Sir,

Trichoscopy refers to dermoscopy of the scalp and hairy areas, and several patterns have already been associated with alopecias. Trichoscopic findings not related to diseases have been reported. The said findings could be potentially mistaken with typical signs of alopecias, which in turn might lead to misdiagnosis and delayed treatment. This article’s goal is to provide practical tips on how to dodge these pitfalls and illustrate them. Artifact images are compared to clinically relevant ones to clarify their peculiarities.

Dirty dots, leftover hair dyes, and cosmetic fibers can hinder correct trichoscopic interpretation and mimic clinically relevant findings.

Dirty dots are a normal trichoscopic finding in healthy children and the elderly, resulting from the scalp’s inability to repel environmental debris due to a decrease in sebaceous gland activity. Clinically, they appear as particles of multiple colors, irregularly distributed. Black dots represent pigmented hair shafts broken at follicular ostia level, described in several alopecias. In alopecia areata (AA), these structures are typically related to disease activity. Unlike black dots, dirty dots are not necessarily located in follicular openings and are easily removed after shampooing.

Broken hairs result from transverse fracture of terminal shafts. They can be found in several alopecias and in AA are related to disease activity. Trimmed shafts from patients with short hair recently cut can resemble broken hairs. These fragments have different lengths, are irregularly distributed, and are not attached to the scalp, which helps in distinction.

Another pitfall may arise when patients use hair dyes. Permanent hair dye accumulation is usually restricted to follicular ostia, appearing as small dots. Semi-permanent hair dye deposits are more spread on the scalp, seen as

Figure 1: (a) Dirty dots: Environmental residues that are physiologically found in children and the elderly. (b) Black dots: Result from hair shafts broken at follicular ostia level. Unlike black dots, dirty dots are not necessarily associated with follicular openings

Figure 2: (a) Haircut: Trimmed shafts from patients with short hair recently cut can resemble broken hairs. (b) Broken hairs: They result from transversal break of terminal hairs and are correlated with activity of some diseases

Figure 3: (a) Permanent hair dye: Its accumulation is usually restricted to follicular ostia, having the appearance of small dots. (b) Yellow dots: Correspond to dilated follicular infundibulum filled with sebum and keratin

Figure 4: (a) Semi-permanent hair dye: They deposit dispersedly on scalp, coloring inter and perifollicular areas, generating coarser dots. (b) Red dots: Represent rich vascularization of hair follicles. They can be physiological finding or seen in diseases such as lupus
coarser dots. Depending on the shade used, hair dye may simulate black, red, or yellow dots.[4] Yellow dots correspond to dilated follicular infundibulum filled with keratotic material and sebum, typically found in AA, discoid lupus erythematosus (DLE), androgenetic alopecia (AGA), and dissecting cellulitis.[1] Red dots can be a feature of DLE or be found on normal scalp, related to rich vasculature surrounding hair follicles.[5] To avoid these pitfalls, it is important to inquire about hair dye use and instruct patients to wash the scalp at least twice before examination, thus minimizing residues accumulation[4] [Figures 3a, b and 4a, b].

Cosmetic keratin fibers are inert camouflage, which attach electrostatically to hair shafts and may be misinterpreted as miniaturized or short regrowing hairs.[2] Short regrowing hairs can be found in AA, associated with disease remission.[3] They were also described in trichotillomania, traction alopecia, and telogen effluvium. Hair miniaturization is a typical trichoscopic finding of AGA.[3] Washing the scalp before examination removes cosmetic fibers and helps to avoid this artifact [Figure 5a and b].

Artifacts in trichoscopy are more common than imagined and represent possible pitfalls that may lead to incorrect diagnoses. This article addresses four of these findings, comparing them with clinically relevant trichoscopic signs. Dermatologists must be aware of these artifacts to recognize them and minimize misinterpretations. Thorough anamnesis and correct orientations to patients are the keys to avoid trichoscopic pitfalls.

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