

Dermoscopy as a Tool for Assessing the Therapeutic Response in a Case of Extra-Genital Lichen Sclerosus et Atrophicus

Extragenital lichen sclerosus et atrophicus (ELSA) is a rare chronic inflammatory disorder. The presence of porcelain-white atrophic papules and plaques is the hallmark clinical feature.^[1] Dermoscopy has been used as a supplementary tool in the diagnosis of ELSA.^[2] Here, along with giving a clue to the clinical diagnosis, dermoscopy was used to assess the therapeutic response.

A 42-year-old male presented with a 6-month history of multiple moderately itchy lesions over the posterior, lateral and anterior aspects of the chest. Cutaneous examination revealed multiple atrophic hypopigmented to coppery papules and indurated plaques. The largest plaque was 4 cm × 4 cm size, horse-shoe shaped, and had multiple satellite papules [Figure 1]. Dermoscopy (Dermlite DL4, 10× magnification) under polarized mode demonstrated irregular porcelain-white structureless areas, brown dots, and globules [Figure 2]. Differentials of ELSA, morphea, borderline tuberculoid Hansen's disease, atrophic dermatofibroma (DF), atrophic dermatofibrosarcoma protuberans (DFSP), and atrophoderma were considered. Histopathology showed epidermal atrophy with hyperkeratosis, follicular plugging, basal vacuolar degeneration, papillary dermal edema, pigmentary incontinence, and perivascular lymphohistiocytic infiltration [Figure 3]. Diagnosis of ELSA was made, and the patient was prescribed clobetasol 0.05% ointment twice daily for 15 days, followed by a once-daily local application for 45 days. At the end of 2 months, there was no evidence of an increase in the size of the lesions, and the patient improved symptomatically. Clinical

examination showed persistent atrophy, hyperpigmentation of the plaque, and improvement of induration [Figure 4a]. Repeat dermoscopy revealed an ill-defined brown pigmentation. There was complete subsidence of the porcelain-white structureless areas, possibly indicating the resolution of sclerosis, along with the disappearance of brown dots and globules [Figure 4b]. As the dermoscopic features resolved, the patient was advised to stop the treatment. One-year after stopping the therapy, clinically the lesions were inactive with persistent atrophy and mild hyperpigmentation [Figure 4c], and dermoscopy showed faint brown pigmentation along with normal reticular skin markings and eccrine gland opening [Figure 4d].

A well-established lesion of ELSA seldom poses any diagnostic problem, but early and atypical lesions may mimic dermatoses like morphea, guttate vitiligo, and idiopathic guttate hypomelanosis.^[1] In the present case, differentials like atrophic DF, atrophic DFSP, and atrophoderma were considered due to the lack of characteristic porcelain white colour. Dermoscopy, as a non-invasive tool, has been used to aid in the diagnosis of ELSA.^[2,3] The features that have been consistently duplicated in various reports are yellow-white keratotic plug and yellow-white structureless areas. Others are peripheral erythematous halo, scale, chrysalis-like structure, erosion, brown lines, grey dots, telangiectasia, and dotted and linear vessels.^[4,5] Comedo-like openings described before in cases of ELSA are actually yellow-white follicular keratotic plugs.^[3] Features like dotted and linear vessels and vascular blotch/haemorrhage are more commonly associated with genital LSA than ELSA.

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Figure 1: Atrophic hypopigmented plaque with satellite papules

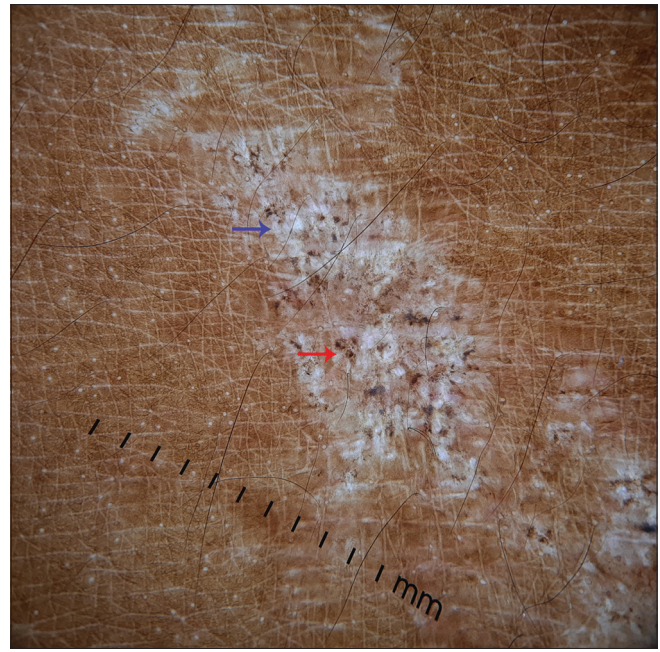


Figure 2: Dermoscopic examination (Dermlite DL4, 10 × magnification) under polarized contact mode with liquid paraffin as immersion fluid showing irregular porcelain-white structureless areas (blue arrow), brown dots, and globules (red arrow)

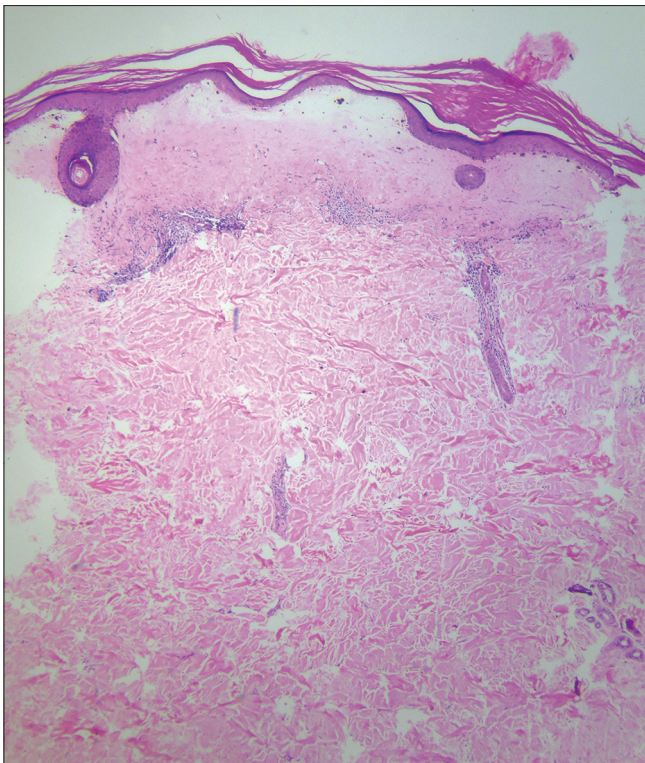


Figure 3: Histology showing epidermal atrophy with hyperkeratosis, follicular plugging, basal vacuolar degeneration, papillary dermal edema, pigmentary incontinence, homogenized ground glass collagen and perivascular and perieccrine lymphohistiocytic infiltration (H & E, X50)

There is no objective way to measure the therapeutic endpoint for LSA. The arrest of progression of the lesion (s) and subsidence of pruritus and pain are considered to be evidence of therapeutic success. During the follow-up visit, an improvement of induration can indicate the clinical

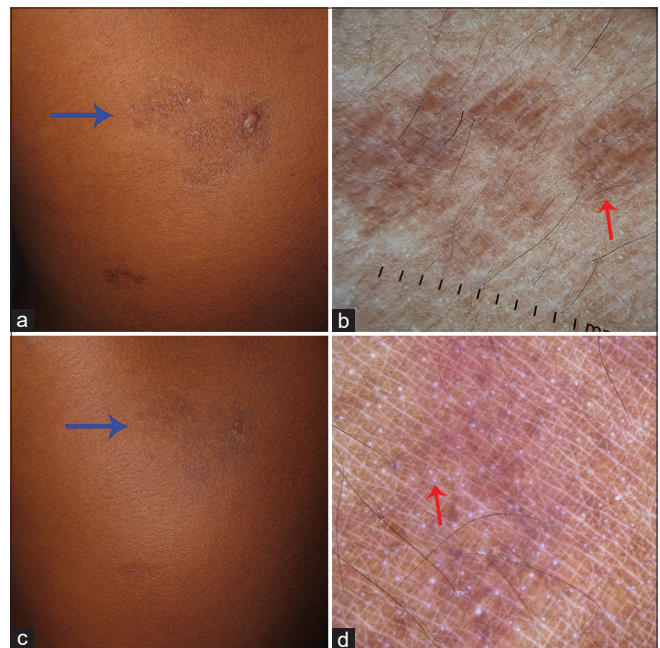


Figure 4: (a) Clinical improvement following therapy at 2 months. (b) Dermoscopic examination (Dermlite DL4, 10 × magnification) under polarized contact mode, after 2 months, showing irregular brown pigmentation (arrow) and disappearance of porcelain-white structureless area. (c) At 1-year post-therapy, no clinical activity. (d) Dermoscopic examination (Dermlite DL4, 10 × magnification) under polarized contact mode showing faint brown pigmentation (arrow) and reappearance of normal cutaneous reticular pattern and eccrine duct openings

resolution. However, the assessment of induration by palpation is subjective. A repeat pathological examination is a more objective way to demonstrate the resolution

of sclerosis. But, it may not be possible to do a repeat biopsy in all cases. In the index case, the porcelain-white homogenous area, which was representative of epidermal hyperkeratosis and dermal sclerosis, disappeared within 2 months of treatment with topical clobetasol ointment, indicating therapeutic endpoint. In the case of morphea, Campione *et al.*^[6] observed the resolution of dermoscopic findings like a fibrotic beam, erythematous border, and telangiectasia following treatment with imiquimod (5%) cream. The other dermoscopic features that we analysed in the index case were the normal cutaneous reticular pattern and opening of eccrine ducts. These structures were not visible in the pre-treatment dermoscopic examination and were evident following successful therapy, and at 1-year post-treatment, they reverted to a normal pattern. We postulate that these structures were obscured by the sclerosis process, and reappeared following the successful resolution of sclerosis.

In conclusion, we report a case of ELSA, in which dermoscopy was not only used to guide the diagnosis but also served as a tool to assess the therapeutic response. The disappearance of the porcelain-white area under dermoscopy may serve as a guide for the therapeutic assessment of ELSA, but larger studies are needed to verify the same.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not

be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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