Dermatology Practical & Conceptual

Dermoscopic Characterization in Pigmented Skin: Interpret "Pigmented" Structures Carefully

Sidharth Sonthalia[1], Abhijeet Kumar Jha[2], Mohamad Goldust[3], Abhishek Omchery[4], Johannes F. Dayrit[5]

1 SKINNOCENCE: The Skin Clinic, Gurgaon, India
2 Department of Skin & V.D., Patna Medical College and Hospital, Patna, Bihar, India
3 Mazandaran University of Medical Sciences, Sari, Iran
4 Kaya Clinic, Sohna Road, Gurugram, India
5 Department of Dermatology, Research Institute for Tropical Medicine, Muntinlupa City, Philippines

Key words: dermoscopy, skin of color, granulomatous, inflammatory, chromoblastomycosis, lupus vulgaris, sarcoidosis, dots, globules

Citation: Sonthalia S, Kumar Jha A, Goldust M, Omchery A, Dayrit JF. Dermoscopic characterization in pigmented skin: interpret "pigmented" structures carefully. *Dermatol Pract Concept.* 2019;9(3):211-213. DOI: https://doi.org/10.5826/dpc.0903a08

Accepted: April 10, 2019; **Published:** July 31, 2019

Funding: None.

Competing interests: The authors have no conflicts of interest to disclose.

Authorship: All authors have contributed significantly to this publication.

Corresponding author: Dr. Sidharth Sonthalia, SKINNOCENCE: The Skin Clinic & Research Centre, C-2246, Sushant Lok-1, Block-C, Gurugram 122009, India. Email: sidharth.sonthalia@gmail.com

Introduction

In a majority of cutaneous disorders, while a specific tissue pattern constitutes the predominant basis for histopathological diagnosis, the presence of special structures or cells serves as an adjuvant or supportive attribute that may enhance the probability of that diagnosis in specific conditions. Dermoscopy as a diagnostic tool in general dermatology is still in a developmental and impressionable phase, and its current "diagnostic" accuracy is limited by the lack of uniform standardized criteria/algorithm of structures or features defining a particular condition owing to paucity of published literature, particularly properly designed trials. Pending the establishment of such criteria while anecdotal reports remain an important source of advancing our dermoscopic cognition of a dermatosis, the presence of an odd or singular structure on dermoscopy reported in a particular condition warrants careful evaluation and interpretation by experts, evidence-based reinforcement from multiple cases, and clarity on its absence in close clinicopathological differentials before labeling it "diagnostic" for that condition. The situation becomes further complicated by the understated but very relevant differences observed in the dermoscopic features of the same cutaneous lesion in different skin types [1].

In our opinion, the Observation "Dermoscopy of Chromoblastomycosis," by Subhadarshani and Yadav [2] published in this journal, highlights the relative limitation rather than the merit of dermoscopy in diagnosing granulomatous disorders, especially in skin of color (SOC). They reported reddish pink background with multiple yellow-orange ovoid structures, along with interspersed brown dots, crusts, and scales as the dermoscopic features in their clinically and pathologically confirmed case of chromoblastomycosis. Notwithstanding the confounding issue of using the terms *brown* and *blackish red* interchangeably for supposedly the most diagnostic dermoscopic feature for the authors, the

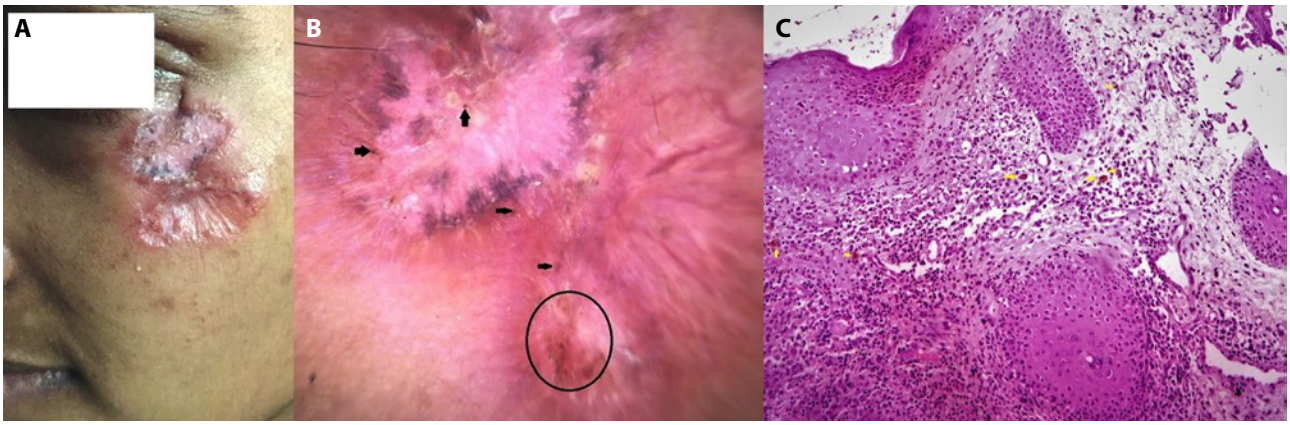

Figure 1. (A) Infiltrated plaque of lupus vulgaris with a "moth-eaten" appearance on the face of an Indian woman. (B) Polarized dermoscopy revealed reddish pink background with yellow-orange ovoid structures, crusts, scales and interspersed irregular brown dots (arrows) with focal clustering (circle). Peripheral branching vessels were the additional feature (Dermlite 4, ×10). (C) Histopathology showing caseating granulomas and other features diagnostic of lupus vugaris. Note the presence of numerous melanophages (yellow arrows) in the upper dermis (hematoxylin and eosin, ×400). [Copyright: ©2019 Sonthalia et al.]

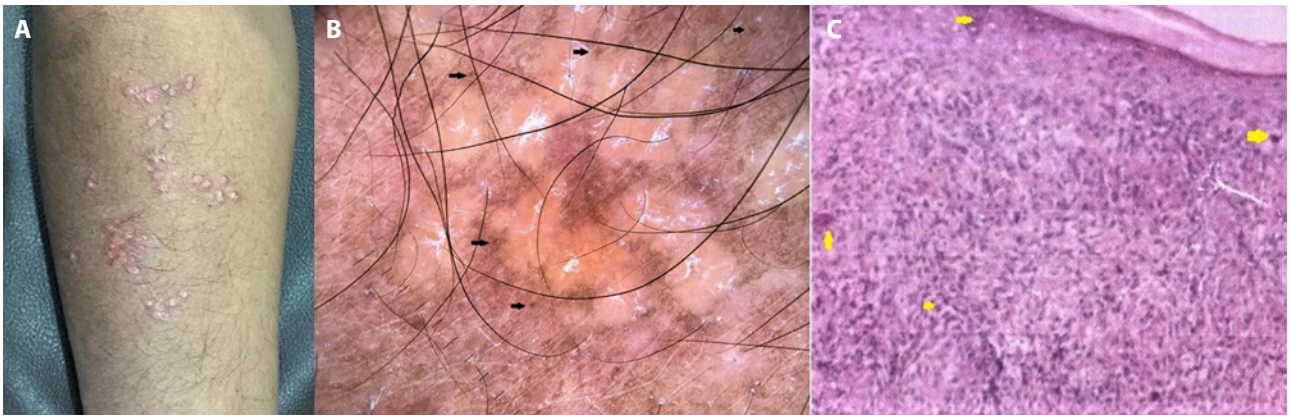

Figure 2. (A) Erythematous clustered papules over the right forearm of an Indian man. (B) Polarized dermoscopy revealed pale pink background with yellowish orange areas, white scales, and interspersed pigmented irregular dots and globules (arrows) (Dermlite 4, ×10). (C) Histopathology showing noncaseating granulomatous inflammation in the dermis suggestive of sarcoidosis. Note the presence of many melanophages (yellow arrows) in the upper dermis (hematoxylin and eosin, ×400). [Copyright: ©2019 Sonthalia et al.]

lack of clarification on the patient's skin type renders the issue more complicated (although we presume Indian origin and skin type IV-V based on authors' work affiliation and clinical image). Although the majority of features on inflammoscopy are indistinguishable in different skin phototypes, as per our reported experience the observation of "pigmented" structures on dermoscopy of any dermatoses in darker skin types warrants cautious interpretation since such brownish dots, granules, globules, and clods are observed very commonly during different phases of evolution of the majority of pigmentary and inflammatory skin disorders in SOC [3]. While in the case under question the brown or blackish red structures may indeed represent the clinically visible black dots stemming from transepithelial elimination of inflammatory exudate and hemorrhage, labeling them as "the most useful sign in diagnosing chromoblastomycosis" seems to be an overstatement. We support our contention with 2 cases.

Case Presentation

The first case is that of a 21-year-old Indian woman with a 2-year-old erythematous facial plaque with a "moth-eaten" appearance (Figure 1A). Polarized dermoscopy (Figure 1B) revealed reddish pink background with yellow-orange ovoid structures, crusts, scales, and interspersed irregular brown dots (similar to the case in question). Peripheral branching vessels were additional features. Lupus vulgaris was confirmed by histopathology and molecular diagnostics.

In the second case, a 40-year-old Indian man had asymptomatic erythematous clustered papules over the right forearm that developed 8 months previously (Figure 2A). Polarized dermoscopy revealed pale pink background with yellowish orange areas and white scales. Interspersed irregular pigmented dots and globules were observed in this case as well (Figure 2B). Cutaneous sarcoidosis was confirmed on

typical histopathology; pulmonary involvement and elevated angiotensin-converting enzyme levels were found. Interestingly, in both cases, apart from the typical granulomatous picture, numerous papillary dermal melanophages were visible (Figures 1C and 2C), possibly contributing to the dermoscopic brownish structures. The yellowish green "apple jelly" nodules or "grains of sand" were not appreciable in either case on diascopy.

Conclusions

Without any intended criticism, we wish to highlight that while there is a huge void of dermoscopic characterization of nonmelanocytic cutaneous disorders especially in SOC, dermoscopy enthusiasts must exert extreme caution before labeling the presence or absence of a particular dermoscopic feature as "highly diagnostic." A systematic approach for collection and banking of dermoscopic images of disorders in general dermatology from across the globe, especially from the darker skin types, is warranted. The preliminary suggestion of existence of minor but important differences in the dermoscopic features of the same inflammatory dermatosis in different skin types [3] makes a valid case for exploring this uncharted territory.

References

1. Sonthalia S, Gupta A, Jha AK, Sarkar R, Ankad BS. Disorders of pigmentation. In: Lallas A, Errichetti E, Ioannides D, eds. *Dermoscopy in General Dermatology*. 1st ed. London: CRC Press; 2018:282-294.
2. Subhadarshani S, Yadav D. Dermoscopy of chromoblastomycosis. *Dermatol Pract Concept*. 2017;7(4):23-24.
3. Gupta V, Sonthalia S, Bhat YJ, Langar S, Bosseila M. Inflammatory and infectious conditions. In: Lallas A, Errichetti E, Ioannides D, eds. *Dermoscopy in General Dermatology*. 1st ed. London: CRC Press; 2018:295-309.