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Trichoscopy Tips

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KEYWORDS

• Trichoscopy • Dermoscopy • Alopecia • Hair • Lupus • Lichen planopilaris • Eyebrows • Scalp

KEY POINTS

- Trichoscopy is useful to diagnose early scarring alopecias and to select the optimal biopsy site in these patients.
- Trichoscopy can easily distinguish hair loss from hair breakage and provides good information on hair shaft damage.
- The pigmented scalp has unique trichoscopic features that make diagnosis of scarring alopecia more difficult.
- Be aware of possible pitfalls, including scalp staining and scalp and hair shaft deposits.

INTRODUCTION

Dermoscopy has only recently been introduced in the assessment of hair and scalp disorders. However, in the past few years, much attention has been given to the method, with many studies focusing on its applications in the field being published; to the point that many hair specialists now consider dermoscopy as an essential part of their dermatologic consultation. Dermoscopy allows visualization of morphologic structures that are not readily visible by the naked eye, including perifollicular and interfollicular features, as well as changes to hair shaft thickness and shape. 1 In 2006, the name trichoscopy was first proposed for the use of dermoscopy in the diagnosis of hair and scalp disorders² and is now widely adopted.3 The aim of this article was not to make an extensive and overdetailed review of all trichoscopic signs, but rather to discuss topics that may be a source of doubt and to give tips that will help clinicians to better perform trichoscopy.

PERFORMING TRICHOSCOPY: THE BASICS How to Evaluate My Patient

First, it is important to determine in which general group of hair loss your patient best fits: diffuse, patchy, or marginal alopecia. Examination of the scalp will depend on the type of hair loss presented by the patient.⁴ In addition, examination of hair shafts and eyebrows may be decisive in some individuals.

Diffuse alopecia

In patients with diffuse hair loss, it is important to part the hair in the midline and to examine at least 3 sites: frontal and middle scalp and vertex. We recommend evaluating each one of the sites with at least 2 magnifications: first with a lower one (×10–20) and then with a higher magnification (×40–50). Hair diameter variability, a hallmark of androgenetic alopecia (AGA), may be better appreciated at higher magnifications (Fig. 1). Because the occipital scalp is commonly spared in patients with AGA, control pictures can be taken from this site for comparison.

Patchy alopecia

When patients present with patchy alopecia, both the center and the periphery of the alopecic patch should be checked. When examining the center of the lesion, it is important to establish whether hair follicle openings are present or not. Loss of follicular openings will guide the diagnosis toward a scarring

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Fig. 1. Hair shaft variability: presence of more than 20% diversity in the hair shaft diameter is suggestive for a diagnosis of androgenetic alopecia.

condition. Signs of disease activity may be present either at the center or at the periphery of lesions, depending on the etiology. So, the latter should always be examined, as well. In addition, it is important to evaluate apparently normal scalp surrounding alopecic patches because early signs of disease activity may already be present in trichoscopy, even before hair loss becomes clinically evident.

Marginal alopecia

An important tip when evaluating a patient with marginal alopecia is to check if vellus hairs are present. Loss of vellus hairs in the hairline is a typical sign of frontal fibrosing alopecia (FFA) (Fig. 2).

"My hair does not grow"

This is a common complaint of patients with either congenital or acquired hair shaft disorders. In these cases, shafts should be directly examined and trichoscopy has satisfactorily replaced optical microscopy in most scenarios. For hair shafts, it's interesting to use polarized light, and higher

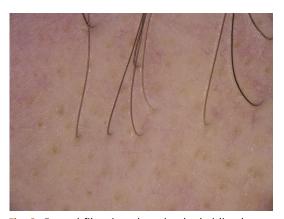


Fig. 2. Frontal fibrosing alopecia: the hairline has no vellus hair.

magnifications are needed (at least \times 70). Clinicians should look for causes of hair breakage, such as trichorrhexis nodosa (Fig. 3), commonly seen in hair weathering; or hair shaft defects that may signal a congenital condition, such as the typical constrictions of monilethrix (Fig. 4).^{5,6}

Evebrows

Hair disorders, such as alopecia areata (AA) and FFA, may also affect the eyebrows (Fig. 5). Trichoscopy may be quite useful, particularly in cases of atypical presentation or when the disease is limited to this area.⁷ Of note, disorders or hair shaft formation, such as trichorrhexis invaginata, might be detectable only in the eyebrows.

Immersion Fluid: When to Use It

A few variables will determine whether immersion fluid should be used or not, when performing trichoscopy. A few simple points should be taken into account:

- 1. Contact dermoscopy always will be necessary if an immersion fluid is being used.
- Devices with nonpolarized light will require the use of an immersion fluid to cancel out reflections from the stratum corneum.
- Immersion fluids may hamper evaluation of scaling conditions and visualization of vellus and white hairs (as they "disappear" when a fluid is used).
- "Elimination" of scaling with immersion fluid is sometimes desirable, as excessive scaling may interfere with visualization of underlying trichoscopic features.

As a general rule, we start the examination with dry dermoscopy and then use an immersion fluid if we judge necessary. The choice of the immersion fluid (eg, water, gel, alcohol) is a matter of personal choice.

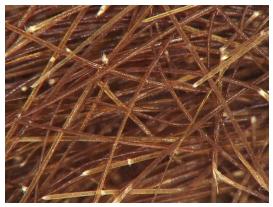


Fig. 3. Trichorrhexis nodosa.

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