

decreasing from 28 to almost 0 (Fig. 2, A and B). Upon discharge, daily sun exposure was recommended.

This is the second reported case of DGA treated with NB-UVB. The only other report in the literature describes a patient who underwent 24 weekly sessions, and received an accumulated dose of 15 J/cm<sup>2</sup>.<sup>1</sup> While that patient's lesions began to improve in the third week, their near total disappearance occurred only after treatment had ended, with no recurrences during 6 months of follow up. In our case, which involved a larger affected body surface area, a higher accumulated dose, and a shorter interval between sessions, the patient remains free of lesions after 1 year of follow up.

A lack of evidence-based treatment guidelines makes DGA treatment challenging for the dermatologist. Around 30 different treatments have been described, mostly in isolated cases or small series, and all with varying results. Among the most commonly used treatments are topical, oral, intralesional, and intramuscular corticosteroids, biological agents, surgery, laser treatment, and phototherapy.<sup>2</sup> Good results have been described with PUVA, retinoid PUVA, and UVA1.<sup>3-5</sup>

In addition to being difficult to treat, recurrences are common in DGA. A retrospective study of 33 patients treated with PUVA found that while 66% showed improvements, most patients experienced recurrences within the first 2 years.<sup>4</sup> Although several treatment sessions are required for resolution, itching, if present, is relieved early on.

NB-UVB phototherapy, with an emission spectrum of 311-313 nm, has been used for many years to treat psoriasis, and poses a lower risk of erythema and carcinogenicity than broadband UVB. Furthermore, it is well known that NB-UVB exerts a greater suppressive effect on lymphoproliferation and cytokine production than broadband UVB.<sup>6</sup> NB-UVB has been shown to be safe and efficacious in the treatment of a growing number of dermatological diseases, even in pediatric populations.<sup>7</sup>

Several variables should be considered when selecting systemic treatment for DGA, including the patient's baseline blood evaluations, comorbidities, interactions with other drugs, potential adverse effects, and prior treatments.<sup>2</sup>

Despite having found only one similar case reported in the literature,<sup>1</sup> we believe that in cases like the present one, in which PUVA was contraindicated, treatment with NB-UVB phototherapy is worth attempting.

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## A Tumor in Images: Anetodermic Pilomatixoma<sup>☆</sup>



### Un tumor en imágenes: pilomatixoma anetodérmico

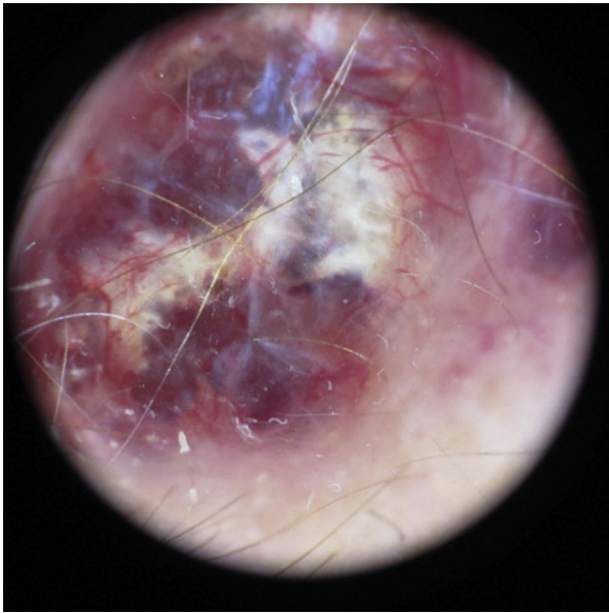
*To the Editor:*

Pilomatixoma or pilomatricoma is a relatively common benign cutaneous tumor that is derived from immature cells in the matrix of the hair follicle. It presents clinically as a slow-growing solid nodular lesion. There are 2 peaks in its incidence, the first during the first 20 years of life and the



**Figure 1** Clinical image showing a multicolor excrement tumor measuring 15 mm across, with a well-defined border in the right frontoparietal region.

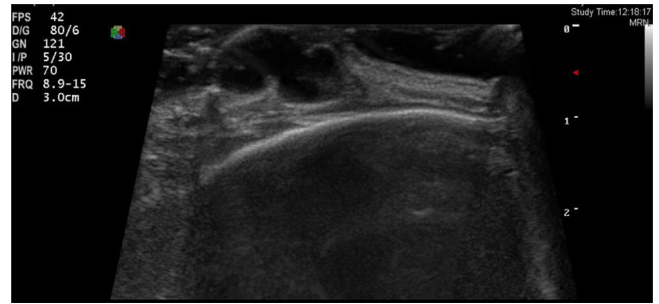
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**Figure 2** Dermatoscopic image showing a lesion with homogeneous red areas, irregular white-yellow structures, areas covered with a blue-white veil, irregular linear vessels on the periphery, and some chrysalides.

second smaller peak in individuals aged 50 to 60 years. In biopsy, the anetodermic or lymphangiectatic variant shows a decrease in collagen and elastic fibers as well as dilated lymphatic vessels in the superficial dermis. Clinically, these findings are manifest as hard palpable nodules within elastic sacs or as pseudobullous lesions.

A 61-year-old woman, whose only relevant condition in her medical history was an operation for breast fibroadenoma, attended the clinic for a mildly painful, rapidly growing lesion in the right frontoparietal region, next to the hairline. The lesion had appeared 1 month earlier, a few days after trauma to the region. Physical exploration showed an exophytic lesion measuring 15 mm across. This lesion was well defined and soft to the touch, of reddish and violaceous color with white-yellow patches (Figure 1). The dermatoscopic image showed a lesion with homogeneous red areas, irregular white-

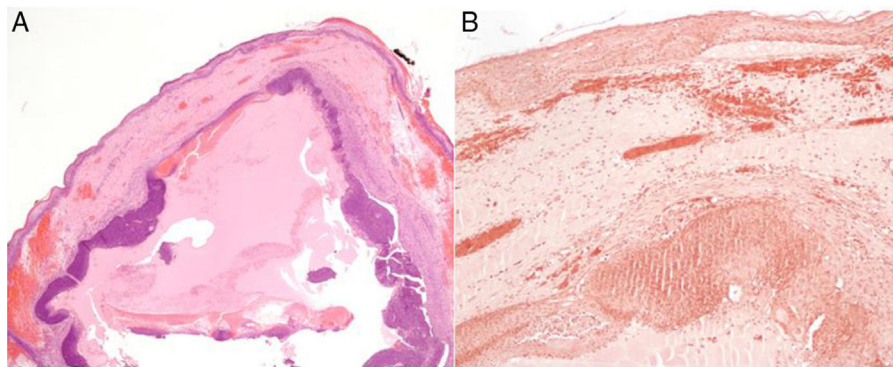


**Figure 3** Skin ultrasound with a hypoechoic, lobulated lesion in the superficial dermis, with discrete posterior reinforcement.

yellow structures, areas covered with a blue-white veil, irregular linear vessels, and some chrysalides (Figure 2). Skin ultrasound showed a hypoechoic, lobulated lesion in the superficial dermis, with discrete posterior reinforcement and increased perilesional vascularization (Figure 3). The lesion was completely excised under local anesthetic and sent for histopathological analysis, which confirmed the suspected diagnosis of anetodermic pilomatrixoma (Figure 4).

Anetodermic pilomatrixoma is an uncommon variant of a relatively common and well-known tumor. Its etiology is not clear, but recent studies postulate that mechanical trauma could play an essential role in its development by compromising the dermal integrity and altering the vascular microenvironment.<sup>1</sup> Some authors have suggested that the trigger could be an increase in the number or activity of mast cells, which would favor elastolysis and increase epidermal proliferation of the lesion through the activation of certain cytokines.<sup>2</sup> This would also explain why some of these tumors exhibit hyperpigmentation in the basal layer due to the capacity of mast cells to activate melanocyte proliferation through certain mediators.

Clinically, anetodermic pilomatrixoma presents as an excrescent tumor with a predilection for the skin of the arms and shoulders, with normal skin coloration, a hyperpigmented appearance, or a vascular appearance.<sup>3</sup> The lesions are soft on palpation and can be depressed at the center when vertical pressure is applied.



**Figure 4** Histological image. Hematoxylin-eosin  $\times 20$ . A well-delimited pilomatrixoma can be seen beneath an edematous dermis with substantial blood extravasation (A) and complete absence of elastic fibers in staining with orcein ( $\times 100$ , B).

If we compare the dermatoscopic characteristics of our lesion with those reported for nonanetodermic pilomatricomas in the study by Zaballos et al.,<sup>4</sup> we find that irregular white structures, homogeneous red areas, and irregular linear vessels are common features. The dilated vessels and hemorrhages observed in pathology may correspond to the linear vessels and homogeneous reddish areas present in the dermatoscopic image.

The ultrasound image of conventional pilomatricoma shows a lesion with a hypoechoic halo and a central hyperechoic region (corresponding to calcification) that generates the posterior shadow.<sup>5</sup> In 1999, Hughes et al.<sup>6</sup> published a retrospective preoperative ultrasound study of 28 suspected conventional pilomatricomas. In 20 of these, the ultrasound findings supported the suspected clinical diagnosis and in 16 of these 20 lesions, histological study confirmed diagnosis of pilomatricoma. In the literature that we reviewed, we could not find a description of skin ultrasound of anetodermic pilomatricoma.

Differential diagnosis should include basal cell carcinoma (BCC) and melanoma,<sup>4</sup> and in both cases, the dermatoscopic and ultrasound studies can help in the preoperative diagnosis. From the ultrasound point of view, BCC and melanoma are also considered hypoechoic lesions. The characteristics that can help differentiate these lesions from pilomatricoma are the presence of small hyperechoic nodules in the lesion characteristic of BCC and an irregular border with abundant vascularization within the tumor in characteristic melanoma lesions.<sup>7,8</sup>

In conclusion, we present the clinical description and the first dermatoscopic and ultrasound findings for anetodermic pilomatricoma.

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## Morphea Following Radiation Therapy in a Patient With Breast Cancer<sup>☆</sup>



### Morfea tras radioterapia en paciente con cáncer de mama

Postirradiation morphea is a rare complication that may develop in areas treated for cancer with radiation therapy, usually in breast cancer patients. We present the case of a patient with carcinoma of the breast treated with surgery and radiation therapy who developed postirradiation morphea 1 year later.

The patient was a 56-year-old woman who had been diagnosed with infiltrating ductal carcinoma of the left breast and treated with lumpectomy. Sentinel node biopsy results were negative. The patient had received adjuvant treatment consisting of chemotherapy, letrozole endocrine therapy, and external beam radiation therapy applied to the

mammary gland using 6- and 18-MeV photons at a dose of 50 Gy followed by boost irradiation of the tumor bed at a dose of 66 Gy. Treatment was well tolerated. One year after completion of radiation therapy, there was a sudden onset of painful induration of the left breast, which also decreased in size. Physical examination revealed asymmetry of the two breasts and a well-demarcated woody plaque with an erythematous border in the irradiated area (Fig. 1). Biopsy showed slight atrophy of the epidermis, hyperpigmentation of the basal layer, thickening of dermal collagen, loss of adnexal structures, and a discrete perivascular and interstitial lymphoplasmacytic inflammatory infiltrate that was both deep and superficial, with few interstitial eosinophils in the deep dermis (Fig. 2). Immune status was normal and serological testing for *Borrelia* was negative. Magnetic resonance imaging and mammography showed no abnormalities of the mammary gland. After treatment with oral prednisone at a dose of 0.5 mg/kg/d tapered over 2 months and topical treatment with clobetasol, the patient's pain disappeared, induration and erythema decreased, and occasional vesicles developed. One year later the patient remained stable without tumor recurrence.

Radiation dermatitis, both acute and chronic, is a frequent reaction to treatment, whereas postirradiation morphea is a much rarer occurrence. The first cases of

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