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Original Article

Dermoscopy in selected disorders of scarring alopecia

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Abstract

Objective To study the dermoscopic features of lichen planopilaris (LPP), discoid lupus erythematosus (DLE) and pseudopelade of brocq (PB) affecting the scalp.

Methods Retrospective observational analysis of dermoscopic characteristics of 18 cases with LPP, DLE, PB were studied. Polarised dermatoscope at 10X magnification in polarized mode was used and photographs were captured. The evaluated parameters included perifollicular changes, vascularity, white dots, keratin plugs, number of follicular ostia.

Results Perifollicular scales, white dots and blue-grey dots along with accentuation of honey comb pattern were seen in LPP. Keratin plugs, white dots and blue-grey dots along with branching vessels were seen in DLE. In PB lack of follicular ostia were present.

Conclusion Dermoscopy thus is helpful in differentiating LPP, DLE and PB and obviating the need of biopsy in all cases.

Key words
Dermoscopy, lichen planopilaris (LPP), discoid lupus erythematosus (DLE), pseudopelade of brocq (PB).

Introduction

Scarring alopecia comprises a group of uncommon inflammatory hair loss disorders, which are characterized by permanent destruction of hair follicles. Dermoscopy does play an important role in improving our final diagnosis.

Methods

In this observational study, we included 18 patients irrespective of age and gender with clinically and histopathologically confirmed cases of lichen planopilaris (LPP), discoid lupus erythematosus (DLE), pseudopelade of Brocq (PB). Ethical clearance was obtained Institutional Ethical Committee. Inclusion criteria for study participation were, clinical and histopathological confirmed cases LPP, DLE, PB affecting the scalp. Patient demographics were recorded and the single most recently developed lesion was examined dermoscopically and histopathologically. Dermoscopy preceded histology, and no treatment was allowed in the interim. The most recently developed lesion of each patient was selected to be dermoscopically documented. Dermoscopic examination was performed with a hand-held dermatoscope (Dermlite DL4, 3gen) and the images were captured. The evaluated parameters included perifollicular changes, vascularity, white dots, keratin plugs, number of follicular ostia. Histological diagnosis of LPP, DLE, PB was based on the identification of the characteristic

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Table 1 Dermoscopic characteristics of the patients

Pattern	*LPP*	*DLE*	*PB*
Perifollicular scaling	6	4	0
Pigment network	6	2	1
Branching vessels	0	4	0
White dots	6	2	
White structureless areas	3	3	
Blue gray dots	3	2	0
Keratin plugs	0	3	0
Decreases number of follicular ostia	6	4	6
Rossettes	0	2	0
Bluish white veil like Wickhams striae	3	1	0

DLE: Discoid lupus erythematosus, LPP: lichen planopilaris, PB: Pseudopelade of Brocq.

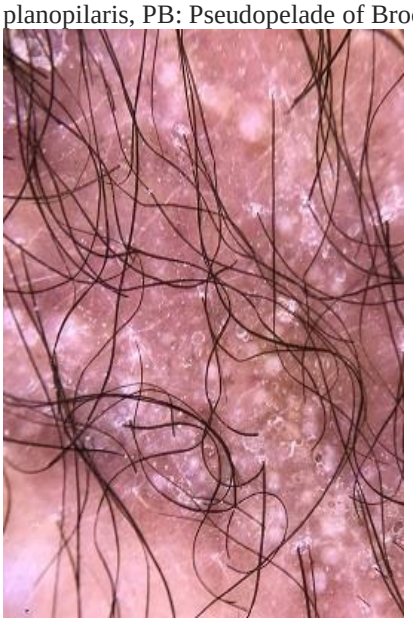

Figure 1 Dermoscopic image of LPP showing bluish white veil with perifollicular scales with loss of follicular ostia

Figure 2 Dermoscopic image of DLE showing keratin plugs, white dots along with branching vessels

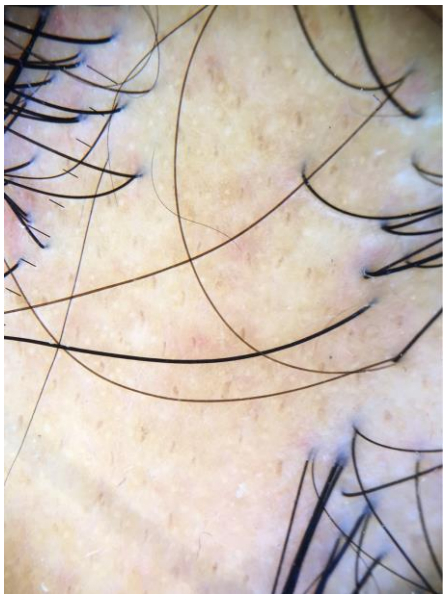

Figure 3 Dermoscopic image of Pseudopelade of brocq (PB) showing loss of follicular ostia

features of each disease under microscopic examination.

Results

Perifollicular scales, white dots and blue-grey dots along with accentuation of honeycomb pattern were seen in LPP (**Figure 1**). Keratin plugs, white dots and blue-grey dots along with branching vessels were seen in DLE while there was lack of follicular ostia in PB (**Figure 2**, **3**). The details of dermoscopic appearance has been depicted (**Table 1**).

Discussion

Lacarrubba *et al*.[1] and Ross *et al*.[2] initially described dermoscopic findings related to various scalp abnormalities such as androgenetic alopecia, alopecia areata, discoid lupus erythematosus, lichen planopilaris, psoriasis and seborrheic dermatitis. Histopathologically, the multiple blue-grey dots represent melanophages

in the papillary dermis.[3] This finding corresponds to the histopathological abnormalities found in lichen planopilaris and discoid lupus erythematosus resulting from interface dermatitis and the subsequent pigment incontinence. Nevertheless, it is interesting to note the two distinct patterns were found at dermoscopy. The first, referred to as a "speckled" pattern, is similar to the "peppering" described in melanoma lesions.[3] Interesting finding in lichen planopilaris is tubular scaling which can helpful to differentiate it from DLE. The scales are entangling hair shaft up to 2-3 mm above scalp surface described as tubular scaling phenomenon.[4] Our findings are in line with other studies, pigment network and bluish white veil like Wickham's striae seemed to be more prominent feature of LPP in our study

In DLE, the most common findings reported by Estrada *et al*.[5] included white patches, branching capillaries, keratin plugs, and a reduction in the number of follicular ostia. Rosettes vary in size from 0.2-0.5 mm, and are believed to stem from an optical effect of the polarized light and its interaction with adnexal openings that are narrowed or filled with keratin; larger rosettes may be attributed to concentric perifollicular fibrosis.[6] The author (AK Jha) has previously reported branching vessels, focal keratin plugs, perifollicular whitish halo, rosettes, and structureless white and brown areas on dermoscopy.[7] Our study was in accordance with the previous reported studies.

The number of hair is characteristically reduced in scarring alopecia and may range from total absent hair in pseudopelade of Brocq.

Conclusion

Bluish white veil like WS, blue gray dots, perifollicular scaling and accentuation of honey comb pattern is highly suggestive of LPP, while keratin plugs and branching vessels in DLE. Dermoscopy thus is helpful in differentiating LPP, DLE and PB and obviating the need of biopsy in all cases.

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