Received: 12 April 2020 | Revised: 8 May 2020 | Accepted: 12 May 2020

DOI: 10.1002/ccr3.2979

CASE REPORT

Clinical Case Reports Open Access WILEY

Dermoscopic features of lupus miliaris disseminatus faciei: Distinct aspects depending on disease stage

Noureddine Litaiem[1,2] | **Amal Chamli**[1,2] | **Takwa Bacha**[1,2] | **Meriem Jones**[1,2] | **Samia Goucha**[1,3] | **Soumaya Rammeh**[2,4] | **Faten Zeglaoui**[1,2]

[1]Department of Dermatology, Charles Nicolle Hospital, Tunis, Tunisia

[2]Faculty of Medicine of Tunis, University of Tunis El Manar, Tunis, Tunisia

[3]Mongi Slim Hospital, Tunis, Tunisia

[4]Department of Pathology, Charles Nicolle Hospital, Tunis, Tunisia

Correspondence
Noureddine Litaiem, Department of dermatology, Charles Nicolle Hospital, Tunis, Tunisia.
Email: Noureddine.litaiem@gmail.com

Abstract

Dermoscopy is a useful tool that helps distinguish lupus miliaris disseminatus faciei (LPDF) from sarcoidosis and tuberculosis. Follicular keratotic plugs (FKP) represent the hallmark of LPDF. Dermoscopic aspect of LPDF changes through the course of the disease.

KEYWORDS

dermoscopy, doxycycline, granulomatous disease, isotretinoin, lupus miliaris disseminatus faciei

1 | INTRODUCTION

Lupus miliaris disseminatus faciei (LMDF) is a chronic and uncommon facial granulomatous disease of unknown etiology. LMDF is a distinct entity that was initially linked to several conditions, including granulomatous rosacea, tuberculosis, sarcoidosis, lupus vulgaris, and acne.[1] It is characterized clinically by facial yellowish and erythematous papules often extending to the neck. Spontaneous resolution of LMDF is possible resulting in unsightly depressed scars. Therefore, early diagnosis and management are mandatory to prevent scar formation.

Clinically, LMDF is difficult to distinguish from other facial granulomatous conditions, especially sarcoidosis.[2] Dermoscopy is a simple and noninvasive diagnostic tool. Dermoscopic features of LMDF were recently described.

The changing dermoscopic aspect of LMDF during the course of the disease was never described. We report herein three cases of LMDF illustrating distinct dermoscopic aspects related to disease stage.

2 | CASE 1

A 50-year-old, otherwise healthy, woman presented with a 1-month history of itchy facial eruption. Physical examination revealed multiple dome-shaped reddish and yellow papules on the forehead, nose, cheeks, eyelids, and chin (Figure 1A). Dermoscopic examination showed sparse follicular keratotic plugs (FKP) associated with linear telangiectatic vessels and white scales on an erythematous and yellow-orange background (Figure 2A, B). Histopathological examination of a skin biopsy of an erythematous papule revealed epithelioid cell granulomas with central necrosis around pilosebaceous units (Figure 3). The diagnosis of LMDF was made. Doxycycline 100 mg/d was prescribed with a good response.

3 | CASE 2

A 22-year-old male patient presented with a 6-month history of facial asymptomatic red papules. Physical examination showed multiple symmetrical erythematous papules on the cheeks, nose,

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.
© 2020 The Authors. *Clinical Case Reports* published by John Wiley & Sons Ltd.

eyelids, and chin (Figure 1B). Dermoscopy showed dotted vessels, numerous FKP surrounded by orange perifollicular halo (Figure 2C). Skin biopsy revealed marked granulomatous reaction with a central area of necrosis around the hair follicles. The diagnosis of LMDF was made. Oral isotretinoin 20 mg daily was prescribed leading to significant improvement after 5 months.

4 | CASE 3

A 37-year-old man with no past medical history presented for multiple scars on the cheeks and nose. He reported a 10-year history of yellowish and red papules which progressively led to scars (Figure 1C). Physical examination revealed multiple facial pinhead-sized depressed scars associated with erythematous papules. Dermoscopy showed multiple yellow dots, comma vessels, and rare FKP surrounded by white structures (Figure 2D). The diagnosis of LMDF was confirmed by histopathological examination, and the patient was treated with isotretinoin 20 mg/d.

5 | DISCUSSION

Lupus miliaris disseminatus faciei is a rare and under-recognized granulomatous disorder. Clinically, LMDF is

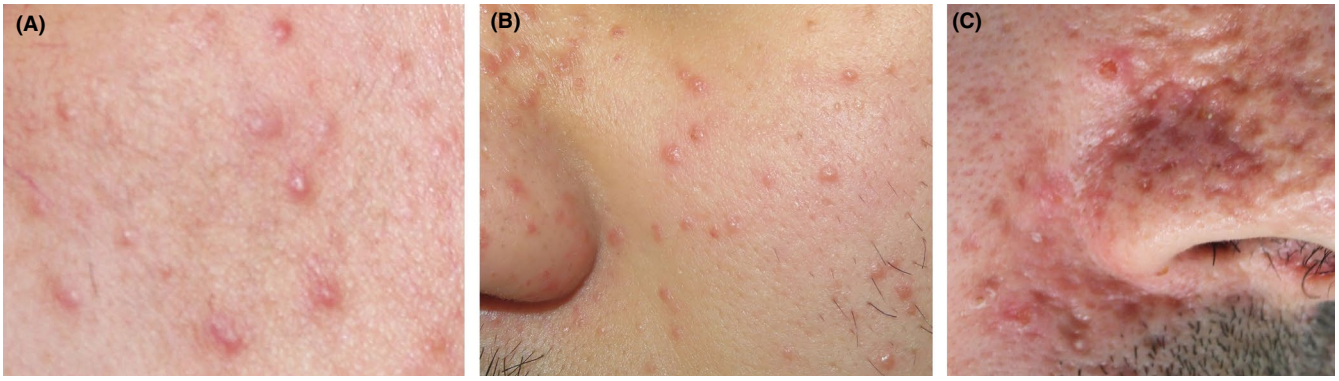

FIGURE 1 Clinical examination. Case 1: (A) multiple dome-shaped reddish and yellow papules on the cheeks. Case 2 (B) multiple keratotic erythematous papules on the cheeks. Depressed scars start to form. Case 3 (C) numerous pinhead-sized depressed scars on the nose and nasolabial folds

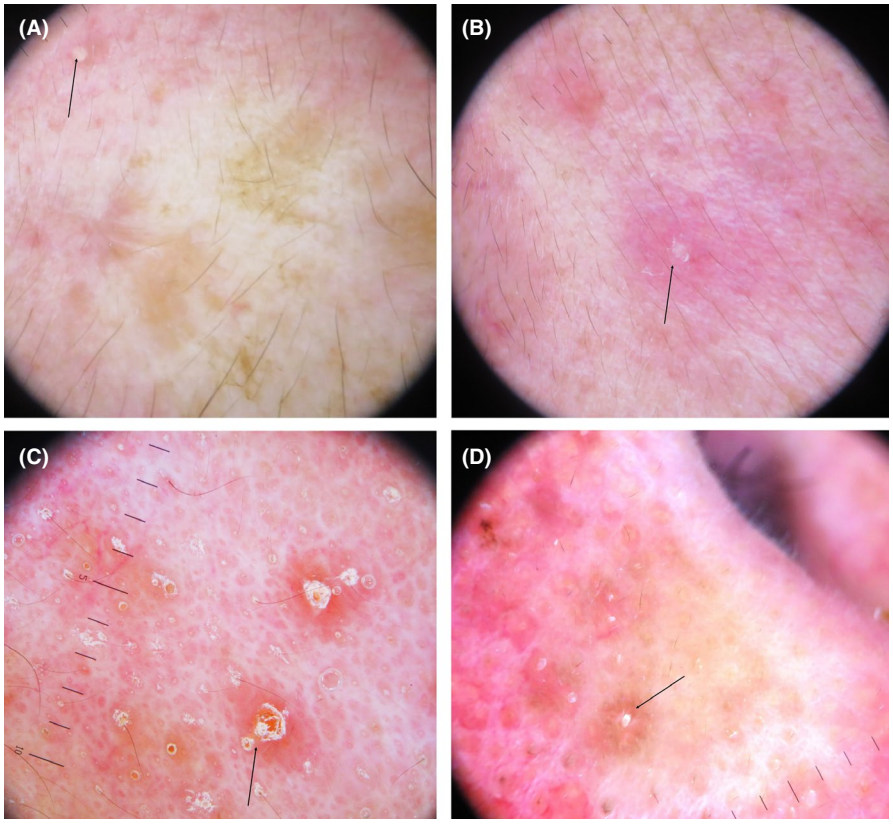

FIGURE 2 Dermoscopic examination. Case 1: structureless yellow-orange (A) and erythematous (B) areas. Follicular keratotic plugs—black arrow—are scarce (A, B). Case 2: (C) multiple follicular keratotic plugs surrounded by yellow-orange areas. Case 3:(D) follicular keratotic plugs surrounded by white structures. The multiple yellow dots correspond to follicular openings

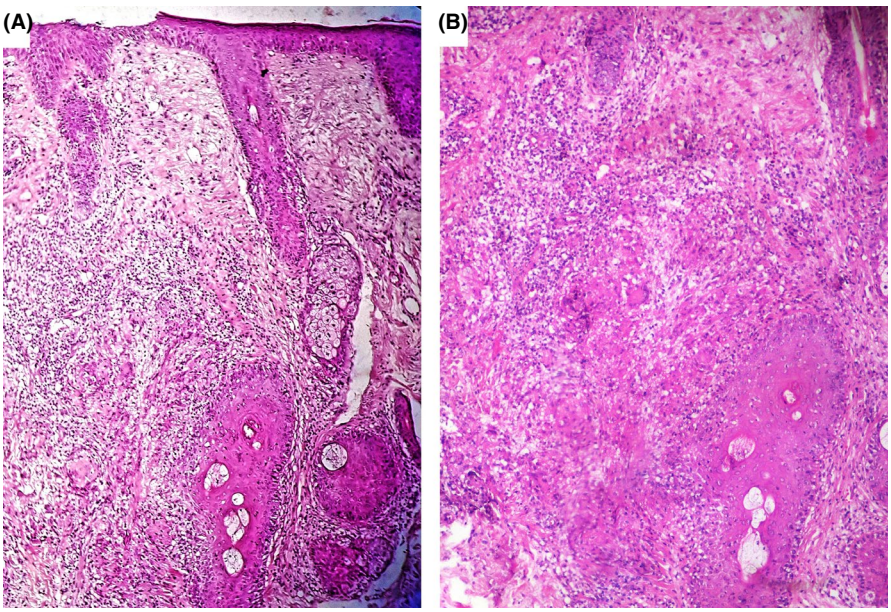

FIGURE 3 Histopathological examination. A, Hematoxylin and eosin ×100: perifollicular granulomatous inflammation; (B) hematoxylin and eosin ×200: The inflammatory infiltrate was composed of epithelioid histiocytes, multinucleate giant cells, and lymphocytes intermingled with dermal necrosis

characterized by monomorphous purely popular or papulonecrotic lesions, which tend to show central umbilication.[1-3] As seen in our patients, the papules are typically localized on the central parts of the face, the eyebrows, and the eyelids.[1-3] The papules typically show a yellowish-brown coloration on diascopy. This finding is related to epithelioid cell granulomas histologically.[1,3] Given some morphological overlap, it is difficult to distinguish LMDF from some facial granulomatous diseases based on histopathological examination alone.[3] Therefore, a careful combination of clinical, histopathological, and dermoscopic examination is essential to make an accurate diagnosis.

Dermoscopy is the mirror of the underlying histopathological alterations.[1,3] Dermoscopic features of LMDF were rarely reported.[2,4,5] FKP represent the hallmark of LMDF.[4] It is unusual in cases of sarcoidosis and lupus vulgaris. FKP are a result of lateral pressure on the hair follicles and correspond histologically to follicular openings filled with keratin.[4,5]

As highlighted by our cases, dermoscopic features of LMDF differ depending on disease stage. Interestingly, FKP were seen in all stages of the lesions in our patients, but were scarce in early and late lesions. As the lesion becomes fully developed, the granulomatous reaction occurs. Yellow background, which corresponds histopathologically to dermal granuloma, was seen in early (case 1) and well-established lesions (case 2). It was rare in late lesions. In late lesions, FKP were surrounded by white structures corresponding to perifollicular fibrosis.[2] These white structures had a reticular pattern and should not be confounded with the Wickham striae. This dermoscopic sign could arguably be considered as a marker of disease activity.

LMDF is a chronic disease. Typically, the lesions last for months. The spontaneous resolution would eventually occur after several years, but lesions heal with scarring. Long-term therapy with doxycycline or isotretinoin may be prescribed with good outcome.[1,2,4] This was consistent with results (cases 1 and 2). The scars result from the existence of deep perifollicular areas of necrosis, surrounded by granulomas.[3]

In summary, our data provide new insights into the dermoscopy of LMDF by showing three different patterns corresponding to disease progression. In early lesions, dermoscopy reveals sparse FKP and yellow-orange areas, while in fully developed lesions, FKP are numerous associated with diffuse yellow-orange areas forming then an erythematous background. Finally, in late lesions, when fibrosis occurs, white structures appear surrounding FKP.

CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

NL and AC: contributed to the first draft of the manuscript. NL, AC, TB, MJ, SR, and SG: contributed to the literature search, analysis, and interpretation of the data. FZ: critically revised the manuscript and gave final approval. All authors: read and approved the final manuscript and agreed to be fully accountable for ensuring the integrity and accuracy of the work.

ORCID

Noureddine Litaiem https://orcid.org/0000-0002-9640-5613

REFERENCES

1. Al-Mutairi N. Nosology and therapeutic options for lupus miliaris disseminatus faciei. *J Dermatol*. 2011;38(9):864-873.
2. Toda-Brito H, Aranha JMP, Tavares ES. Lupus miliaris disseminatus faciei. *An Bras Dermatol*. 2017;92(6):851-853.

3. Chougule A, Chatterjee D, Yadav R, Sethi S, De D, Saikia UN. Granulomatous rosacea versus lupus miliaris disseminatus Faciei-2 faces of facial granulomatous disorder: a clinicohistological and molecular study. *Am J Dermatopathol*. 2018;40(11):819-823.
4. Ayhan E, Alabalik U, Avci Y. Dermoscopic evaluation of two patients with lupus miliaris disseminatus faciei. *Clin Exp Dermatol*. 2014;39(4):500-502.
5. Lallas A, Argenziano G, Apalla Z, et al. Dermoscopic patterns of common facial inflammatory skin diseases. *J Eur Acad Dermatol Venereol*. 2014;28(5):609-614.

How to cite this article: Litaiem N, Chamli A, Bacha T, et al. Dermoscopic features of lupus miliaris disseminatus faciei: Distinct aspects depending on disease stage. *Clin Case Rep*. 2020;8:1793–1796. https://doi.org/10.1002/ccr3.2979