

Absence of central white patch in dermatofibromas presenting in darker skin



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INTRODUCTION

Dermatofibromas (DFs) are benign, cutaneous lesions that most commonly present in middle-aged individuals as hyperpigmented, firm papules with central hypopigmentation. Most DFs can be diagnosed clinically based on their morphology and based on the presence of the dimple sign. DFs dimple with the application of lateral pressure, an indicator known as the Fitzpatrick sign (Fig 1). Although this sign is not unique to DFs, it is highly predictive of a DF. While the diagnosis of DFs can be straightforward, occasionally, DFs can be clinically challenging to differentiate from cutaneous malignancies.¹ In such cases, tissue biopsy and histologic evaluation can be used to confirm the diagnosis and exclude clinical mimickers, such as melanoma.

Dermatoscopy, using a handheld dermatoscope, can help in the *in vivo* evaluation of DFs by permitting the clinician to view their subsurface morphology, thereby adding another layer of certainty prior to rendering a final diagnosis of DF. It provides the clinician another tool to distinguish between benign and malignant lesions and, therefore, decreases the need for lesion biopsies. The current literature focuses on the dermatoscopic findings of DFs in lighter skin tones, leaving gaps in the recognition of patterns found in individuals with darker skin phenotypes.²

The most reproducibly identified dermatoscopic pattern associated with DFs in fair-skinned individuals is one consisting of a central, stellate, white, scar-like area surrounded by a thin peripheral pigment network.³ However, this pattern may not be the most common pattern seen in darker skin phenotypes. Features similar to those found in melanomas and vascular tumors have been reported

Abbreviation used:

DF: dermatofibroma



Fig 1. Dermatofibroma in 37-year-old woman, demonstrating central depression upon lateral pressure, known as the dimple sign. Photographed by Richard Usatine, MD.

in DFs.⁴ It was previously thought that these differing features were due to different stages in maturation of the DFs.⁵ While this might impact the dermatoscopic appearance of these common lesions, the patient's skin phototype likely also plays a role, similar to the phenomenon seen in nevi.¹ A prospective study conducted in Morocco of patients with Fitzpatrick

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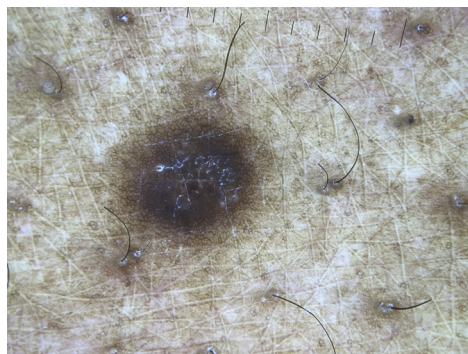


Fig 2. Dermatofibroma on right thigh of 64-year-old Black man, demonstrating lack of central white scar, fine reticulated pigment, and overlying scale. Photographed by Richard Usatine, MD.

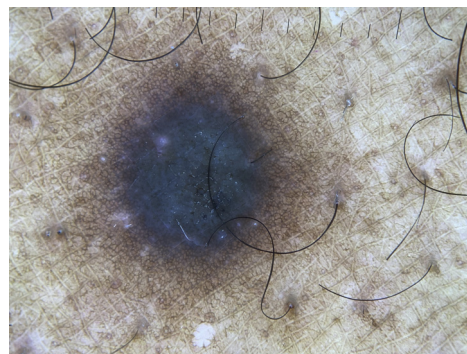


Fig 3. Dermatofibroma on left thigh of 64-year-old Black man, demonstrating blue-gray color, peripheral reticulation, perifollicular hypopigmentation, and lack of central scar. Photographed by Richard Usatine, MD.

skin types V and VI noted new patterns, including a white ring around an ulceration, a pigment network with pigment encircling follicular openings, and a faint peripheral network with a star-like white patch.⁶ We reviewed the DFs in patients with types V and VI skin in an image database spanning 2 institutions and herein report an additional pattern: a diffuse pigment network without a central white scar. We describe 5 lesions in 3 patients, all of which were clinically diagnosed DFs lacking central white scars. All lesions had positive dimple signs and were visualized using polarized dermatoscopy.

CASE SERIES

The first 2 lesions identified in this report came from a 64-year-old Black male who was clinically diagnosed with 2 DFs on his lower extremities (Figs 2 and 3). In the first lesion (Fig 2), dermatoscopy did not reveal a central, white, scar-like area. Rather, the lesion manifested a central, brown, homogeneous area, with overlying scale, surrounded by a thin network. Dermatoscopy of the second DF (Fig 3) revealed peripheral reticulation and a central, homogeneous, hyperpigmented area with a blue-white color, but we again failed to visualize a central white scar.

An additional dermatofibroma was diagnosed on the left chest in a 56-year-old Black male (Fig 4). This DF also did not reveal a central scar-like area; instead, the lesion demonstrated a uniformly distributed brown network. Figs 5 and 6 are DFs noted on the skin of a 37-year-old Black female. Both DFs in this patient revealed the absence of central white scars and, rather, appeared as central, brown, structureless areas surrounded by pigment networks.

DISCUSSION

These findings add to the growing body of evidence of dermatoscopic features of DFs in

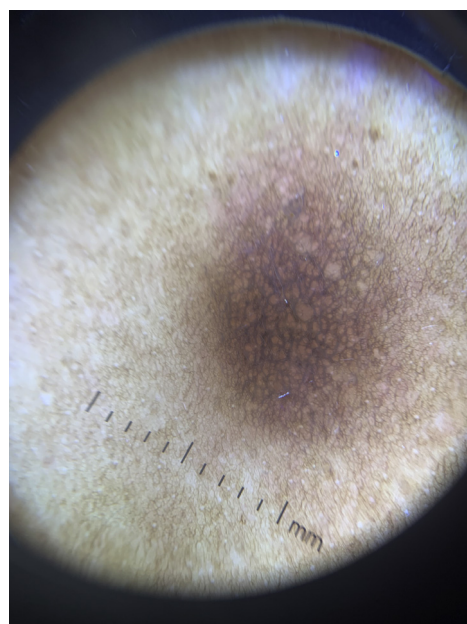


Fig 4. Dermatofibroma on chest of 56-year-old Black man, demonstrating lack of central scar, uniformly distributed brown network-like appearance, fine reticulation around the border, and a pink blush tone. Photographed by Elizabeth Seiverling, MD.

patients with skin types V and VI. Though the pattern of a peripheral network with a central scar-like area is associated with DFs in fair skin phenotypes, we describe 5 instances in which this feature was absent in darker skin phenotypes. In our experience, DFs in Black patients reveal diffuse peripheral networks, with or without central, brown-to-hyperpigmented, structureless areas. While such a pattern may raise concern for a melanocytic neoplasm, it is important to underscore that all these DFs had positive dimple signs, which is not a feature associated with nevi or melanoma.

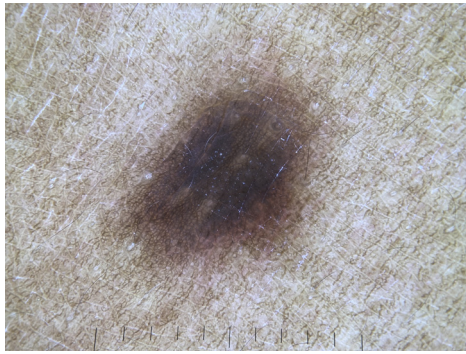


Fig 5. Dermatofibroma found on shoulder of 37-year-old Black woman, showing fine peripheral network, 6 patchy areas representing perifollicular hypopigmentation, and pink blush. Photographed by Richard Usatine, MD.

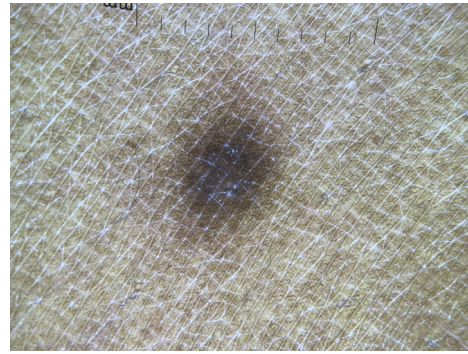


Fig 6. Dermatofibroma on leg in 37-year-old Black woman, demonstrating lack of central scar, delicate network lines in periphery, and perifollicular hypopigmentation. Photographed by Richard Usatine, MD.

Recognizing the dermatoscopic presentation of DFs in all skin types is an important step in reducing diagnostic disparities. Melanoma is often diagnosed in later stages in Black patients, and there has been a call to action to improve medical education regarding the presentation of melanoma in Black skin.⁷ The identification of melanoma is aided by a deep foundation in recognizing benign growths.⁸ Thus, it is imperative we include examples of dermatofibroma and its variations in all skin types.

Limitations include that all 5 of the DFs were diagnosed only clinically and not histologically. However, the presence of firm nodules with dimple signs, stable sizes, fine peripheral reticulations, and multiple DFs in 2 of the 3 patients does support the correct diagnoses of the 5 lesions presented. Additionally, the absence of subjective pruritus and excoriations or lichenification on clinical examination, combined with the lack of dermatoscopic features associated with prurigo nodules, eliminated prurigo nodules from the differential diagnosis.⁹ Barring the possibility of any other diagnoses in the differential, there was no justifiable reason for us to biopsy the lesions present in our patients. We hope to encourage more publications of skin lesions found in darker skin types.

Conflicts of interest

None disclosed.

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