Kyrgidis A, Ciardo S, et al. Uncovering the diagnostic dermoscopic features of flat melanomas located on the lower limbs. *Br J Dermatol.* 2018;178(3):e217-e218. doi:10.1111/BJD.16030
5. Gaudy-Marqueste C, Wazaefi Y, Bruneu Y, et al. Ugly Duckling Sign as a Major Factor of Efficiency in Melanoma Detection. *JAMA Dermatol.* 2017;153(4):279-284. doi:10.1001/JAMADERMATOL.2016.5500
6. Marghoob AA, Scope A. The complexity of diagnosing melanoma. *J Invest Dermatol.* 2009;129(1):11-13. doi:10.1038/JID.2008.388