

Dermoscopy as a useful supportive tool for the diagnosis of pityriasis amiantacea-like tinea capitis

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ABSTRACT Clinical distinction between pityriasis amiantacea-like tinea capitis and pityriasis amiantacea due to noninfectious inflammatory diseases is a troublesome task, with a significant likelihood of diagnostic errors/delays and prescription of inappropriate therapies. We report a case of pityriasis amiantacea-like tinea capitis with its dermoscopic findings in order to highlight the usefulness of dermoscopy in improving the recognition of such a condition.

Introduction

Pityriasis amiantacea (PA) is a scalp disorder presenting with thick, silvery/yellowish, asbestos-like scales wrapping around and binding down tufts of hair [1]. It is typically considered to be a reactive condition to several inflammatory diseases, which may affect the scalp, mainly including psoriasis, atopic dermatitis and seborrheic dermatitis [1]. However, although rarely, PA may be the presenting clinical pattern of dermatophyte infection (PA-like tinea capitis), thus emphasizing the importance of ruling out/confirming the possibility of tinea capitis when dealing with a case of PA [1,2] We here describe for the first time the usefulness of dermoscopy as a supportive diagnostic tool in an instance of PA-like tinea capitis.

Case report

A 9-year-old girl presented with a five-week history of a progressively worsening, asymptomatic, scaling patch on the scalp. Her past medical history was unremarkable and there was no personal or family history of atopic diathesis and skin diseases. Physical examination showed thick, adherent, whitish, asbestos-like scales on the right parietal region of the scalp, surrounding and binding the hair (Figure 1a); no other significant skin, nail or mucosal finding was evident. Dermoscopic examination (performed with DermLite DL3 x10; 3Gen, San Juan Capistrano, CA, USA) revealed diffuse white scales and compact white keratotic material adhering to tufts of hair (asbestos-like scaling) without erythema

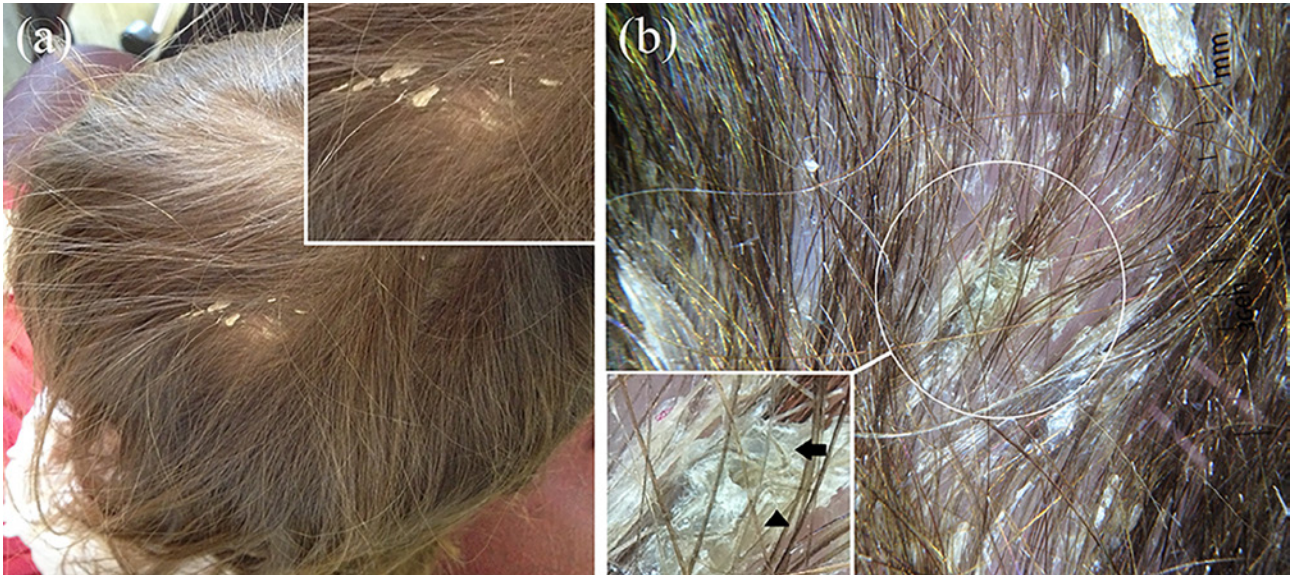


Figure 1. Physical examination shows thick, whitish, asbestos-like scales surrounding and binding the hair on the right parietal region of the scalp (better visible in the box) (a). Polarized light dermoscopic examination displays white scales and compact white keratotic material adhering to tufts of hair (asbestos-like scaling) without erythema; “question mark” (black arrow in the box) and “zigzag” (hair shaft bent at more than one point—black arrowhead in the box) hairs are also visible (b). [Copyright: ©2016 Errichetti et al.]

(Figure 1b); interestingly, several hairs displayed a “question mark” or “zigzag” (hair shaft bent at more than one point) appearance (Figure 1b). As such dermoscopic findings may be found in tinea capitis [3-7], we decided to carry out a direct microscopic examination of 10% KOH preparation of the scales scraped from the scalp, which showed septate branching hyphae. Specimens were also cultured on conventional Sabouraud’s dextrose agar medium, with evidence of *Microsporum canis* growth after three weeks, thus confirming the diagnosis of tinea capitis. The patient was treated with oral griseofulvin (15 mg/kg once daily) with complete resolution of the clinical picture after eight weeks of therapy.

Discussion

Clinical distinction between PA due to inflammatory noninfectious diseases and PA-like tinea capitis is a challenging task, with a significant likelihood of diagnostic errors/delays and prescription of inappropriate therapies [1,2]. Over the last few years, dermoscopy has been showed to be a useful auxiliary instrument for the recognition of several hair disorders [8-9], particularly dermatophyte infections [3-7]. Indeed, beside nonspecific findings (broken and dystrophic hairs, black dots, scaling, erythema, etc.), tinea capitis may display peculiar dermoscopic features such as “comma” hairs, “corkscrew” hairs, “zigzag” hairs, interrupted (Morse code-like) hairs, “elbow-shaped” hairs and “question mark” hairs [3-7]. Regarding the present instance, even though we observed dermoscopic findings that may be commonly seen in PA, i.e., diffuse white scaling and the characteristic compact white keratotic material adhering to a tuft of hair (asbestos-like scales) [10], dermos-

copy turned out to be very helpful in suspecting tinea infection by showing the aforementioned “zigzag” and “question mark” hairs. In fact, although such features (or similar findings) may be rarely found in other hair disorders (e.g., “zigzag” hairs in trichorrhesis nodosa, alopecia areata and monilethrix, and “question mark” hairs in alopecia areata) [3-7], they are typically not visible in classic PA [10].

In conclusion, even though the final diagnosis relies on mycological testing, dermoscopy might come in very handy for raising the suspicion of tinea capitis presenting with a PA-like appearance by showing peculiar dermoscopic findings (e.g., as shown in this case, “zigzag” and “question mark” hairs), which are typically not detectable in instances of PA due to inflammatory diseases. Obviously, further studies on larger groups of patients are needed to confirm our observations.

References

1. Abdel-Hamid IA, Agha SA, Moustafa YM, El-Labban AM. Pityriasis amiantacea: a clinical and etiopathologic study of 85 patients. *Int J Dermatol* 2003;42(4):260-4. PMID: 12694489. PMID: 10.1046/j.1365-4362.2003.01755.x.
2. Ginarte M, Pereiro M Jr, Fernández-Redondo V, Toribio J. Pityriasis amiantacea as manifestation of tinea capitis due to *Microsporum canis*. *Mycoses* 2000;43(12):93-6. PMID: 10838857. DOI: 10.1046/j.1439-0507.2000.00543.x.
3. Rudnicka L, Szepietowski JC, Slowinska M, et al. Tinea Capitis. In: Rudnicka L, Olszewska M, Rakowska A (eds). *Atlas of Trichoscopy*. 1st ed. London: Springer-Verlag, 2012;361-9.
4. Arrazola-Guerrero J, Isa-Isa R, Torres-Guerrero E, Arenas R. Tinea capitis. Dermoscopic findings in 37 patients. *Rev Iberoam Micol* 2015;32(4):242-6. PMID: 25728878. DOI: 10.1016/j.riam.2014.09.002.

5. Schechtman RC, Silva NDV, Quaresma MV, et al. Dermatoscopic findings as a complementary tool on the differential diagnosis of the etiological agent of tinea capitis. *An Bras Dermatol* 2015;90(3 Suppl 1):S13-5. PMID: 26312662. DOI: 10.1590/abd1806-4841.20153787.
6. Lacarrubba F, Verzi AE, Micali G. Newly described features resulting from high-magnification dermoscopy of tinea capitis. *JAMA Dermatol* 2015;151(3):308-10. PMID: 25471133. DOI: 10.1001/jamadermatol.2014.3313.
7. Wang HH, Lin YT. Bar code-like hair: dermoscopic marker of tinea capitis and tinea of the eyebrow. *J Am Acad Dermatol* 2015;72(1 Suppl):S41-2. PMID: 25500038. DOI: 10.1016/j.jaad.2014.05.063.
8. Errichetti E, Stinco G. The practical usefulness of dermoscopy in general dermatology. *G Ital Dermatol Venereol* 2015;150(5):533-46. PMID: 26086412.
9. Rudnicka L, Olszewska M, Rakowska A, Slowinska M. Trichoscopy update 2011. *J Dermatol Case Rep* 2011;5(4):82-8. PMID: 22408709. DOI: 10.3315/jdcr.2011.1083.
10. Verardino GC, Azulay-Abulafia L, Macedo PM, Jeunon T. Pityriasis amiantacea: clinical-dermatoscopic features and microscopy of hair tufts. *An Bras Dermatol* 2012;87(1):142-5. PMID: 22481666.