

Dermatoscopy of Inflammatory Diseases in Skin of Color

Abstract

Dermatoscopy is a relevant *in vivo* diagnostic tool for inflammatory diseases of the skin that aids not only in diagnosis, but also in monitoring the response to treatment. The inflammatory diseases show dermoscopic patterns involving the vessels, scales, follicles, background hue, and special clues. This review aims to provide an overview on the use of dermatoscopy in inflammatory dermatoses based on the available literature and the deviation from it in the skin of color (SOC) as there is paucity of literature in dermatoscopy of inflammatory disorders in SOC. The dermoscopic patterns in most of the inflammatory diseases in SOC are similar to that of white skin, with pigmentary changes being the prominent dermoscopic findings while vascular patterns and erythema being less evident.

Keywords: Dermatoscopy, dermoscopy, inflammoscopy

Introduction

Dermoscopy or dermatoscopy of the inflammatory diseases, also known as inflammoscopy, has become a relevant diagnostic tool not only for diagnosis but for their assessment as well.^[1] Use of dermatoscopy by dermatologists in India is mainly in the context of inflammatory dermatoses and hair disorders, rather than skin tumors when compared to the West.^[2]

The salient dermoscopic findings in the inflammatory diseases are: vessels (morphology and arrangement), scales (color and distribution), follicular findings, and background color. In addition, there are certain important clues that are specific to the disease per se. Scales are important features of papulosquamous disorders and their color and arrangement can help us to distinguish most of such dermatoses.^[3] For vascular structures, the use of noncontact polarized dermatoscopes is usually recommended as they preserve such findings; an interface fluid (70% ethanol, oil or gel) is preferably required to enhance the visualization of structures covered by overlying scaling.^[4] Six main morphological categories of vascular patterns are noted: dotted, linear (irregular or serpentine), comma (curved), hairpin (looped), glomerular (coiled),

and arborizing (serpentine, branched).^[5] However, the main deterrent to the utility of dermatoscopy in skin of color (SOC) is the presence of higher melanin content in the basal layer preventing vessels from visualization through dermatoscopy. Multispectral dermatoscopes with yellow and red light may be helpful in dark skin as the vessels and dermal pigmentation stand out black against the yellow or red background offering better contrast.^[6]

Among dark-skinned patients, dermoscopic findings are mostly the same as reported in the literature for light skin. Only the frequencies of vascular features, predominant background colors, and pigmentary changes show differences which can be attributed to the different intensity of skin pigmentation.^[7]

Papulo-Squamous Disorders

Psoriasis

Dermoscopy of plaque psoriasis (PP) characteristically reveals white scales, regular and symmetrical distribution of dotted vessels which are uniform in size and shape, on a light or dull red background, corresponding to the parakeratosis, and dilated capillaries in the regularly arranged dermal papillae, respectively [Figure 1a and b].^[3,5] The globular ring pattern, with vessels distributed in a network-like arrangement,

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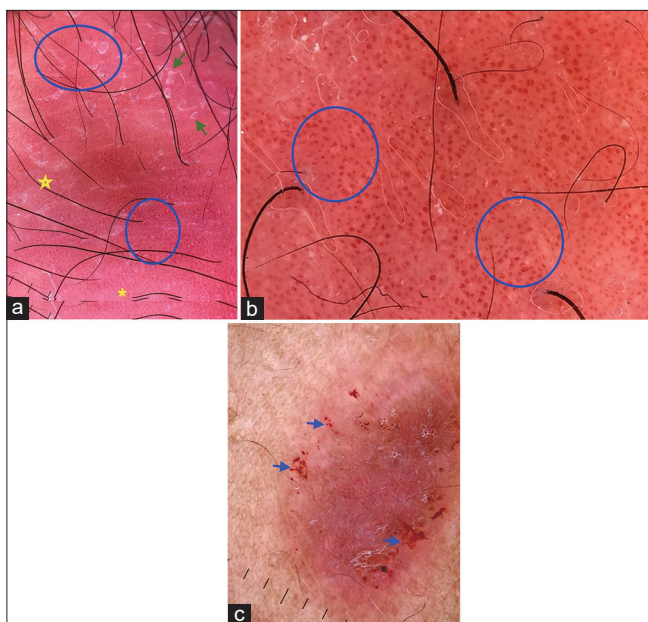


Figure 1: (a) Dermatoscopy of psoriasis showing regularly arranged uniform red dots (blue circles) and white scales (green arrows) on a dull red background (yellow stars); (Dermlite DL3N 10X, polarized mode). (b) Regularly arranged red globules (blue circles) at high magnification. (Dermlite DL3N 20X, polarized mode). (c): Dermoscopic auspitz sign showing pin point hemorrhagic dots (Dermlite DL3N 10X, polarized mode)

is less commonly seen.^[3] Dermoscopic “auspitz sign” is elicited by removing the scales or applying interface fluid for hyperkeratotic lesions and red dots or tiny red blood drops can be visualized [Figure 1c].^[8]

The dermoscopic features seen at different body sites and in subtypes of psoriasis is similar with mild variations. Due to higher hydrostatic pressure on the legs, the vessels may appear as red globules.^[9] In scalp or palmoplantar psoriasis, the thick hyperkeratotic scales need to be removed to visualize the underlying vascular structures.^[10] In psoriatic balanitis and inverse psoriasis, lesions lack scaling, but show typical vascular pattern of regularly distributed red dots.^[10,11] In palmoplantar and pustular psoriasis, yellow globules (pustules) and crusts, while in follicular psoriasis, white follicular keratotic plugs, surrounded by uniform dotted vessels, are visualized.^[3]

Dermoscopic features of psoriasis in SOC are essentially similar, however, presence of brown to bluish-brown globules, blotches, and clods can be observed in longstanding cases, because of pigmentary incontinence histologically, due to itching, rubbing, and scratching.^[12,13] Persistence of psoriatic pattern of vessels with minimal scaling is a dermoscopic clue to diagnosis in topical corticosteroid-modified lesions.^[13] Dermoscopy may also be helpful in treatment evaluation and monitoring as the presence of globular vessels in psoriatic lesions is a negative response predictor to narrowband ultraviolet B (Nb-UVB) phototherapy and hemorrhagic dots are a positive predictive sign for treatment with biological agents.^[14,15]

Lichen planus

Wickham’s striae (WS) is the dermoscopic hallmark of lichen planus (LP) with vessels, dots, and pigment structures. WS, corresponding to hypergranulosis, has many patterns and colors, commonest pattern being reticular followed by linear, radial-streaming, annular, round, leaf venation, and starry sky/white dots.^[16] The color varies from white to bluish in dark skin.^[13] In SOC, in all subtypes of LP, non-vascular findings are the predominant dermoscopic features which include white structures with linear streaks and gray-blue dots or brown punctate areas (melanophages in dermis).^[17] The background color in classical LP is reddish in early lesions, whitish in active lesions, brown in resolving and diffuse brown background with fine or coarse gray-blue dots in resolved lesions.^[18] The vessels are dotted, globular, or linearly arranged at the periphery of the lesion and less appreciable in dark skin.^[19]

In annular LP, peripheral round white WS are present, whereas in hypertrophic LP, WS are absent but comedo-like openings (CLO) filled with yellow keratinous plugs can be seen along with peripheral white striations, bluish-gray globules and yellowish structures.^[19,20] CLO correspond to dilatation, plugging, and hypergranulosis of the infundibula and is suggestive of transepithelial elimination.^[21]

Lichen planus pigmentosus (LPP), the macular variant of LP, affecting largely the dark skinned population, shows “hem” like distribution of brownish-gray dots and globules with exaggerated pseudoreticular pattern and accentuation of pigmentation around hair follicle openings.^[22] Dermoscopy also helps in assessing if post-inflammatory pigmentation persists for long, as presence of pigment granules indicates a long course [Figure 2a-d].^[17]

Dermatitis

Dermoscopy reveals characteristic serocrusts, patchily arranged dotted vessels, and dull red background. The color varies with the stage of the disease. In acute exudative lesions, yellow-brown to dark brown colored serocrusts predominate (yellow clod sign).^[23] The background assumes a variegated appearance in the subacute stage, with a faint background red color, corresponding to spongiosis, interspersed with brown pigmented structures (reticular pattern, lines, globules, and clods) suggestive of evolving pigmentary incontinence. The scales may be white or yellowish-white, but often have a “dirty” brown hue and may be peripheral.^[24] In addition to the common patchily distributed dotted vessels, other vascular patterns seen are red globules, linear, curvilinear, arborizing, and looped vessels.^[13] Adherent fabric fibers can be seen [Figure 3a and b].

Dermoscopic features of seborrheic dermatitis are also similar. In hand eczema, brownish-orange dots or globules, corresponding to spongiotic vesicles, yellowish scale-crusts and dotted vessels are seen [Figure 3c].

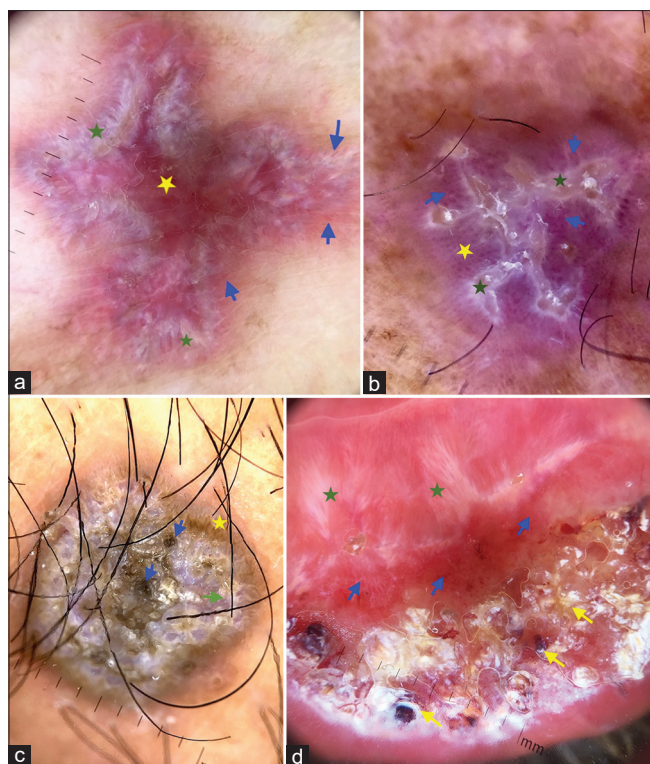


Figure 2: (a) Dermoscopy of lichen planus showing radial streaming of whitish wickham's striae (green star), short linear vessels in periphery (blue arrow) on a violaceous background (yellow star); (b) pearly yellowish WS (green star), dotted vessels (blue arrow) on a violaceous background (yellow star); (c) Lichen planus hypertrophic showing comedo like openings (blue arrows), wickham's striae (green star), (d): Mucosal LP showing whitish WS, dotted vessels, serous and hemorrhagic crusts due to erosion (yellow arrows) (Dermlite DL3N 10X, polarized mode)

Dermoscopy of erythrodermic atopic dermatitis consists of yellowish scales/serocrusts and clusters of dotted vessels on a pinkish background.^[25] Multispectral dermoscopy helps in detection of chemical leucoderma and pigmented contact dermatitis by highlighting superficial changes like pigment network with blue light and deeper changes like grayish granular dots, globules, and target structures with yellow light.^[26]

Pityriasis rosea

In pityriasis rosea (PR), the characteristic dermoscopic features are collarette of white scales (collarette sign) and yellowish background.^[27] In dark skin, the background may be brownish-yellow and the vessels are rarely appreciated. The vessels if seen are in the form of irregular faint red dots and follicles are normal [Figure 4]. Mix of brown and gray pigmentation at periphery of the lesion are considered as pigment pattern because of hemosiderin deposition.^[25] Both the herald patch and the secondary lesions of PR show similar features. Occasionally in atopic patients, an eczematous reaction may occur on the background of PR with yellow serocrusts and clustered dotted vessels.^[3]

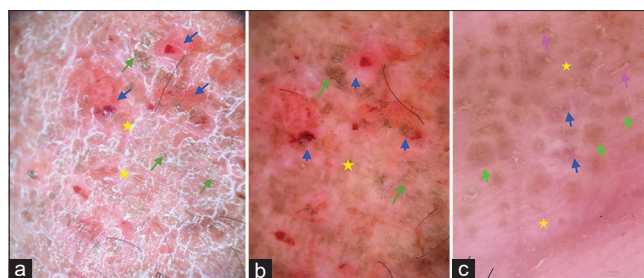


Figure 3: (a) Dermoscopy of dermatitis, shows patchy dotted vessels (blue arrow) with brownish scales (green arrows) on a faint red background (yellow stars);(b) Dermoscopy of dermatitis, shows patchy dotted vessels (blue arrow) with brownish scales (green arrows) on a faint red background (yellow stars) and adherent fibres. (c) Hand eczema showing brownish globules (green arrows), yellowish scale-crusts (pink arrows), patchy dotted vessels (blue arrow) on a faint red background (yellow stars). (Dermlite DL3N 10X, polarized mode)

Pityriasis rubra pilaris

Classic and circumscribed pityriasis rubra pilaris (PRP) shows round areas of yellowish background with follicular plugs in center and vessels in the form of dots and short lines [Figure 5]. In erythrodermic PRP, orange blotches and spared areas over a reddish background and reticular vessels are seen. Palmoplantar keratoderma typically shows orange structureless areas.^[28]

Prurigo nodularis

In acute excoriated prurigo nodularis (PN), the yellowish or reddish-brown crust or erosion is surrounded by pearly white area, whereas in the chronic hypertrophic PN, peripheral striations with dotted or globular vessels are seen. Pearly white areas appear as “white starburst pattern” (correspond to compact orthokeratosis above zones of wedge-shaped hypergranulosis and acanthosis) and peripheral striations (dermal fibrosis) extending to periphery.^[29]

Background color is whitish with periphery displaying a pigment pattern and white scales. Due to excoriation and micro-ulceration, fabric fibers may be seen adhered to the surface of lesions, the “adherent fabric fiber” sign which is a crucial sign of malignant transformation of benign lesions [Figure 6].^[30]

Pityriasis lichenoides

Pityriasis lichenoides et varioliformis acuta (PLEVA): the dermoscopic findings in SOC are: in early phase lesions- amorphous brownish areas (crust-plug with basophilic material in epidermis and lymphocytic infiltrate in the dermis) around the hair follicles, dotted vessels, and scaling ([Figure 7a]; in late phase lesions: white structureless areas (corresponding to hyperkeratosis and acanthosis), whitish structureless rim with central crust-plug (hyperkeratosis and epidermal erosion), red dots, and hemorrhage (microhemorrhages and extravasation of red blood cells), focal bluish gray areas (melanin in the dermis) or centrifugal strands irregularly distributed along

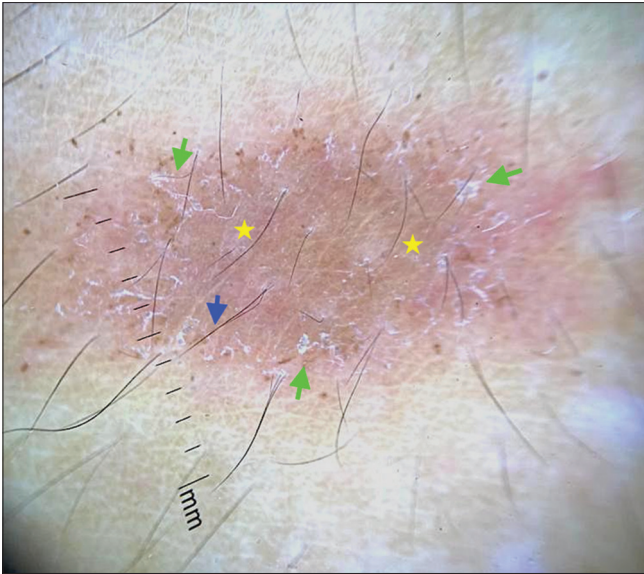


Figure 4: Dermoscopy of pityriasis rosea, shows patchy faint red dotted vessels (blue arrow) and yellowish background (yellow stars) (Dermlite DL3N 10X, polarized mode)

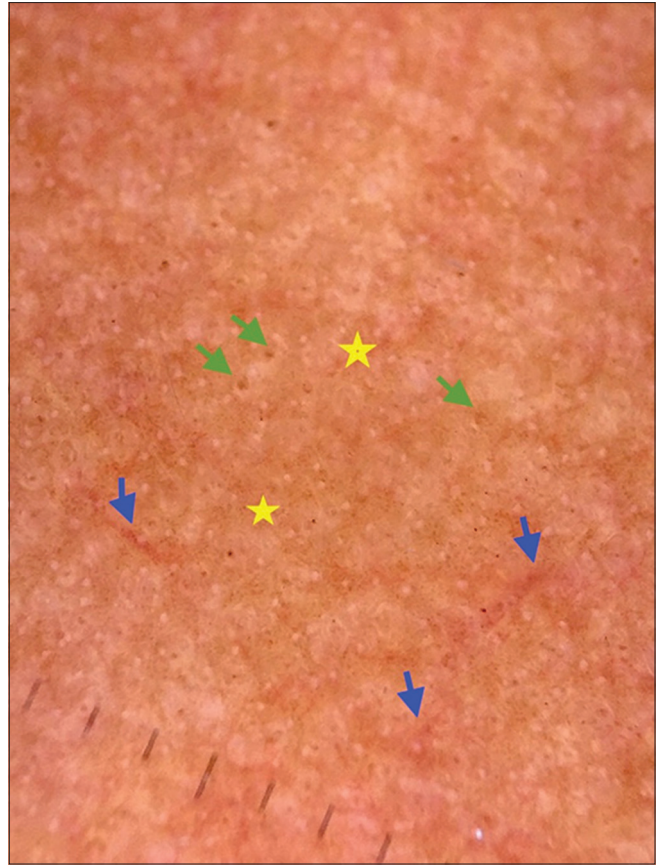


Figure 5: Dermoscopy of pityriasis rubra pilaris (PRP), showing dotted vessels (blue arrow), follicular plugs (green arrows) on a yellowish background (yellow stars). (Dermlite DL3N 10X, polarized mode)



Figure 6: Dermoscopy of prurigo nodularis, showing central erosion (blue arrow) and crusting (pink star) surrounded by white starburst pattern of pearly white areas (green arrows) with peripheral pigmented dots (yellow stars). Also seen is the adherent fabric fibre sign (pink arrows). (Dermlite DL3N 10X, polarized mode)

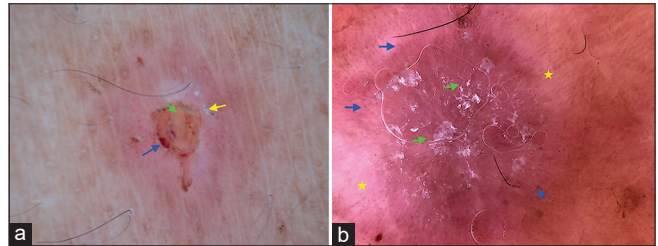


Figure 7: (a) Dermoscopy of pityriasis lichenoides et varioliformis acuta (PLEVA) showing crust plug (green arrow), dotted vessel (blue arrow) and scaling (yellow arrow) (Dermlite DL3N 20X, non-polarized mode). (b) Dermoscopy of pityriasis lichenoides chronica (PLC) showing brown structureless area with scales (green arrow), dotted vessels (blue arrow) and hypopigmented areas in the periphery (yellow star) (Dermlite DL3N 20X, polarized mode)

Pityriasis lichenoides chronica (PLC): In SOC, the dermoscopy of the center of the lesion shows brown structureless areas and white scaling, with dotted vessels and hypopigmented areas in the periphery [Figure 7b]. The background is brownish because of hemosiderin deposition (due to extravasated erythrocytes), melanophages (focal basal cell degeneration), and lymphocytic infiltration.^[25]

Lichen simplex chronicus

Dermoscopy shows erythema and perifollicular scaling associated with hair shaft breakage. On the

the periphery and yellow globules (spongiosis and basal cell degeneration).^[31]

scalp, it may manifest “broom fibers” – multiple hair emerging from same follicle break at the same level distally [Figure 8a and b].^[32]

Lichen nitidus

The characteristic dermoscopic feature is the well defined, round white areas with absence of skin markings, corresponding to the flattening of epidermis overlying the inflammatory infiltrate [Figure 9].^[33]

Lichen striatus

Dermoscopy of the cutaneous lesions reveal brownish to grayish granular pigmentation, dotted vessels, and white scales.^[34] Dermoscopy of nail shows erythronychia disrupting the lunula and distal nail splitting [Figure 10a and b].^[35]

Other Inflammatory Disorders

Discoid lupus erythematosus

Dermoscopic patterns in discoid lupus erythematosus (DLE) differ in different stages. In acute inflammatory stage, follicular keratotic plugging, telangiectasia, perifollicular red dots, perifollicular white halo and white scales are seen, whereas in late stage white structureless areas, telangiectasia, dotted vessels, and blue-gray globules or honeycomb pigmentation are revealed [Figure 11a and b].^[36] The keratin plugs correspond to hyperkeratosis that is more prominent in follicular opening, the perifollicular red dots to dilated vessels and erythrocyte extravasation in perifollicular area.^[37] The dyschromia in the form of brown (pigment incontinence) and white (fibrosis) areas occurs in long standing cases of scalp and non-scalp DLE.^[38] Rosettes have been reported that vary in size from 0.2 to 0.5 mm and 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.^[39] A “red starburst” pattern as radially arranged

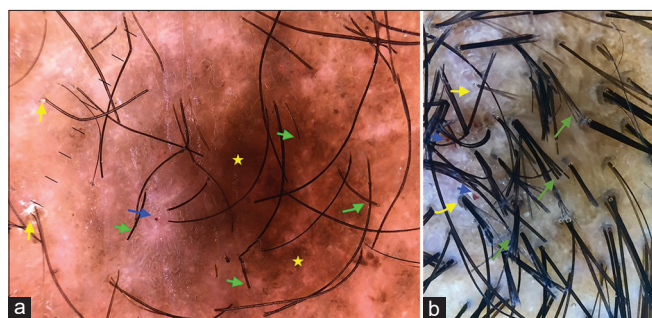


Figure 8: (a) Dermoscopy of lichen simplex chronicus (LSC) showing perifollicular scales (yellow arrows), whitish structureless areas (blue arrows), pigmented background (yellow stars), broken hair (green arrows). (b) Dermoscopy of LSC over scalp showing broom hairs (green arrows), perifollicular scaling (yellow arrows) and hemorrhages (blue arrow). (Dermlite DL3N 10X, polarized mode)

red lines on an erythematous background corresponding to telangiectasia, pigmentary changes, and diffuse dermal fibrosis has been reported.^[40]

Dermoscopic features of DLE in dark skin include loss of pinpoint white dots, blue-gray dots in a speckled pattern, and a peripheral pigmented network. A blue-white veil with “ground-glass” hue, corresponding to the hyperkeratosis overlying interface changes at the dermal–epidermal junction, with pigment incontinence and melanophages in the papillary dermis can be seen.^[41]

The dermoscopy of mucosal DLE differs from cutaneous DLE in lacking follicular plugs, perifollicular halo, and reduced number of follicular ostia. Usual findings are grayish-black to brown pigment dots, whitish-yellow scales, white structureless areas, and pink background with dilated vessels.^[42]

Morphea

Dermoscopy is very helpful in the diagnosis of morphea in the dark skin where the typical lilac border of the plaques is difficult to appreciate. The typical dermoscopic features are the whitish fibrotic beams, corresponding to collagenization of the dermis, with linear branching vessels crossing the beams, and there is loss of appendages.^[43] Erythematous background and

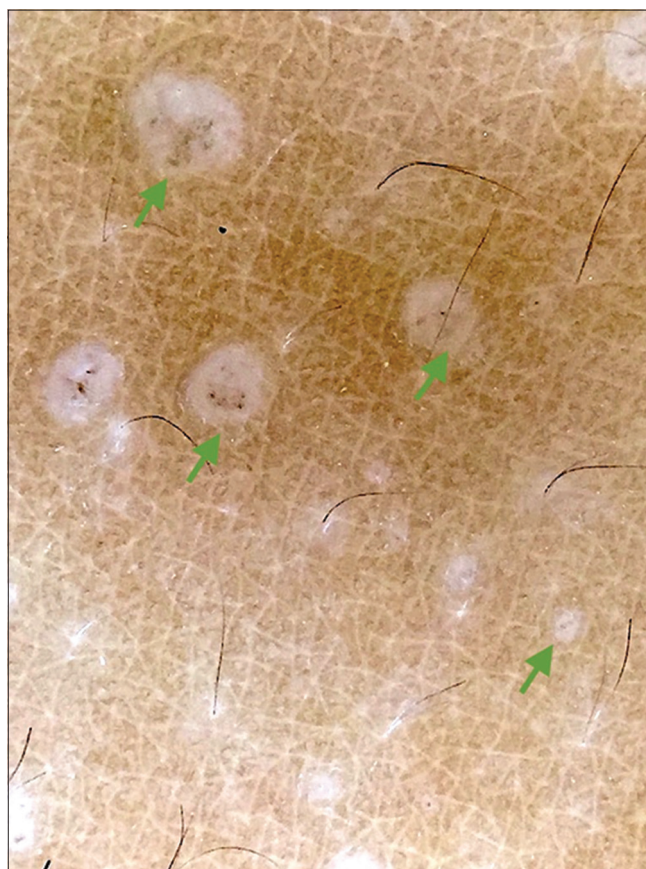


Figure 9: Dermoscopy of lichen nitidus, showing white round areas devoid of skin markings (green arrows). (Dermlite DL3N 10X, polarized mode)

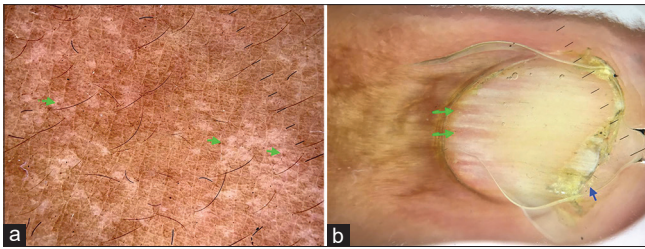


Figure 10: (a) Dermoscopy of lichen striatus showing brown to grayish pigmented granules (green arrow) (Dermlite DL3N 10X, polarized mode). (b) Dermoscopy of nail lichen striatus showing erythronychia (green arrows) disrupting the lunula and distal nail splitting (blue arrow). (Dermlite DL3N 10X, polarized mode)

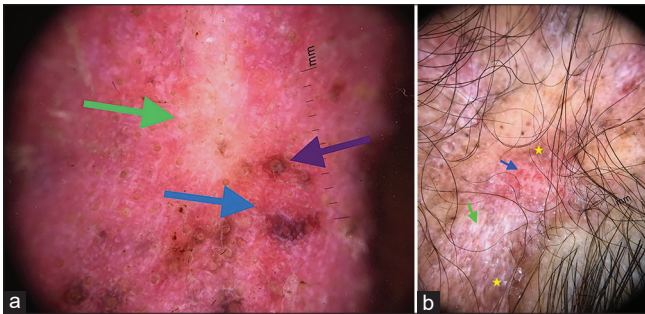


Figure 11: (a) Dermoscopy of early DLE reveals erythema, white scales, follicular plugs (purple arrow), and the characteristic perifollicular whitish halo (green arrow) along with telangiectasia (blue arrow). (Dermlite DL4, 10X, polarized mode). (b) Dermoscopy of late DLE reveals white structureless area (green arrow) with telangiectasias (blue arrow) and speckled pigmentation (yellow stars). (Dermlite DL3N 10X, polarized mode)

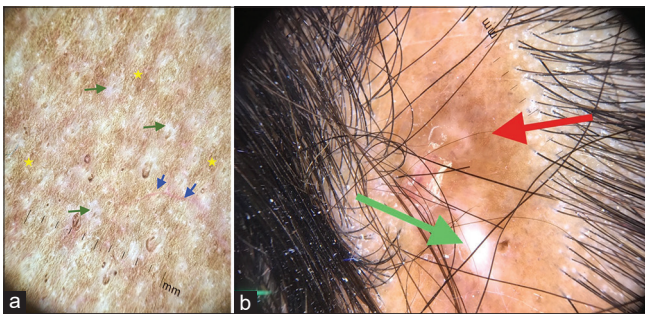


Figure 12: (a) Dermoscopy of morphea showing white fibrotic beams (green arrows), crossed by linear branching vessels (blue arrows), loss of appendages and reticular brown areas (yellow stars). (Dermlite DL3N 10X, polarized mode) (b) Dermoscopy of en coup de sabre reveals white structureless areas (green arrow) with pigment network on a light brown white background (red arrow) (Dermlite DL4, 10X, Polarized mode)

pigmentary structures in the form of structureless brown areas, reticular brown areas, and brown dots may also be seen [Figure 12a and b].^[44]

Lichen sclerosus et atrophicus (LSA)

The keratotic follicular plugs and white structureless areas, corresponding to follicular hyperkeratosis and superficial fibrosis, respectively, are the characteristic dermoscopic features of LSA [Figure 13]. Dotted vessels, hemorrhagic

dots, erythematous areas, and pigmented dots and network can be seen in dark skin.^[44]

In genital LSA, dermoscopy shows white streaky structureless areas (corresponding to sclerosis) and gray-blue dots in peppering pattern (dermal melanophages), and marked decrease in concentration of vessels, or polymorphous vessels are seen. Purpuric-to-red globules and blotches can be seen which correspond to the blood spots because of excessive scratching.^[45]

Zoon's balanitis

Or plasma cell balanitis is an inflammatory condition presenting as well-defined erythematous plaques on the glans or inner side of prepuce. Dermoscopy shows homogenous orange structureless areas, corresponding to hemosiderin deposition, and the curved or serpiginous vessels, representing vascular proliferation [Figure 14].^[45]

Porokeratosis

The dermoscopic diagnostic finding is white-yellowish, double edged annular “white track,” corresponding to the coronoid lamella, with central dotted vessels. However, this track is hyperpigmented in disseminated superficial actinic porokeratosis and in SOC, the peripheral aspect of the white track shows dark brown to almost black dots that form an almost incomplete outer track, corresponding to the pigment incontinence and melanophages in superficial papillary dermis.^[46] The central vascular structures are inapparent, and get overshadowed by the pigmented dots/globules in dark skin [Figure 15a and b]. In porokeratosis of Mibelli, the outer hyperpigmented track is encountered peripheral to the white track.^[47]

Darier's disease and Grover's disease

Both have similar dermoscopic features because of common histopathology of compact hyperkeratosis, orthokeratosis, and exocytosis because of acantholytic dyskeratosis.

In SOC, multiple dark brown polygonal to round structures (hyperkeratosis) surrounded by grayish-white halo (acanthosis) with superficial white scaling impart a global honeycomb pattern. Three zones can be seen with central light brown follicular opening. The brown color of the round and polygonal structures is attributable to melanin [Figure 16]. Dotted and linear irregular vessels can also be seen, but less in darker skin.^[48]

Hailey- hailey disease

Dermoscopy of the vesico-pustules reveals irregular pinkish white areas separated by pink furrows along

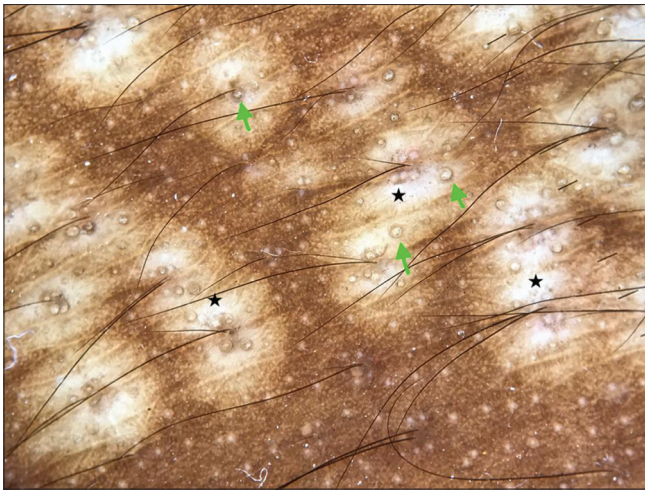


Figure 13: Dermoscopy of lichen sclerosus et atrophicus (LSA) showing white structureless areas (black stars) with whitish keratotic plugs (green arrows). (Dermlite DL3N 10X, polarized mode)

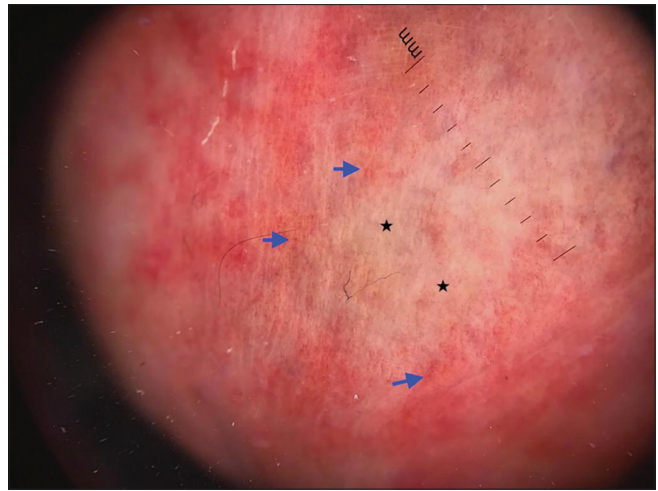


Figure 14: Dermoscopy of Zoon's balanitis showing orange structureless areas (black star) with curved vessels (blue arrows) (Dermlite DL3N 10X, polarized mode)

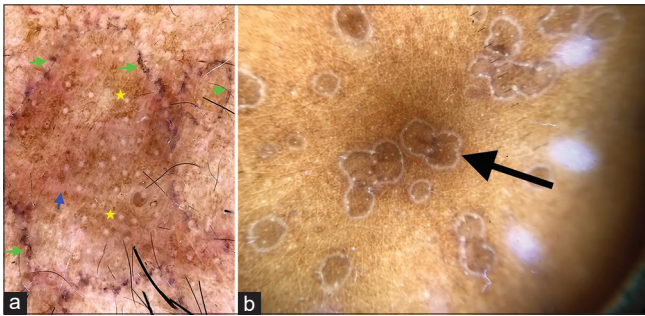


Figure 15: (a) Dermoscopy of disseminated superficial actinic porokeratosis - annular border showing dark brown globules (green arrows), occasional red dots (blue arrows) and light brown pigmented blotches (yellow star). (Dermlite DL3N 10X, polarized mode). (b) Dermoscopy of porokeratosis reveals skin-colored to pale area bound by irregular double-margined "white track" border (black arrow) representing coronoid lamella. (Dermlite DL4 10X, polarized mode)

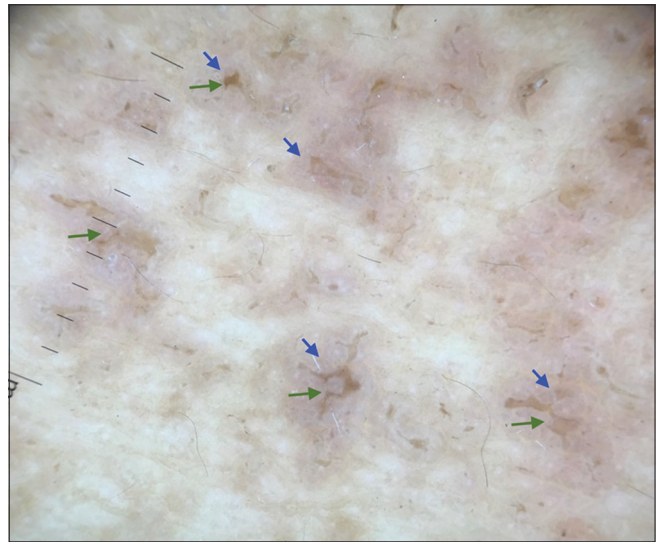


Figure 16: Dermoscopy of Darier's disease showing central brownish stellate shaped area (green arrows) surrounded by pinkish-white halo (blue arrows). (Dermlite DL3N 10X, polarized mode)

with whitish areas in a cloud-like arrangement or as irregularly raised wavy folds giving a crumpled fabric pattern. Erosions with a few dotted vessels and crusted areas can be seen. Dermoscopy of the surrounding keratotic papules show irregular brownish black to grayish black areas.^[49]

Keratosis pilaris (KP)

Dermoscopic features of KP include presence of vellus hair that are frequently coiled, semicircular or looped, perifollicular erythema (perifollicular lymphocytic infiltrate), and peripilar casts (follicular infundibular plugging with perifollicular parakeratosis) [Figure 17]. Hair may emerge in groups of 2 or 3. Vascular ectasias have been described. Pigmented structures in healed and late lesions can be seen in darker skin.^[50]

Reactive perforating collagenosis

Dermoscopy shows central round yellowish-brown structureless area, corresponding to transepidermal

elimination of collagen, surrounded by white keratotic collarette and erythematous halo- "trizonal concentric" pattern.^[3] In dark skin, pigmented dots and globules can be seen in the outer zone [Figure 18].

Urticaria

The dermoscopic appearance of urticaria includes red, reticular network of linear vessels, which may be surrounded by an area devoid of vessels, corresponding to dermal edema.^[51] These red lines represents ectatic, horizontal, subpapillary vessels. It should be differentiated from urticarial vasculitis where purpuric dots or globules are present on orange-brown background suggestive of extravasation and degradation of red blood cells histologically [Figure 19].^[51]

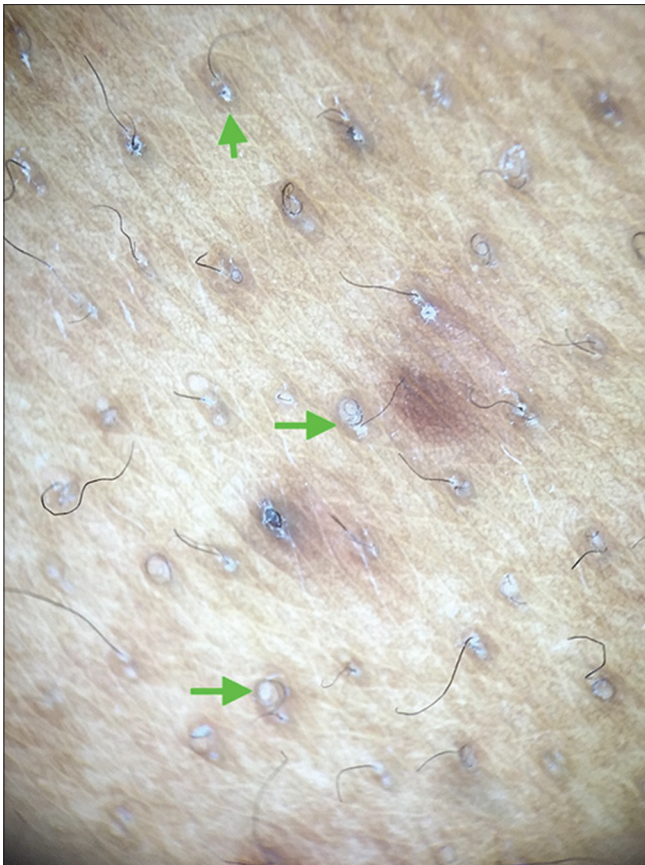


Figure 17: Dermoscopy of keratosis pilaris showing coiling of vellus hair (green arrows) with perifollicular scales, erythema and pigmentation. (Dermlite DL3N 10X, polarized mode)

Erythema multiforme

Dermoscopic features of a typical target lesion in different zones are: central dusky zone – clods of red, blue, purple, and black colors; pale edematous zone – featureless area; outer red ring- homogenous erythema with few short linear vessels.^[52]

Granuloma faciale

Dermoscopy shows a translucent white gray background intermingled with orthogonal whitish streaks, dilated follicles and elongated parallel telangiectasias, which can also be seen in discoid lupus erythematosus, sarcoidosis, and lupus vulgaris, hence biopsy is more confirmatory.^[53]

Pigmented purpuric dermatoses

Dermoscopy reveals coppery red to red brown background, red dots and globules, dotted and blotchy red vessels in perifollicular area. Brownish, pigmented dots, and clods and milky white areas have been reported [Figure 20a]. The red dots, globules, and patches correspond histologically to extravasation of red blood cells and an increased number of blood vessels which may be dilated. Brown globules and dots are a result of spherical or elliptical organization

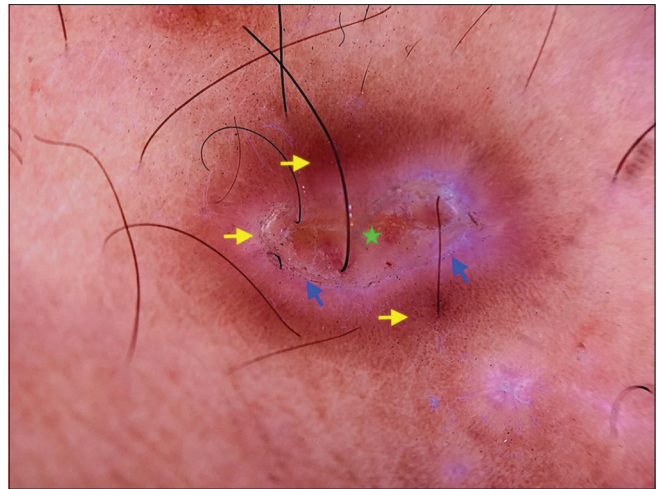


Figure 18: Dermoscopy of reactive perforating collagenosis showing central round yellowish-brown structureless area (green star) surrounded by white keratotic collarette (blue arrows) and erythematous halo with pigmented dots (yellow arrow)- “trizonal concentric” pattern. (Dermlite DL3N 10X, polarized mode)

of melanocytes or melanophages at the dermo–epidermal junction.^[54] Dermoscopy of lichen aureus shows brownish or coppery-red diffuse coloration of the background, red dots, globules, and a network of brownish to gray interconnected lines [Figure 20b].^[55]

Mastocytosis

The predominant dermoscopic features in cutaneous mastocytosis in SOC include the brown reticulate network on a background of yellowish hue (dense dermal mast cell infiltrate with increased melanization of the overlying basal layer of the epidermis) and a central pale yellow to whitish structureless area (accumulation of serosanguineous fluid produced due to excoriation of the epidermis) [Figure 21]. The linear vessels and red spots in the center correspond to dilated vessels.^[56] A reticular pigment network over a reddish background while eliciting Darier’s sign is highly suggestive of urticaria pigmentosa.^[57]

For telangiectasia macularis eruptiva perstans (TMEP), dermoscopy of early lesions- linear branching vessels forming a reticular network, encircling the eccrine gland openings without crossing; older lesions also show linear branching vessels with a background of brownish discoloration.^[58]

Langerhans cell histiocytosis (LCH)

The frequent dermoscopic features are reddish purple areas, brown dots, and central white area with telangiectasia.^[59] The presence of vascular blotch corresponds to dermal hemorrhage, white homogeneous areas to dermal Langerhans cell infiltration without epidermal involvement and brown dots or structureless area or crust to epidermal infiltration and necrosis by

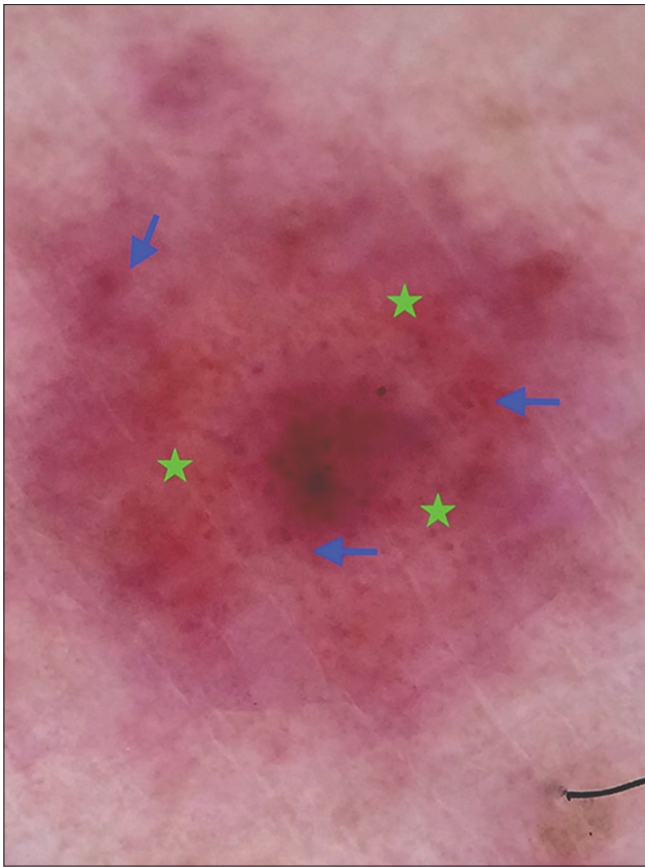


Figure 19: Dermoscopy of vasculitis reveals purpuric dots or globules (blue arrows) present on orange-brown background (green star) (Dermlite DL3N, polarized, 10X)

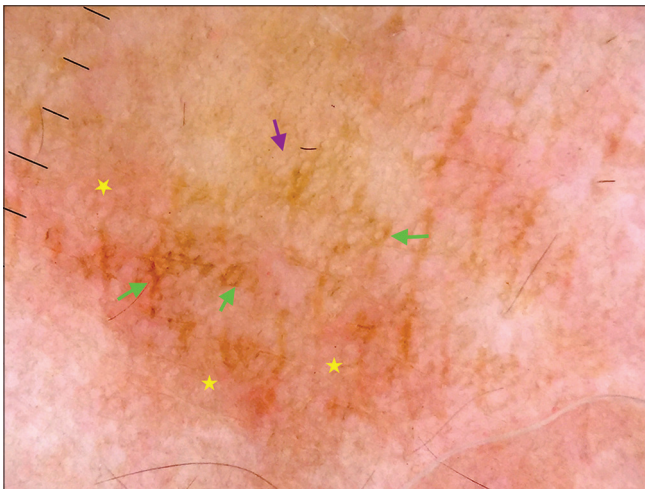


Figure 21: Dermoscopy of mastocytosis revealing brown reticulate network (green arrows), background of yellowish hue (yellow stars) and central pale structureless area (purple arrow) (Dermlite DL3N, polarized, 10X)

Langerhans cells [Figure 22]. LCH can be differentiated from non-LCH disorders like juvenile xanthogranuloma, benign cephalic histiocytosis, and reticulohistiocytosis by presence of white structureless area and absence of a yellow structure which corresponds to xanthomized

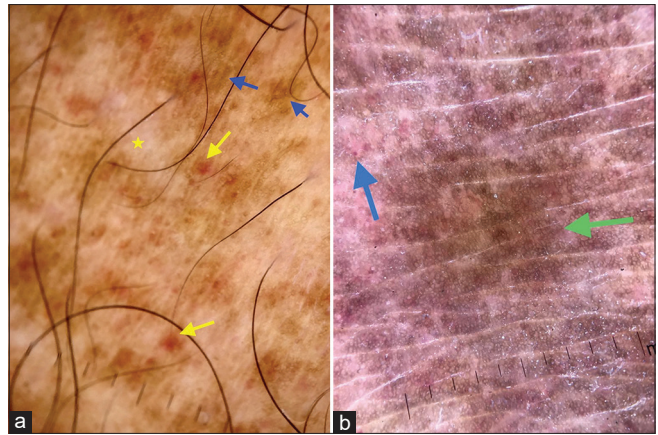


Figure 20: (a) Dermoscopy of pigmented purpuric dermatoses: Dotted, globular and blotchy vessels in perifollicular areas (yellow arrows), brownish dots and clods (blue arrows), milky white areas (yellow star) (Dermlite DL3N, polarized, 10X). (b) Lichen aureus reveals red globules (blue arrow) with increased pigment network (green arrows) (Dermlite DL3N, polarized, 10X)

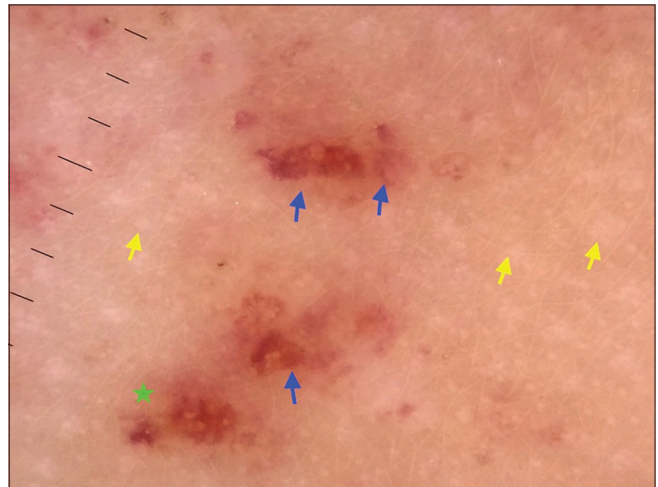


Figure 22: Dermoscopy of Langerhan's cell histiocytosis reveals vascular blotches (blue arrows), brownish globules (green star) and whitish structureless areas (yellow arrows). (Dermlite DL3N, polarized, 10X)

histiocytes.^[60] The presence of vascular blotches and absence of atypical red vessels and arborizing vessels helps in differentiating LCH from seborrheic dermatitis.^[61]

Conclusion

The dermoscopic patterns in most of the inflammatory diseases in SOC are similar to that of white skin, with pigmentary changes being the most conspicuous dermoscopic findings, while vascular patterns and erythema being less evident in the former. Table 1 summarizes the dermoscopic findings in inflammatory dermatoses.

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Table 1: Summary of the dermoscopic findings in Inflammatory dermatoses

Dermoscopic Findings	Background colour	Scales	Vessels	Follicular findings	Pigment pattern	Specific clues
1. Psoriasis	Light or dull red	White	Regular and uniformly dotted	-	Brownish to bluish in longstanding cases	Dotted/glomerular vessels
2. Lichen planus	Purplish or bluish	-	Dotted or linear	Follicular plugs with corn pearls in LPH	Gray-blue dots and globules.	Wickham's striae
3. Dermatitis	Dull red	Sero crusts, brownish-white or white.	Patchily arranged dots	-	Brown lines, globules, clods	Yellow clod sign Adherent fabric fibre sign
4. Pityriasis rosea	Brownish-yellow	Collarrete of white scales	Faint red dots	-	Brown-gray pigmentation at periphery	-
5. Pityriasis rubra pilaris	Yellowish	-	Dots or short lines	-	Brown at periphery	White starburst pattern, adherent fabric fibre sign
6. Prurigo nodularis	Reddish brown/white	Yellowish-red brown crust	Dots or globules	-	-	-
7. Pityriasis lichenoides	Amorphous	-	Dots and hemorrhages	Perifollicular crust	-	-
Pityriasis Lichenoides et Varioliformis Acuta	brownish areas, whitish rim	White	Dots	-	Hypopigmentation in periphery	-
Pityriasis Lichenoides Chronica	Brownish	-	-	-	-	-
8. Lichen simplex chronicus	Brown	Perifollicular white	-	-	Brown-gray pigmentation	Broken hair
9. Lichen nitidus	white	-	-	-	-	-
10. Lichen striatus	Brownish	white	dots	-	Brownish to grayish granules	Absence of skin markings
11. Discoid lupus erythematosus	Red	White	Dots, telangiectasia	Follicular plugs, follicular red dots, perifollicular haloes	-	Rosettes
Acute	White	-	Telangiectasia	-	Speckled blue dots	-
Chronic	-	-	-	-	-	-
12. Morphea	White or brown	-	Linear branching	Absence	-	White fibrotic beams
13. Lichen sclerosus atrophicus (LSA)	White	white	Dots, hemorrhages	Follicular plugs	dots	White structureless areas
14. Zoon's balanitis	Orange	-	Curved or serpiginous	-	-	structureless areas
15. Porokeratosis	Brown	-	dotted	-	Brown to black dots	Double edged track- outer pigmented, inner white
16. Darier's disease and Grover's disease	Brown-white	white	Dots, linear irregular	Light brown follicular openings	Polygonal to round brown structures	Polygonal to round brown structures surrounded by white halo
17. Hailey- hailey disease	Pinkish white	Brown crusts	Dots	-	Brownish, grayish, black	Pink furrows
18. Keratosis pilaris	Reddish	Peripilar casts	-	Follicular plug, perifollicular erythema	Brown dots	Coiled hairs
19. Reactive perforating collagenosis	Reddish-brown	White collarette	-	-	Brown dots, globules	Trizonal pattern

Contd...

Table 1: Contd...

Dermoscopic Findings	Background colour	Scales	Vessels	Follicular findings	Pigment pattern	Specific clues
20. Urticaria	Red	-	Reticular network of linear vessels	-	-	Network of vessels surrounded by pale area
21. Erythema multiforme	Red	-	Red, purple clods	-	-	Trizonal pattern
22. Granuloma faciale	White gray	-	Short linear Parallel telangiectasia	Dilated follicles	-	Orthogonal whitish streaks
23. Pigmented purpuric dermatoses	Red brown	-	Dots, globules, blotches	-	Brownish dots, globules, clods	Blotchy vessels in perifollicular areas
24. Mastocytosis	Yellowish	-	Linear branching vessels	-	Brown reticular pigment network	
25. Langerhans cell histiocytosis (LCH)	Brownish -white	-	Vascular blotch	-	Brown dots	Brown structureless area

Conflicts of interest

There are no conflicts of interest.

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