

Pilodermoscopy?

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With sufficient training and expertise, clinicians can use dermoscopy to improve diagnostic accuracy for melanocytic lesions and other common skin tumours. Dermoscopy may also be applicable in the examination of other elements of the skin, including vasculature, hair and nails.

Case presentations

Case 1

A 36-year-old female executive attended for assessment of recent onset patchy hair loss. She had a past history of atopic eczema, mild episodic asthma and seasonal rhinitis. The hair loss was localised over the left frontal scalp abutting the scalp margin and had occurred over a short period of time. She had noticed that the hairs in the region were loosely anchored and coming out easily with minor traction. Naturally she was concerned about the appearance and threat of further loss.

On examination, there was a patch of localised nonscarring alopecia measuring 7 by 6 cm over the left frontotemporal scalp (Figure 1). There was some fine, nonpigmented regrowth centrally. The hair pull test was diffusely positive at the margins of the patch of alopecia. Peripherally and best appreciated dermoscopically, small exclamation mark hairs

characteristic of alopecia areata were visible (Figure 2). Nails were normal without evidence of pitting or dystrophy.

The patient was treated with serial intralesional triamcinolone injections and her symptoms improved over four months to the point where cosmetically significant regrowth allowed adequate styling to conceal the area. Over a year, the localised alopecia completely resolved.

Case 2

A 45-year-old female sales assistant presented with scalp pruritus and discomfort associated with a large area of alopecia over the scalp vertex. She was taking antidepressants but was otherwise well. Her hairdresser had alerted her to the progressive alopecia, which was otherwise out of sight. A diagnosis of psoriasis had been previously suggested.

On examination there was a large patch of scarring alopecia over the scalp



Figure 1. Alopecia of the left frontotemporal scalp in case 1.



Figure 2. Dermoscopy of case 1 demonstrating multiple short exclamation mark hairs and yellow dots.

vertex (Figure 3). The area of scarring was pale, shiny and devoid of follicular openings. Multiple hairs were seen exiting a common follicular orifice throughout the zone of scarring. Dermoscopically this phenomenon of tufted folliculitis could be clearly seen (Figure 4). Beyond



Figure 3. Scarring alopecia of the scalp vertex in case 2.

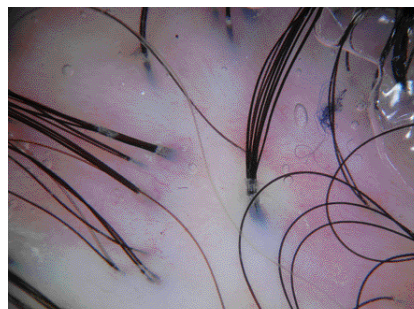


Figure 4. Dermoscopy of case 2 demonstrating several areas of tufted folliculitis on a background of scarring.

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the scarring, there was some perifollicular erythema and hyperkeratosis. Pustules were also present with swabs culturing *Staphylococcus aureus*. There were no mucosal or nail changes.

A scalp biopsy showed dermal abscesses with dense perifollicular inflammation, and foreign body granuloma formation consistent with folliculitis decalvans. Scarring and Gram-positive cocci were also present histologically. Basement membrane thickening was absent.

The patient was treated with 0.05% clobetasol propionate lotion, and a combination of oral clindamycin and rifampicin, both 300 mg twice daily. A widespread rash developed so both antibiotics were ceased. Doxycycline 50 mg twice daily was substituted in their place and over six months the pustules and inflammation settled leaving a stable area of scarring that was symptom free.

Diagnosis

The diagnosis in case 1 was alopecia areata and in case 2 was folliculitis decalvans.

Discussion

Although the discipline of dermoscopy arose as a supplemental examination tool for the assessment of pigmented lesions, its application today extends well beyond that domain. Dermoscopists know only too well the value of x10 magnification in the assessment of nail discolouration, nonpigmented lesions, infestations and even the scalp and hair shafts. In addition, before the ready availability of portable dermoscopes in the clinic, rheumatologists would use slit lamps from the ophthalmology clinic to assess nail fold vasculature in connective tissue disease.

A newly published text outlines the variety of hair and scalp disorders for which dermoscopy has valuable application.¹ These disorders include alopecia areata, which may demonstrate yellow dots in areas devoid of hair or containing dystrophic or miniaturised hairs.² This feature is thought to correlate with

distended follicular infundibula containing sebum and keratinous material. Short fractured dystrophic hairs or exclamation mark hairs may also be visible.

Folliculitis decalvans, on the other hand, is a rare form of acquired cicatricial alopecia, triggered by an abnormal immunological response to the presence of infection. On dermoscopy, scaling, crusting and peripilar casts can be observed as well as coiled capillary loops and tufted folliculitis (Figure 4). Alterations to the normal scalp vasculature will be best appreciated with videodermoscopy at magnifications of x30 or greater. The presence of multiple hairs exiting a single follicular opening is not seen only in folliculitis decalvans, but also in other forms of inflammatory alopecia such as lichen planopilaris and lupus erythematosus.

Other useful applications of dermoscopy for hair loss include the assessment of diversity of hair shaft diameter in androgenetic alopecia (greater than 20% variation is considered diagnostic), presence of beaded hair shafts in monilethrix or even differentiation of nits from scalp scaling and debris in head lice.

Key points

Dermoscopy may be useful in the assessment of hair and scalp disorders. Polarised light noncontact dermoscopy without oil immersion is just as simple in this setting. The examination of hairs specifically by dermoscopy might be termed 'pilodermoscopy' using traditional dermatological nomenclature. **MT**

References

1. Tosti A. Dermoscopy of hair and scalp disorders with clinical and pathological correlations. London: Informa Healthcare; 2007.
2. Tosti A, Whiting D, Iorizzi M, et al. The role of scalp dermoscopy in the diagnosis of alopecia areata incognita. *J Am Acad Dermatol* 2008; 9: 64-67.

COMPETING INTERESTS: None.