

Editorial

Scalp Dermoscopy: An Absorbing Perspective to Discriminate Disorders of the Hair and Scalp

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Executive Editor

Dermoscopy or videodermoscopy has been proven to be a valuable tool in the evaluation of various changes in the hair and scalp in recent years. Although an immersion gel or liquid is conventionally utilized for the diagnosis of pigmented tumors, examination of hair and scalp may efficiently be performed with dry dermoscopy. A significant number of studies indicating availability of dermoscopy as a diagnostic tool exist, which concern about the advantages of dermoscopic diagnosis of hair and scalp disorders avoiding unnecessary scalp biopsies, identification of diagnostic features of various scalp disorders definition of structural patterns of videodermoscopic changes, evaluation of specificity of dermoscopic patterns and finally the role of dermoscopy for a better understanding of pathogenesis of some hair and scalp disorders.

Videomicroscopy has been initially employed for phototrichogram and suggested to be a useful technique in the evaluation of scalp hair [1] Consequently an increasing number of reports concerning measurement of hair growth and hair diameter in vivo and distinctive features of hair follicle miniaturization followed. Most of these studies are focused on the diagnostic dermoscopic features of alopecia areata and early diagnosis of female pattern hair loss [2, 3, 4, 5]. Ross *et al.* evaluated the digitally stored images from a broad range of scalp and hair conditions and defined recognizable patterns, in a retrospective study [6].

Vascular patterns may easily be recognizable with videodermoscopy either as simple or twisted loops and appear to correspond to capillary structure of dermal papilla. Twisted loops are seen in psoriatic scalp and in psoriasis-like forms of seborrheic dermatitis while vascular structures are generally absent in cicatricial conditions such as discoid lupus erythematosus (DLE). Interfollicular honeycomb pigment pattern is relevant to the sun-exposed areas of thinning or complete hair loss typically on the mid-scalp of affected individuals and appears to be a marker of chronic conditions of alopecia. Yellow dots are distinctive peripilar features which are seen in all stages of chronic alopecia areata [5, 6, 7] while they represent distension of the affected follicular infundibulum with keratinous material and sebum. Yellow dots represent a valuable parameter for the diagnosis of alopecia areata and enable accurate diagnosis in clinically puzzling cases when telogen effluvium or trichotillomania need to be differentiated. Some patterns may be well-correlated with the pathogenesis of the disease or ongoing inflammatory process: A pigment network is seen in dark-skinned individuals inside the plaques of hair loss. Since interfollicular epidermis is generally unaffected by the inflammatory process in lichen peripilaris (LPP), this sign may help in differentiating this clinical condition from other types of scarring alopecias, as DLE [7]. In frontal fibrosing alopecia, which is a clinical variant of LPP the most prominent dermoscopic findings are loss of follicular openings, peripilar erythema and

scales [8]. The pigmentary incontinence of the papillary dermis is represented by blue-grey dots which may be detected at follicular or interfollicular areas and this finding is suggested to be one of the discriminating features of LPP and DLE [7].

Androgenetic alopecia is characterized by hair diameter diversity which is due to stages of miniaturization of the follicles. Variability in the hair shafts diameter of exceeding 20% is diagnostic [2]. Peripilar brown depressions have been described in early androgenetic alopecia while honeycomb pigment pattern and yellow dots may be observed in advanced conditions [9].

Dermoscopic characteristics mostly have clinical significance in alopecia areata not only for the differential diagnosis of special cases but also investigating the clinical activity and response to the treatment [10, 11]. Black dots, tapering hairs and broken hairs indicate strong disease activity while short vellus hairs are found to be characteristic for remitting disease [11].

Dermoscopy has been described to exhibit clues to the diagnosis of scalp sarcoidosis, acute diffuse and total alopecia of the female scalp [12, 13], and tinea capitis [14]. Of these conditions, acute diffuse and total alopecia of the female scalp, which is first described by *Braun-Falco* and *Zaun* as an increased rate of telogen hairs in the non-lesional scalp area of alopecia areata patients [15], is of great significance, since this condition which is also designated as alopecia areata incognito; do not have distinctive histopathologic features. Rapid progression evidenced by an increase in total hair loss of more than 20% during the month prior to the first visit without an apparently circumscribed hair loss and having a favourable prognosis and diffuse hair loss on the midline of the scalp along with the detection of yellow dots, broken hairs, or short vellus hairs, cadaverized hairs or exclamation mark hairs indicate ADTAFS and by means of dermoscopy this condition may be distinguished from female pattern hair loss and telogen effluvium [12].

The scalp examination may be performed by a computerized polarized- light microscopy (*FotoFinderDermatoscope*) lenses with x 20-

70 magnifications, or *Dermlite II*, or using a hand-held dermoscope with a x10 magnification without an immersion gel.

Scalp dermoscopy enables a better understanding of hair and scalp disorders and promises to be a non invasive, practical and prompt way of diagnosis for various types of hair loss.

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