Atypical truncal necrobiosis lipoidica: When dermoscopy enlightens clinics

Marwa THABOUTI[1], Nadia Ghariani Fetoui[2], Oumaima Mani[1], Marouène Belkahla[1], Sana Mokni[1], Baderedine Sriha[1], Najet Ghariani[1], and Mohamed Denguezli[3]

[1]Farhat Hached University Hospital of Sousse
[2]Centre Hospitalier Universitaire Farhat Hached de Sousse
[3]Farhat Hached hospital, Sousse, Tunisia

October 14, 2022

Abstract

Necrobiosis Lipoidica (NL) is a rare granulomatous skin condition typically occurring in lower extremities. We report an atypical case of NL and we highlight the role of dermoscopy in the diagnostic approach.

Atypical truncal necrobiosis lipoidica: When dermoscopy enlightens clinics

Marwa Thabouti(MD)*, Nadia Ghariani Fetoui(MD)*, Oumaina Mani (MD)*, Marwane Ben Kahla (MD)*, Sana Mokni (MD)* Badreddine Sriha (MD), Najet Ghariani (MD)*, Mohamed Denguezli (MD)***

*** Dermatology Department, Farhat Hached Hospital, Sousse, Tunisia.**

**** Anatomopathological Department, Farhat Hached Hospital, Sousse, Tunisia.**

Corresponding Autor: Marwa Thabouti. Phone number: 0021650553815. Mail Adress: hebek2011@live.com

No conflicts of interest to disclose.

No financial support.

No acknowledgement

Keywords: Necrobiosis Lipoidica, Dermoscopy, diabetes mellitus

"Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy"

Dear Editor;

Necrobiosis Lipoidica (NL) is a rare granulomatous skin condition typically occurring in lower extremities. We report an atypical case of NL and we highlight the role of dermoscopy in the diagnostic approach.

A 53-year-old lady, presented to our dermatology department with a 3-month history of a painful and pruritic skin lesion on the trunk. She was known to have diabetes type 2 for the last 5 years, which was under control with oral antidiabetic agents. There was no history of local trauma or infection. Dermatologic examination showed an indurated, erythematous plaque, giving rise to a serous fluide without atrophy, ulceration or local inflammatory signs. The lesion was localized in the intermammary area and included the upper inner

part of the two breasts**(Figure 1a)** . Systemic examination was unremarkable, notably no fever or axillary lymphadenopathies. On dermoscopy, the lesion showed uniformly distributed linear branched vessels, white linear streaks and yellow structureless areas **(Figure 1b)** . Her laboratory tests were within normal ranges, apart from hyperglycemia and high glycated hemoglobin test. An Ultrasound scan showed a subcutaneous fat thickening, with no collection, while mammography was read as normal. The patient was prescribed a course of antibiotics for ten days without any improvement. Histological examination of a skin biopsy stained with hematoxylin and eosine showed sandwich-like horizontal layers of necrobiotic collagen alternating with inflammatory cell infiltrates of lymphocytes, histiocytes, multinucleated giant cells and plasma cells. Stain for acid-fast bacilli was negative. The diagnosis of truncal NL was made based on clinics, dermoscopic and histological findings. The patient was treated with potent topical steroids once daily. The skin lesion gradually resolved within two weeks **(Figure 2a,2b)** .

NL is a rare chronic granulomatous dermatitis, which typically affects young and middle-aged adults. It was described in association with sarcoidosis, thyroid disorders, inflammatory bowel disorders, but most frequently with diabetes mellitus **(1,2)** . NL affects 11% to 87% of diabetic patients **(3)** . It was described for the first time by Oppenheim in 1929. Clinically, it is characterized by well-defined erythematous papules, plaques or nodules. The center of the plaque may show areas of atrophy and telangiectasia. Later, it may develop ulceration in around 30% of cases and rarely squamous cell carcinoma **(4)** . It is located usually on the leg. Truncal location, as seen in our patient, is very rare. Only one case was reported in 2020 **(5)** . Dermoscopy is a non-invasive tool that is very helpful in the diagnosis of such atypical cases. Three main clues are suggestive of NL, notably linear branched vessels, a background of yellow structureless areas and white linear streaks. Some authors suggested a correlation between the different stages of the disease and dermoscopic morphology of vessels, which presents at first as curved lines, than as linear serpentine vessels and finally as linear branches. To the best of our knowledge, our observation is the second report of truncal NL in the literature. It highlights the important role of dermoscopy in guiding the diagnosis of such atypical clinical presentations.

1. Reid SD, Ladizinski B, Lee K, Baibergenova A, Alavi A. Update on necrobiosis lipoidica: a review of etiology, diagnosis, and treatment options. *J Am Acad Dermatol.* 2013;**69** (5):783-791.
2. Clinical Features and Comorbidities of Patients with Necrobiosis Lipoidica with or Without Diabetes. Hashemi DA, Brown-Joel ZO, Tkachenko E, Nelson CA, Noe MH, Imadojemu S, Vleugels RA, Mostaghimi A, Wanat KA, Rosenbach M. JAMA Dermatol. 2019;155(4):455.
3. O'Toole EA, Kennedy U, Nolan JJ, Young MM, Rogers S, Barnes L. Necrobiosis lipoidica: only a minority of patients have diabetes mellitus. *Br J Dermatol* . 1999;**140** (2):283-286.
4. Uva L, Freitas J, Soares de Almeida L, Vasques H, Moura C, Miguel D, Filipe P. Squamous cell carcinoma arising in ulcerated necrobiosis lipoidica diabeticorum. Int Wound J. 2015 Dec;12(6):741-3.
5. M. Alkhatieb, H. Mortada. Truncal necrobiosis lipoidica diabeticorum: A first case report. international Journal of Surgery Case Reports 77 (2020) 311–313.

Figure 1: a: indurated, erythematous plaque, without atrophy or local inflammatory signs, **b:** red arrow: linear branched vessels, black star: yellow structureless areas.

Figure 2a, b: The skin lesion resolved clinically and dermoscopically.

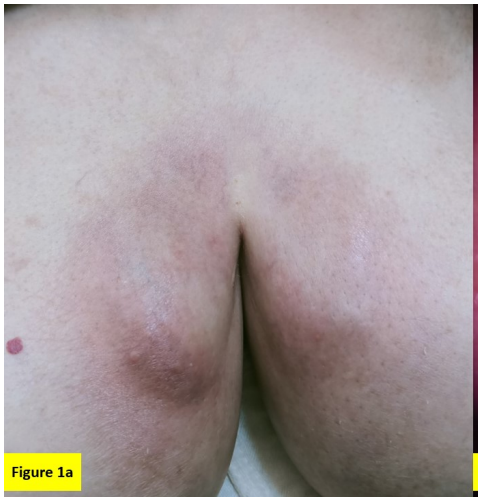

Figure 1a

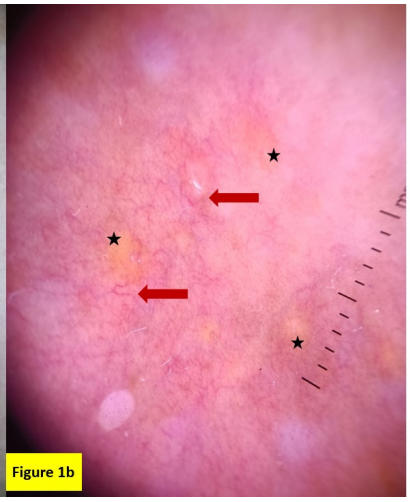

Figure 1b

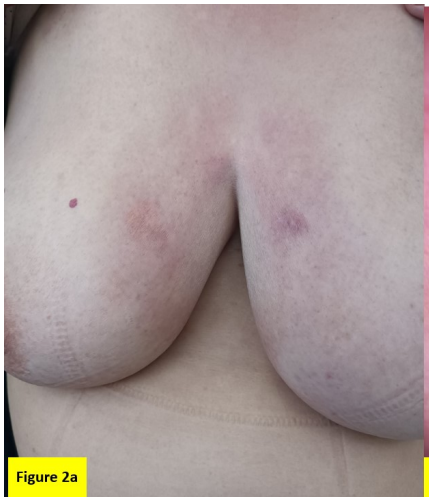

Figure 2a

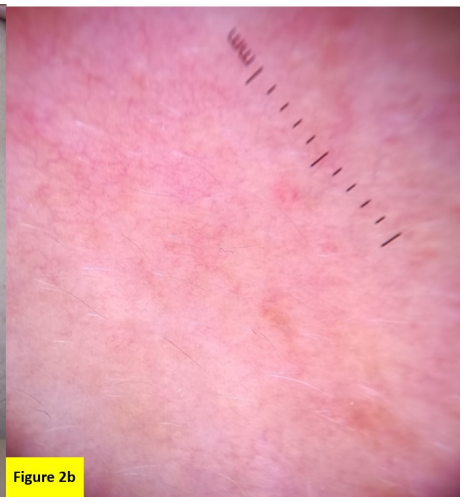

Figure 2b