DOI: 10.3315/jdcr.2008.1020

Journal of Dermatological Case Reports

Dermoscopy findings of alopecia areata in an African-American patient

Larissa Hanauer de Moura, Bruna Duque-Estrada, Leonardo Spagnol Abraham, Carlos Baptista Barcaui, Celso Tavares Sodré

Department of Hair Disorders, Professor Rubem David Azulay Dematology Institute, Rio de Janeiro, Brazil

Corresponding author:

Bruna Duque-Estrada, MD

Av. Sernambetiba, 3300, Bl. 01, Apt. 1802.

22630-010 Rio de Janeiro - RJ, Brazil

E-mail: *bruna.pinto@uol.com.br*

Key words:

alopecia areata, dark skin, epiluminescence microscopy, hair loss, pigmented network, scalp, trichoscopy

Abstract

Background: Dermoscopy has been established as an indispensable tool in the diagnosis and follow up of hair disorders. In alopecia areata, dermoscopy of active disease shows yellow dots, dystrophic hairs, as well as cadaverized (black dots) and exclamation mark hairs. Alopecia areata has been reported to occur equally among races, however, until date, there are no published data regarding dermoscopic findings in African-American patient.

Main observation: We report a case of scalp dermoscopy of alopecia areata in an African-American patient that shows a diffuse honeycomb-like pigmented network, few yellow dots and white dots.

Conclusion: This case shows that skin color may affect dermoscopic findings in alopecia areata. In our African-American patient with alopecia areata dermoscopy showed a diffuse honeycomb-like pigmented network, which was previously considered characteristic for androgenic alopecia and white dots, which were considered characteristic for cicatricial alopecia. Further studies are needed to elucidate the presence of white dots in alopecia areata.

Introduction

Dermoscopy represents a useful technique in the evaluation of hair disorders. This method has been used for diagnosis and follow-up of hair and scalp disorders.[1] In alopecia areata, dermoscopy of active disease shows yellow dots, dystrophic hairs, as well as cadaverized (black dots) and exclamation mark hairs. The presence of numerous yellow dots is a specific feature of alopecia areata, occurring in 95% of patients in all stages of the disease.[2,3]

In dark-skinned patients, there is only one report of dermoscopy of alopecia in a patient with lichen planopilaris.[4] In this case, scalp dermoscopy demonstrated a diffuse and homogeneous honeycomb-like pigmented pattern and white dots.[4]

We report a case of scalp dermoscopy of alopecia areata in an African-American patient.

Case Report

A 53-year-old woman, type V skin, presented with several patches of alopecia of the scalp. According to the patient, she developed alopecia areata totalis in the past 3 years. Hair growth was achieved with intramuscular betamethasone (aqueous suspension containing 3 mg/ml betamethasone sodium phosphate, and 3 mg/ml betamethasone acetate) every 4 weeks for 10 months; however relapse occurred few months after discontinuation of therapy.

On physical exam, she presented patches of alopecia on vertex, parietal, and occipital scalp (Fig. 1). Scalp dermoscopy showed a honeycomb-like pigmented network in a diffuse distribution on the affected and non affected areas (Fig. 2A). Inside the alopecic patches, cadaverized, vellus and short regrowing hairs, as well as yellow dots were well appreciated. Interestingly, white dots regularly distributed among hair follicles and empty follicular units were also observed (Fig. 2B).

Figure 1

Patient presenting multiple confluent patches of alopecia areata in the vertex, parietal, and occipital scalp as well as white hairs developed after previous hair regrowth.

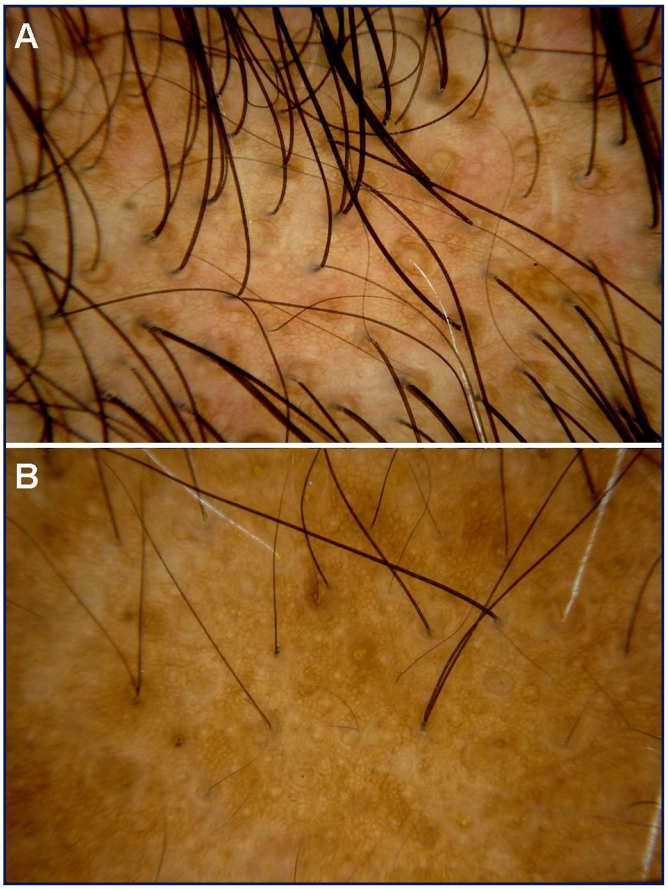

Figure 2

Dermoscopy of normal scalp showing diffuse pigmented network, white dots and absence of signs of active disease (A). Dermoscopic findings in alopecic patches (B). A diffuse pigmented network is well observed along with yellow dots, cadaverized hairs (black dot), short regrowing hairs, white hairs, and white dots.

Discussion

Dermoscopy (trichoscopy) has been established as an indispensable tool in the diagnosis and follow up of hair disorders. In alopecia areata, dermoscopic criteria have been described in many reports.[2,3,5-8] Patterns include the presence of yellow dots, which likely represent distension of the affected follicular infundibulum with keratinous material and sebum.[2] Dermoscopy also enhances visibility of dystrophic hairs with variable morphology depending on the site of the shafts' fracture secondary to the inflammation in hair bulb. When it occurs before emergence from the scalp, one can see cadaverized hairs.[9] Exclamation marks hairs are characterized by wider diameter in the distal shaft and thinner diameter in the proximal shaft. This pattern marks presence of the lymphocytic inflammatory infiltrate affecting the hair bulb and, thus, producing thinner hair shaft.

Inui *et al*.[3] demonstrated in 2008 that for diagnosis of alopecia areata, yellow dots and short vellus hairs were the most sensitive markers. Black dots, exclamation mark hairs and broken hairs were the most specific markers. The presence of black dots, exclamation marks hairs and vellus hairs indicate disease activity. Black dots, yellow dots and clustered short vellus hairs correlated with the severity of disease.[3]

Alopecia areata has been reported to occur equally among races, however, until date there are no published data regarding dermoscopic findings in African-American patients with alopecia areata. At our hair clinics in Rio de Janeiro, 40% of patients are of skin phototypes V and VI. We report dermoscopic findings in a dark-skinned patient with alopecia areata. The honeycomb-like pigmented network was observed in affected and unaffected scalp, which suggests that the pigment network is normally present in dark-skinned scalp. In alopecic patches, few yellow dots were observed. As reported in Asians, we believe that the diminished contrast of the pigmented scalp and the yellowish color of yellow dots make observation of these findings difficult.[3] The presence of white dots in our patient are not well understood. Kossard and Zagarella described white dots as being a dermoscopic clue to cicatricial alopecia, representing fibrous tracts on histopathology.[4] As in our case the patient had diagnosis of alopecia areata based on clinical findings and diseases course, we did not perform histopathologic exam. Further studies are needed to elucidate the presence of white dots in alopecia areata.

This case shows that skin color may affect dermoscopic findings in alopecia areata. In our African-American patient with alopecia areata dermoscopy showed a diffuse

honeycomb-like pigmented network, which was previously considered characteristic for androgenic alopecia and white dots, which were considered characteristic for cicatricial alopecia. Further studies are needed to elucidate the presence of white dots in alopecia areata.

References

1. Lacarrubba F, Dall'Oglio F, Rita Nasca M, Micali G. Videodermatoscopy enhances diagnostic capability in some forms of hair loss. *Am J Clin Dermatol*. 2004; 5: 205-208.
2. Ross EK, Vincenzi C, Tosti A. Videodermoscopy in the evaluation of hair and scalp disorders. *J Am Acad Dermatol*. 2006; 55: 799-806.
3. Inui S, Nakajima T, Nakagawa K, Itami S. Clinical significance of dermoscopy in alopecia areata: analysis of 300 cases. *Int J Dermatol*. 2008; 47: 688-693.
4. Kossard S. and S. Zagarella. Spotted cicatricial alopecia in dark skin. A dermoscopic clue to fibrous tracts. *Australas J Dermatol*. 1993; 34: 49-51.
5. Rudnicka L, Olszewska M, Rakowska A. Kowalska-Oledzka E, Slowinska M. Trichoscopy: a new method for diagnosis of hair loss. *J Drugs Dermatol*. 2008; 7: 651-654.
6. Ben Hassines M, Crickx B, Descamps V. Vidéomicroscopie au cours de la pelade. *Ann Dermatol Venerol*. 2007; 34:35-38.
7. Inui S, Nakajima T, Itami S. Dry dermoscopy in clinical treatment of alopecia areata. *J Dermatol*. 2007; 34:635-639.
8. Tosti A., Whiting D, Iorizzo M, Pazzaglia M, Misciali C, Vincenzi C, Micali G. The role of scalp dermoscopy in the diagnosis of alopecia areata incognita. *J Am Acad Dermatol*. 2008; 59:64-67.
9. Tosti A. Dermoscopy of hair and scalp disorders with clinical and pathological correlations. Informa Healthcare. 2008.