

PRACTICAL DERMOSCOPY

[Translated article] Rainbow Pattern: Key Potential or Distraction in the Diagnostic Dermoscopy

Patrón arcoíris: potencial clave o distractor en el diagnóstico dermatoscópico

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Case report

A 45-year-old man, with no relevant past medical history consulted for an asymptomatic lesion on his back of indeterminate history, which he noticed 1 month earlier due to occasional bleeding (Fig. 1).

The physical examination confirmed the presence of a 1 cm in diameter pink, well-demarcated, friable, and partially eroded tumor nodule located in the left scapular area (Fig. 2).



Figure 1 Physical examination and lesion location.



Figure 2 Patient's lesion. A 1 cm diameter pink, well-demarcated, friable, and partially eroded papule located on the left scapula.

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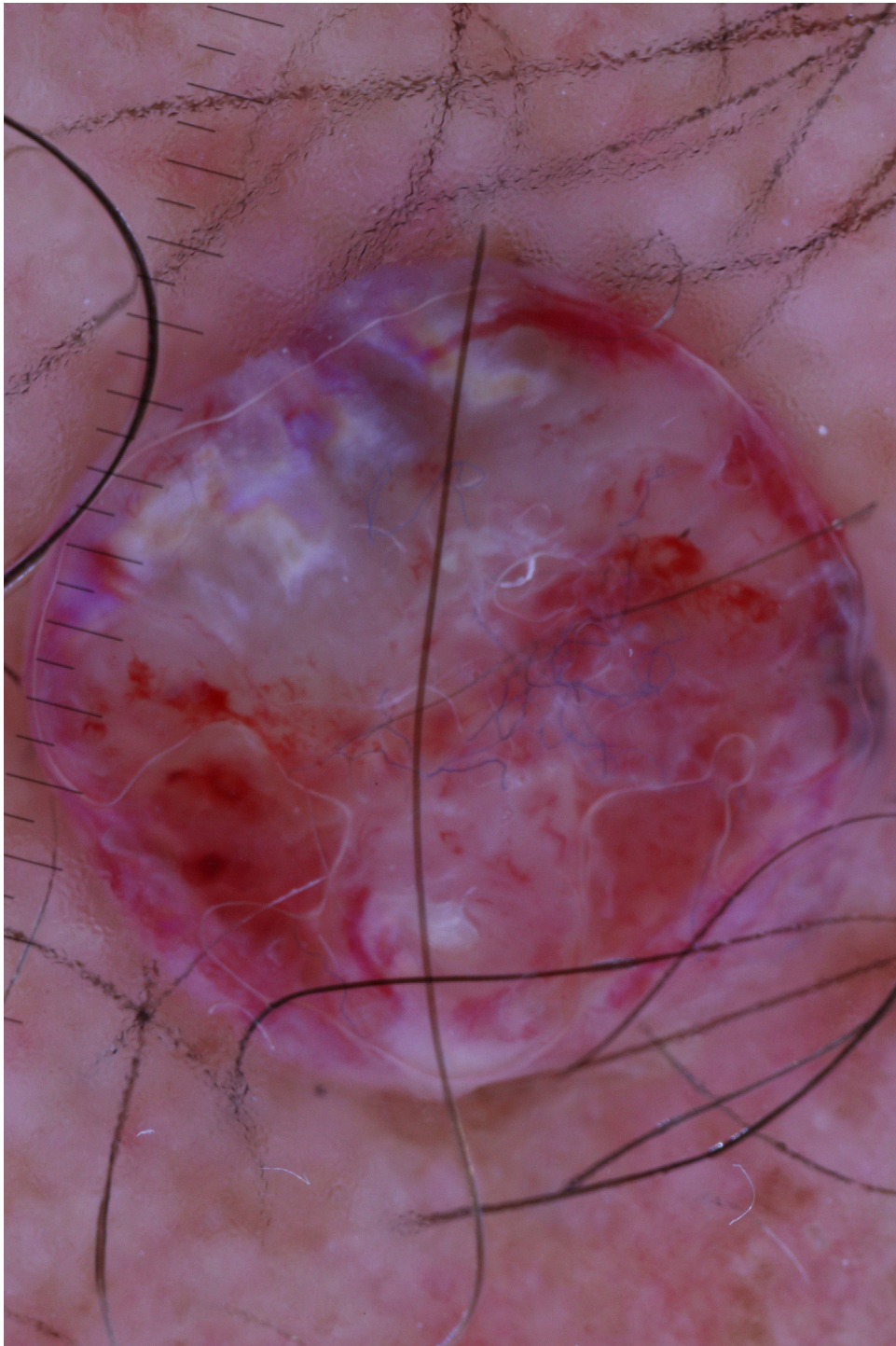


Figure 3 Dermoscopy. A rainbow pattern can be seen in the upper region, red-white areas, hemorrhagic zones in the central part, and small areas of bluish-gray ovoid nests on the right lateral margin.

17 What is your diagnosis?

Commentary

The dermoscopic image of the lesion revealed a rainbow pattern in the upper region, red-white areas and hemorrhagic zones in the central part, and small areas formed by bluish-gray ovoid nests on the right lateral margin (Fig. 3).

Given the lesion progression timeframe and dermoscopic findings, the following diagnoses were considered: amelanotic melanoma, Merkel cell tumor, atypical fibroxanthoma, pyogenic granuloma, squamous cell carcinoma, or basal cell carcinoma (BCC).

Histopathological analysis of the sample provided a definitive diagnosis of macronodular basal cell carcinoma (BCC).

The rainbow pattern was initially described in Kaposi's sarcoma lesions.¹ Subsequently, it has also been noted in other tumors such as atypical fibroxanthoma, pseudolymphoma, hemosiderotic dermatofibroma, blue nevus, and BCC.² This pattern likely results from a phenomenon related to luminescence and the interaction of light with the superficial and/or deep structural components of a lesion. Each polarization state undergoes variable absorption and refraction delay, resulting in a unique combination of colors for each lesion. However, further studies are still needed to understand the underlying optics of this phenomenon and evaluate its potential diagnostic relevance.³

In the case of BCC, a study on the dermoscopic variability of BCC based on clinical type and tumor location found the rainbow pattern in 5% of the 501 BCCs analyzed, mostly associated with nodular BCC.⁴ Additionally, an Indian cohort that analyzed the relationship between dermoscopic patterns and the clinical or histopathological subtype of BCC in patients with phototypes IV–VI, this pattern was

reported in a higher percentage – up to 24% of the 143 BCCs analyzed, with an increased frequency of 34% in the nodular BCC subgroup.⁵

Although its prognostic value is still uncertain, a recent study indicated that this pattern was a dermoscopic sign found exclusively in tumors unresponsive to imiquimod.⁶

Conflicts of interest

None declared.

References

1. Cheng ST, Ke CLK, Lee CH, Wu CS, Chen GS, Hu SCS. Rainbow pattern in Kaposi's sarcoma under polarized dermoscopy: a dermoscopic pathological study. *Br J Dermatol.* 2009;160:801–9.
2. Draghici C, Vajaitu C, Solomon I, Voiculescu VM, Popa MI, Lupu M. The dermoscopic rainbow pattern – a review of the literature. *Acta Dermatovenerol Croat.* 2019;27:111–5.
3. Vázquez-López F, García-García B, Rajadhyaksha M, Marghoob AA. Dermoscopic rainbow pattern in non-Kaposi sarcoma lesions. *Br J Dermatol.* 2009;161:474–5.
4. Suppa M, Micantonio T, di Stefani A, Soyer HP, Chimenti S, Fagnoli MC, et al. Dermoscopic variability of basal cell carcinoma according to clinical type and anatomic location. *J Eur Acad Dermatol Venereol.* 2015;29:1732–41.
5. Vinay K, Ankad BS, Narayan RV, Chatterjee D, Bhat YJ, Neema S, et al. A multicentric study on dermoscopic patterns and clinical–dermoscopic–histological correlates of basal cell carcinoma in Indian skin. *Clin Exp Dermatol.* 2022;47:1982–90.
6. Aróstegui Aguilar J, Hervella Garcés M, Yanguas Bayona JI, Azcona Rodríguez M, Martínez de Espronceda Ezquerro I, Sarriguarte Aldecoa-Otalora J. Dermoscopic signs as predictors of non-response to imiquimod treatment in superficial basal cell carcinoma. *An Sist Sanit Navar.* 2019;42:303–7.