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Dermoscopy of Necrobiosis Lipoidica[☆]

Dermatoscopia de la necrobiosis lipoídica

To the Editor:

Necrobiosis lipoidica (NL) is an uncommon degenerative disorder of unknown etiology that affects connective tissue. Although very often associated with diabetes mellitus, NL does occur in nondiabetic patients.^{1,2}

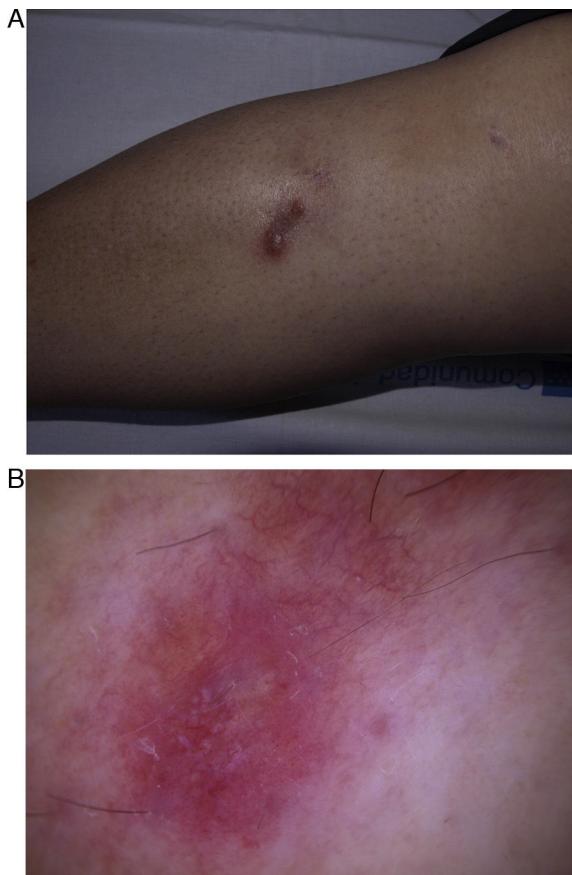


Figure 1 A, Well-defined, erythematous-violaceous plaque 2 cm in diameter on the right pretibial region. B, Comma-shaped vessels, whitish structures on a pink background, brownish-orange patches, and a fine network of vessels in the upper part of the dermoscopic image. C, Histology reveals alternating layers of palisading granuloma and degenerated collagen in the dermis together with an intense perivascular inflammatory infiltrate (hematoxylin-eosin $\times 100$).

The diagnosis of NL has traditionally been based on clinical presentation and histologic findings, which are distinctive in many cases. However, atypical presentations and variations in the appearance of the lesions as they evolve can make diagnosis difficult.^{1,2} We report the cases of 3 patients with NL lesions at different stages with a view to establishing a correlation between dermoscopic and histologic findings.

Patient 1 was a 65-year-old woman with no past history of interest who presented an asymptomatic erythematous-

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violaceous plaque on her right leg that had appeared 2 months earlier (Fig. 1A). Dermoscopy revealed comma-shaped vessels, whitish structures on a pink background, orange-brown areas, and a fine network of vessels in the upper part of the dermoscopic image (Fig. 1B). Biopsy results were consistent with a diagnosis of NL (Fig. 1C).

Patient 2 was a 38-year-old woman who presented 2 erythematous plaques on the left pretibial region; the larger lesion had appeared 1 year earlier and the smaller lesion 1 month before the consultation (Fig. 2A). Dermoscopically, both lesions were characterized by a fine network of abundant vessels on a pink background and homogeneous orange-yellow areas (Fig. 2, B and C). A biopsy of the larger lesion revealed the layered pattern of palisaded granuloma and necrobiosis typical of NL.

Patient 3 was a 61-year-old woman who presented numerous atrophic plaques with onset more than 15 years earlier (Fig. 3A). Dermoscopy revealed irregular arborizing vessels on a light-brown background, whitish areas, and a patchy pigmented reticulum (Fig. 3B). The findings of histology were consistent with a diagnosis of NL (Fig. 3C).

NL is a granulomatous disease with a characteristic clinical presentation and histologic features. However, the clinical expression may vary depending on the stage and site of the lesions. The initial clinical presentation consists of a well-defined reddish papule that extends peripherally to become an atrophic yellow-brown plaque with a raised erythematous border and telangiectasias. The site most often affected is the pretibial region, but NL can also develop on the trunk or upper limbs, or in atypical sites.^{1,2}

The characteristic histologic finding is alternating horizontal layers of palisading granuloma and degenerated collagen affecting the full thickness of the dermis.³ The inflammatory infiltrate varies depending on the stage of development of the lesion. Initially, neutrophil infiltration is characteristic, but this diminishes when the plaques become atrophic to leave only small granulomas with multinucleated cells interspersed through the degenerated collagen.²

The differential diagnosis should include diabetic dermopathy, stasis dermatitis, erythema nodosum, and tuberculoid leprosy, among others. However, in the early stages, NL can also resemble sarcoid lesions. For example, it may present superficial annular lesions similar to those of granuloma annulare. NL lesions with marked fatty infiltration can mimic xanthomas.¹

Dermoscopy can be very useful in the diagnosis of early-stage lesions and lesions located in atypical sites.^{4,5} There are very few descriptions of the dermoscopic features of NL in the literature. Vazquez-Lopez et al.,⁶ who assessed the vascular features of several nonneoplastic skin diseases dermoscopically, reported that the presence of linear vessels was the only common feature in 6 cases of NL. On the basis of 2 cases studied in the early stages, Bakos et al.⁵ proposed the presence of arborizing telangiectasias, hairpin vessels, and a yellowish background as features suggestive of NL, and suggested that these findings corresponded to the vascular plexus of the reticular dermis, papillary vessels, and necrobiosis, respectively. In our descriptive study, we present 3 cases with lesions in different stages of development ranging from months to years. Under dermoscopy, incipient lesions displayed comma-shaped vessels, more developed lesions revealed a fine network of vessels, and advanced lesions

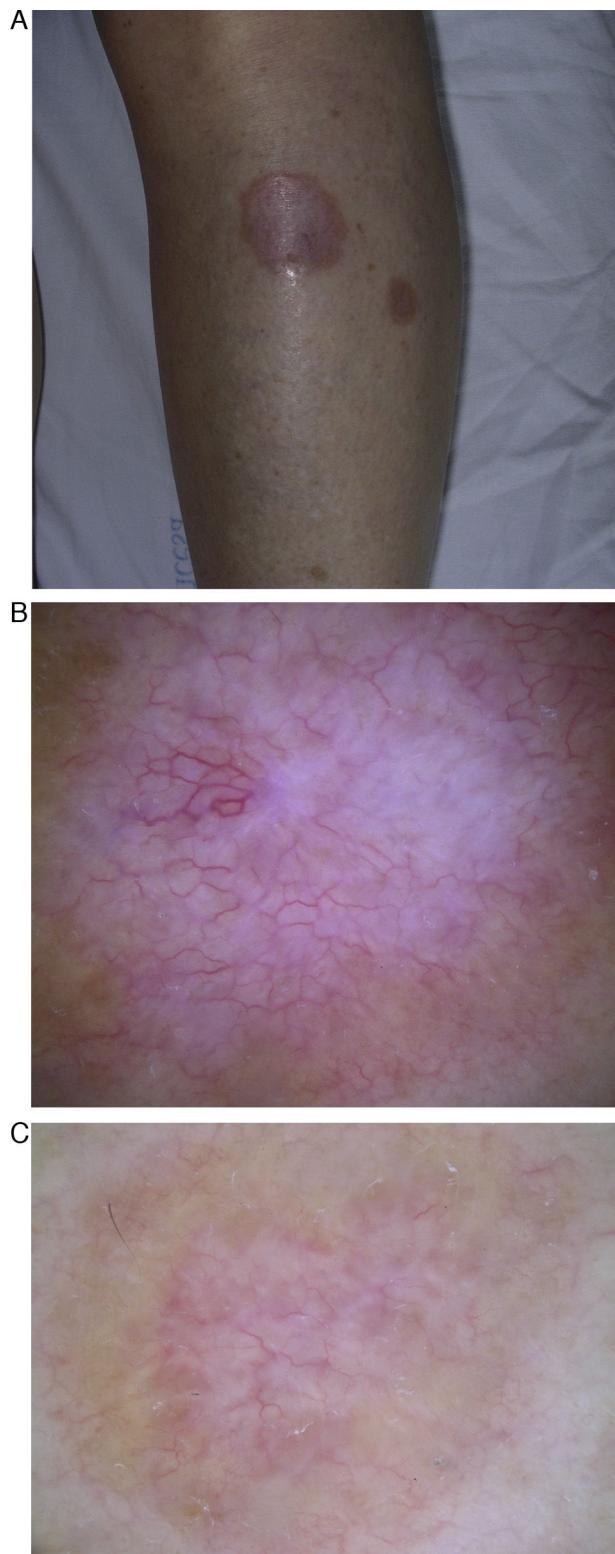


Figure 2 A, Erythematous plaques in the left pretibial region; the center of the larger plaque is atrophied. B and C, Dermoscopy of both lesions reveals a fine dense network of fine vessels on a pinkish background and patches with a homogeneous orange-yellow coloration.

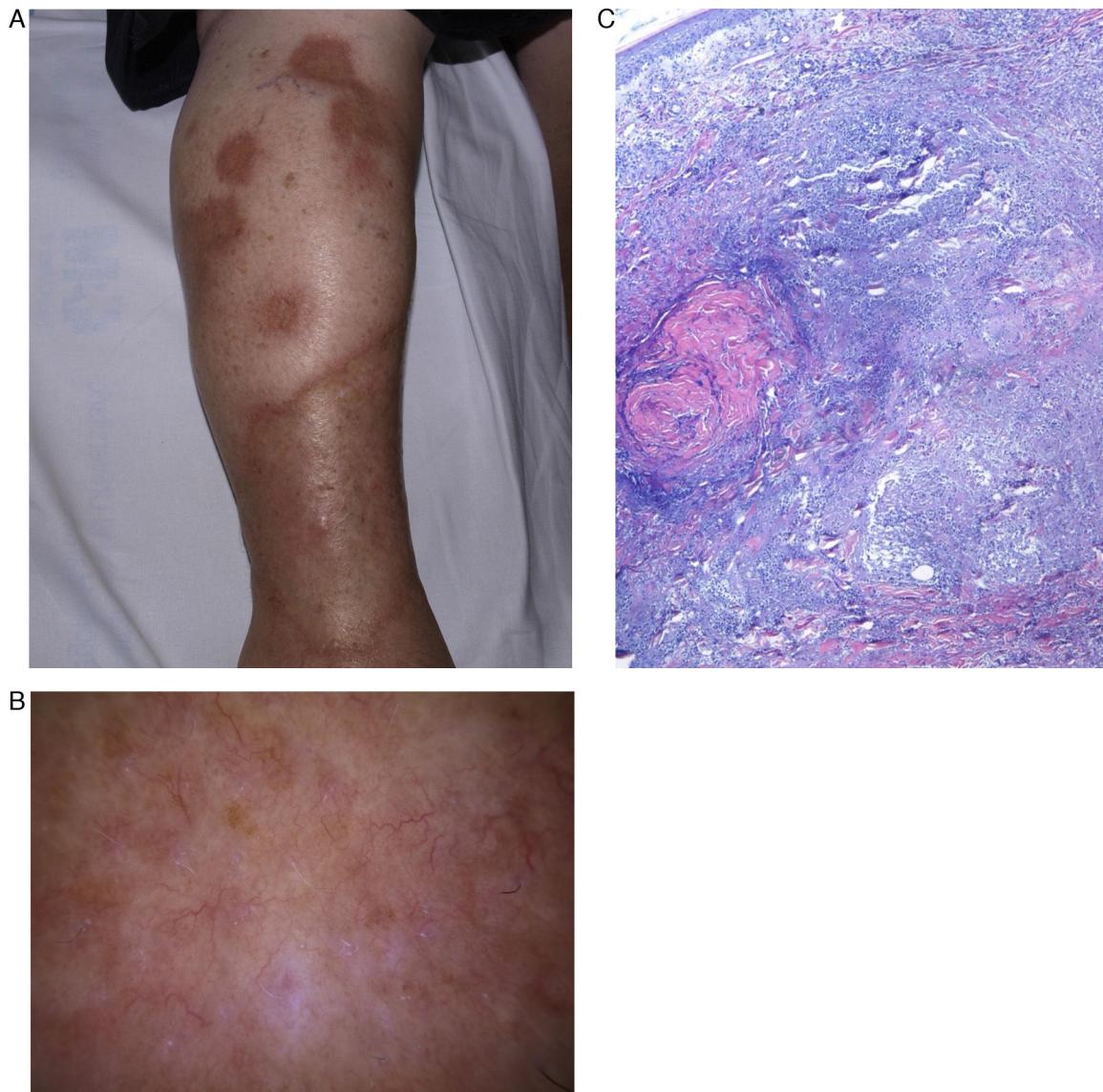


Figure 3 A, Yellowish atrophic plaques with raised and irregular erythematous borders on the right leg. B, Dermoscopy reveals irregular arborizing vessels on a light-brown background, whitish structures, and a patchy pigmented reticulum. C, Histology reveals abundant degenerated collagen in the dermis surrounded by palisading granulomas (hematoxylin-eosin $\times 40$).

presented an irregular pattern of arborizing vessels. These findings could be explained by the visualization initially of the papillary vessels and later, as atrophy progresses, the increasing visibility of the vessels of the deep plexus.

The whitish structures observed would correspond to degenerated collagen and the orange patches to granulomatous inflammatory infiltrate. The pigmented reticulum and brown background observed in advanced lesions would appear to be due to the stimulation of melanocytes at the dermoepidermal junction, a common phenomenon in inflammatory lesions.

The dermoscopic description of other granulomatous diseases can be found in the literature. Lupus vulgaris has been described as a yellow-gold coloration with fine telangiectasias,⁷ and sarcoidosis is associated with translucent globular orange structures and linear vessels.⁸

Dermoscopy could become a very useful aid to the diagnosis of early-stage NL or NL lesions in atypical sites. Descriptive series with more cases are needed to confirm the findings on the dermoscopic features of NL presented in this paper.

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Transient Pigmentary Lines of the Newborn[☆]

Líneas pigmentarias transitorias del recién nacido

To the Editor:

The skin of newborn babies plays a fundamental role in the transition at birth from an aqueous to a predominantly dry environment. Newborn skin is characterized by a relatively thin stratum corneum, the absence of dermal ridges and well-developed collagen fibrils within the papillary dermis, a composition distinct from that of subcutaneous fat, and an immature cutaneous vascular system.¹

Due to the immaturity of the cutaneous components a series of specific cutaneous reactions occurs during the first few weeks of life, giving rise to a condition known as transient benign cutaneous lesions of the newborn. It is important to recognize these reactions and not to confuse them with infections or signs of internal or genetic diseases in order to avoid alarming parents and performing unnecessary tests and treatments.^{1,2}

This letter describes the case of a 1-month-old infant who presented hyperpigmented lesions that followed the skin folds of the abdomen, consistent with a diagnosis of transient pigmentary lines of the newborn.

The patient was a 1-month-old male infant who had been referred for assessment of abnormal pigmentation of the abdomen that had been present since birth. He had been born by unassisted vaginal delivery at 39 weeks of gestational age, and had no congenital abnormalities. No physiological scaling or other transient cutaneous lesions were observed in the first days of life, and there was no family history of similar cutaneous lesions.

Physical examination revealed 4 horizontal hyperpigmented lines that followed the skin folds of the abdomen. Apart from hyperpigmentation of the navel, no other lesions were observed (Fig. 1). The infant's growth and development were normal.

A diagnosis of transient pigmentary lines was established and the parents were informed of the transient nature of the condition. In the following 4 months, without treatment, the linear hyperpigmentation gradually faded and disappeared, and normal skin color was restored.

Transient pigmentary lines were first described by Gibbs in 1967.³ This rare condition, one of several forms of transient benign cutaneous lesions that affect newborns,¹ is referred to in the literature by several terms, including striped hyperpigmentation of the torso,^{3,4} pigmentary lines of the newborn,^{5,6} and transient infantile patterned hyperpigmentation.⁸ By searching the PubMed database using the search terms *pigmentary lines*, *pigmentary transient*, *striped hyperpigmentation*, and *transient hyperpigmentation* we found only 7 other cases consistent with this entity (Table 1).^{3,5–8} The condition is characterized by the appearance at birth of several horizontal bands of hyperpigmentation that follow the skin folds of the abdomen, back, or limbs. These bands subsequently fade spontaneously and resolve fully by 2 to 8 months of age. They most commonly affect black or dark-skinned male neonates, and are rare in white infants. Transient pigmentary lines can be associated with abnormal cornification (ichthyosis vulgaris and collodion baby)^{3,4} and pigmentation (vertical linear hypopigmentation of the abdomen,⁵ hyperpigmentation along the spine,⁷ and mottled hyperpigmentation of the



Figure 1 Linear hyperpigmentation in the skin folds of the abdomen and diffuse hyperpigmentation of the navel.

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