

Original Research

Assessment of Dermoscopic findings in Discoid lupus erythematosus patients

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ABSTRACT:

Background: Cutaneous lupus erythematosus encompasses a wide range of dermatologic manifestations, which may or may not be associated with the development of systemic disease. Discoid lupus erythematosus (DLE) appears as erythematous scaly plaques in the early stages. Hence; the present study was conducted for assessing the Dermoscopic findings in Discoid lupus erythematosus patients. **Materials & methods:** The present study was conducted for assessing the Dermoscopic findings in Discoid lupus erythematosus patients. Ten patients with DLE were enrolled. Patients were clinically examined. Dermoscopic assessment was done with the help of a dermoscope. Detailed history was taken regarding duration of complaints, age at onset, treatment history and any other medical disorder. All the results were compiled and analysed using SPSS software. Results were expressed as mean \pm SD for quantitative data. **Results:** Arborising vessels, speckled pattern blue grey dots and follicular plugging was seen in 100 percent of the patients each. Yellow dots were seen in 20 percent of the patients. White patches were seen in 30 percent of the patients. Scaling was seen in 80 percent of the patients. **Conclusion:** The study recommends dermoscopy as a precious tool for distinguishing skin lesions and their unique dermoscopic patterns.

Key words: Discoid lupus erythematosus

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INTRODUCTION

Cutaneous lupus erythematosus encompasses a wide range of dermatologic manifestations, which may or may not be associated with the development of systemic disease. Cutaneous lupus is divided into several subtypes, including acute cutaneous lupus erythematosus, subacute cutaneous lupus erythematosus, and chronic cutaneous lupus erythematosus. Chronic cutaneous lupus erythematosus includes discoid lupus erythematosus, lupus erythematosus profundus, chilblain cutaneous lupus, and lupus tumidus.¹⁻³ Discoid lupus erythematosus (DLE) appears as erythematous scaly plaques in the early stages. Then, lesions get thickened with adherent scales and follicular plugging. In late stage, lesions become depressed, depigmented, and telangiectasia.⁴⁻⁶ The scalp is most frequently affected, but the face, trunk, and extremities can also be involved. Classical lesions include violaceous to erythematous, scaly plaques

with prominent follicular plugging. Without prompt diagnosis and treatment, the lesions can lead to disfiguring scarring and atrophy.⁷ Hence; the present study was conducted for assessing the Dermoscopic findings in Discoid lupus erythematosus patients.

MATERIALS & METHODS

The present study was conducted for assessing the Dermoscopic findings in Discoid lupus erythematosus patients. Ten patients with DLE were enrolled

INCLUSION CRITERIA

- Patients of any age or sex with DLE.

EXCLUSION CRITERIA

- Patients who did not signed the written consent form prior to participation in the study.
- Patients were clinically examined. Dermoscopic assessment was done with the help of a dermoscope. Detailed history was taken regarding duration of

complaints, age at onset, treatment history and any other medical disorder. All the results were compiled and analysed using SPSS software. Results were expressed as mean \pm SD for quantitative data.

RESULTS

In the present study, a total of 10 DLE patients were enrolled. Mean age of the patients was 43.5 years. 60 percent of the patients were of rural residence while

the remaining 40 percent were of urban residence. 70 percent of the patients were males while the remaining were females. Arborising vessels, speckled pattern blue grey dots and follicular plugging was seen in 100 percent of the patients each. Yellow dots were seen in 20 percent of the patients. White patches were seen in 30 percent of the patients. Scaling was seen in 80 percent of the patients.

Table 1: Dermoscopic findings and their histopathologic correlation in DLE patients

Dermoscopic findings	Number	Percentage
Yellow dots	2	20
Arborising vessels	10	100
White patches	3	30
Speckled pattern blue grey dots	10	100
Scaling	8	80
Follicular plugging	10	100

DISCUSSION

Discoid lupus erythematosus (DLE) is the most disfiguring form of cutaneous lupus erythematosus (CLE). Recurrent outbreaks of inflammatory lesions usually affecting photo exposed areas (face, ears) and scalp, lead to a prominent scarring that might have a high impact on the quality of life of the patients. Therefore, early treatment is mandatory to minimize these undesirable consequences. Most patients with DLE will respond to strict photoprotection, smoking cessation and topical treatment (corticosteroids, calcineurin inhibitors). Antimalarial drugs are considered the first-line systemic treatment.⁶⁻⁸ Hence; the present study was conducted for assessing Dermoscopic findings in Discoid lupus erythematosus patients.

In the present study, a total of 10 DLE patients were enrolled. Mean age of the patients was 43.5 years. 60 percent of the patients were of rural residence while the remaining 40 percent were of urban residence. 70 percent of the patients were males while the remaining were females. Thakur BK et al studied the clinical, trichoscopic, and histopathological characteristics of Primary cicatricial alopecia (PCAs) of the scalp and to find out the concordance between trichoscopic and histopathological diagnosis. They retrospectively analyzed the clinical, trichoscopic, and histopathological features of 24 PCA patients. A total of 24 patients of PCA were seen with a male: female ratio of 2:1. There were 10 (41.7%) patients of discoid lupus erythematosus (DLE), 5 (20.8%) of lichen planopilaris (LPP), 3 (12.5%) of dissecting cellulitis of scalp, and 2 (8.3%) each of pseudopelade of brocq, folliculitis decalvans, and frontal fibrosing alopecia. The important histopathological findings of DLE were follicular plugging, vacuolar changes in the basal layer, necrotic keratinocytes, and superficial and deep perifollicular and perivascular lymphocytic infiltrate. Histopathology of LPP showed vacuolar changes in the basal layer and lichenoid infiltrate involving the infundibulum and isthmus. Trichoscopy of DLE

showed follicular plugging, yellow dots, and thick arborizing blood vessels. The peripilar cast was important finding in LPP. The characteristic yellow dot with three-dimensional structure was noted in dissecting cellulitis of the scalp. The Cohen's kappa agreement was 0.89 between histopathological and trichoscopic diagnosis.¹⁰

In the present study, Arborising vessels, speckled pattern blue grey dots and follicular plugging was seen in 100 percent of the patients each. Yellow dots were seen in 20 percent of the patients. White patches were seen in 30 percent of the patients. Scaling was seen in 80 percent of the patients. Dermoscopic findings described in previous studies on scalp DLE include follicular red dots, reduced follicular ostia, arborizing vessels, white patches, honeycomb pigmented network, blue-grey dots, and variable scaling. Follicular keratotic plugging is a typical feature of DLE that can be easily appreciated on clinically and dermoscopically. Clinically, the keratotic plugs have been referred to as the carpet tack sign since they project up similar to carpet tacks.¹¹ Several dermoscopic features have been established in DLE. Active lesions show "red dots", which are erythematous, polygonal, and concentric in structure, linked to dilated vessels and extravasated erythrocytes in perifollicular distribution on pathology. Large, yellow-brown dots correspond to keratotic plugs in the dilated follicular ostia. Longstanding, inactive lesions show absence of follicular openings and cicatricial milky red or white patches and structureless white and brown areas. Thick arborizing, monstrous vessels may be noticed too. Large yellow dots with thin arborizing vessels at the periphery (red spider in a yellow dot) are characteristic for the late DLE lesions. In dark skin, loss of pinpoint white dots can be appreciated due to the inflammatory infiltrate involving the adnexal structures, and a pigmented network may be seen at the periphery of the plaque. A speckled pattern of blue-gray dots has also been reported and attributed to the presence of

melanophages in the interfollicular papillary dermis.^{12,13} In dermoscopy, a blue hue is generally considered a clue to malignancy in solitary pigmented skin lesions. According to Massi et al, the diagnoses most commonly associated with this finding are malignant melanoma and Spitz/Reed naevi. Histopathologically, this dermatoscopic feature correlates with the presence of an acantholytic epidermis with compact orthokeratosis overlying large amounts of melanin in the dermis. The structureless, white areas described in end-stage lesions of DLE are different because they correspond histologically to diffuse dermal fibrosis.^{12,13}

CONCLUSION

The study recommends dermoscopy as a precious tool for distinguishing skin lesions and their unique dermatoscopic patterns.

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