

CASES FOR DIAGNOSIS

Unusual Vascular Pattern of a Nodular Lesion in the Dermoscopic Examination of a Kidney Transplant Recipient

M. Feito-Rodríguez,^a M. J. González-Beato,^b and Á. Pizarro^a

^aServicio de Dermatología and ^bServicio de Anatomía Patológica, Hospital Universitario La Paz, Madrid, Spain

Medical History

A 32-year-old man who had received a kidney transplant and was undergoing immunosuppressant treatment with prednisone, cyclosporin, and mofetil mycophenolate presented with a lesion on the scalp that had developed over 4 weeks and grown rapidly.

Physical Examination

The patient had a roseate nodular lesion on the vertex of the scalp. The lesion was 12 mm in diameter with a smooth surface and well-defined edges, and was slightly indurated to the touch (Figure 1). There were no other relevant findings.

Additional Tests

Dermoscopy showed an eccentric erosion and considerable diffuse erythema that receded almost completely under pressure, together with multiple vascular bundles or vessels with a glomerular appearance, mainly located on the periphery of the tumor, and some forked vessels (Figure 2). Dermoscopy revealed no other relevant structures.

Histopathology

The lesion was excised and histology showed nests of basaloid cells that extended from the epidermis to the reticular dermis, with peripheral palisading cells and fissures around the tumor aggregates caused by the retraction of the adjacent stroma (Figure 3). Immunostaining for CD31

and CD34 (endothelial markers) revealed many elongated, small-caliber vascular lumens on the periphery of the tumor; this finding correlated with dermoscopy findings.

What is your diagnosis?



Figure 1.



Figure 2.

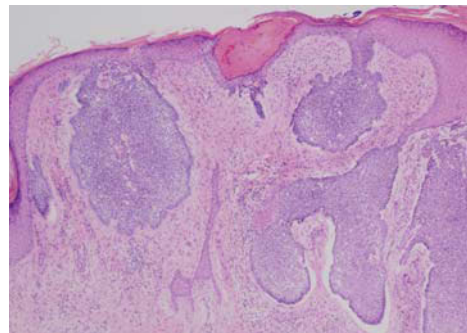


Figure 3.
Hematoxylin–
eosin, ×20.

Correspondence:
Marta Feito Rodríguez
Servicio de Dermatología
Hospital Universitario La Paz
Paseo de la Castellana, 261
28046 Madrid, Spain
marta8marta@hotmail.com

Diagnosis

Nodular basal cell carcinoma

Treatment and Course

After complete excision of the lesion, the patient continued to be monitored and no signs of recurrence or other lesions were observed either on the scalp or in other locations.

Comment

Recipients of organ transplants have a higher risk of developing various malignant tumors, of which nonmelanoma skin cancer is the most frequent.¹ The incidence of basal cell carcinoma in these patients has been reported as being 10 times higher than in the general population.² A retrospective study by Harwood et al³ found that basal cell carcinomas in kidney transplant patients occurred at an earlier age, were often multiple, and, histologically, were nodular and multicentric superficial subtypes. Interestingly, the course of the tumor was no more aggressive than in immunocompetent patients.

In our patient, the short time since onset and the rapid growth of the lesion made several initial diagnoses possible, including cutaneous B-cell lymphoma, cutaneous metastasis, and amelanotic melanoma. Dermoscopy revealed an unusual vascular pattern characterized by multiple bundles or glomerular structures formed by very thin vessels, mainly in the periphery of the tumor—structures previously described in Bowen disease.⁴ This disease was ruled out in our patient due to the clinical appearance of the tumor. We also observed some eccentric erosive foci on the surface; this is a common finding in basal cell carcinoma and it altered the focus of the initial suspected clinical diagnosis.

The most common vascular structures in dermoscopic examination of basal cell carcinoma are arborizing telangiectases⁵; these structures were absent in our patient. Forked vessels (some were visible in our patient), very thick nonbranching telangiectases, and vascular spots may also

be occasionally observed.⁵ Fine, short telangiectases with very little branching are also common in superficial basal cell carcinoma. We found no references to vascular bundles in basal cell carcinoma and their presence in this lesion did not aid specific diagnosis. An immediate histologic study was therefore necessary to establish the nature of the lesion. However, this unusual vascular pattern was not characteristic of the other entities in the differential diagnosis, whereas the surface erosion in the dermoscopic study did indicate the possibility of nonpigmented basal cell carcinoma.

We believe that the mechanism that caused this vascular pattern—unusual in basal cell carcinoma—in our patient probably involved the rapid growth of the tumor: sufficient time was not given for the formation of arborizing telangiectases of greater thickness and extension, which are so characteristic of the dermoscopy findings in this type of tumor. Immunosuppression may have favored the observed clinical course and, indirectly, the unusual dermoscopy findings.

Conflicts of Interest

The authors declare no conflicts of interest.

References

1. Jensen P, Hansen S, Moller B, Leivestad T, Pfeffer P, Geiran O, et al. Skin cancer in kidney and heart transplant recipients and different long-term immunosuppressive therapy regimens. *J Am Acad Dermatol.* 1999;40:177-86.
2. Euvrard S, Kanitakis J, Claudy A. Skin cancers after organ transplantation. *N Engl J Med.* 2003;345:1681-91.
3. Harwood CA, Proby CM, McGregor JM, Sheaff MT, Leigh IM, Cerio R. Clinicopathologic features of skin cancer in organ transplant recipients: a retrospective case-control series. *J Am Acad Dermatol.* 2006;54:290-300.
4. Argenziano G, Zalaudek I, Corona R, Sera F, Cicale L, Petrillo G, et al. Vascular structures in skin tumors: a dermoscopy study. *Arch Dermatol.* 2004;140:1485-9.
5. Menzies SW, Westerhoff K, Rabinovitz H, Kopf AW, McCarthy WH, Katz B. Surface microscopy of pigmented basal cell carcinoma. *Arch Dermatol.* 2000;136:1012-6.
6. Giacomel J, Zalaudek I. Dermoscopy of superficial basal cell carcinoma. *Dermatol Surg.* 2005;31:1710-3.