Our Dermatology Online

Case Report

Atypical dermatophytosis in a case of systemic lupus erythematosus

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ABSTRACT

Systemic lupus erythematosus (SLE) is a multiorgan autoimmune connective tissue disease with many muco-cutaneous manifestations. We report a case of SLE on treatment presented with scaly erythematous plaques on the trunk and extremities and diffuse scaly erythematous macular lesions on the face resembling cutaneous lupus erythematosus. Laboratory evaluation established a diagnosis of tinea corporis with faciei. He responded to long term itraconazole therapy. This case focuses on the modification of tinea in an autoimmune disorder on immunosuppressive therapy and its therapeutic implications.

Key words: Systemic lupus erythematosus; Tinea corporis; Tinea faciei; Steroid-modified tinea; Itraconazole

INTRODUCTION

Systemic lupus erythematosus (SLE) is an autoimmune connective tissue disease characterized by immune complex deposition in various organs, treated with high dose of immune suppressants. Fungal infections, having a favour for immunocompromised hosts, remains a major area of concern in such immunosuppressed patients. Over the recent several years, incidence of dermatophytosis in India has increased and clinicians have encountered atypical and recalcitrant presentations of dermatophytosis [1]. SLE manifests with many specific and nonspecific cutaneous lesions that may resemble many common and uncommon dermatoses. We report a case of dermatophytosis in a patient with SLE that posed diagnostic and therapeutic challenges.

CASE REPORT

A 26-year-old male patient, a known case of SLE since past 10 years, presented with itchy, scaly lesions over the scalp, face, chest and right arm for the past 2 months. There was associated burning sensation on exposure to sunlight indicating photo-aggravation. Patient also had general weakness, poly arthralgia with morning stiffness and oral ulcers at the time of presentation. He was advised daily oral prednisolone 20 mg, azathioprine 100 mg and hydroxy chloroquine sulphate 400mg during his last visit to the rheumatologist which was about 3 months ago. He was not compliant in his medication and was taking them irregularly. Examination revealed intense diffuse erythema and scaling of the scalp and face including the pinna with an ill-defined margin at the chin (Fig. 1). Discrete erythematous, scaly, ulcerated and crusted plaques over the chest (Fig. 2), right arm, back and left thigh were also seen. Oral Cavity examination revealed erosions over the buccal mucosa, gingiva and lips with dark crusting over the lips. Diffuse non scarring alopecia over the fronto-parieto-temporal area of scalp was also noticed. Multiple finger nails showed longitudinal ridging and longitudinal melanonychia. Patient was evaluated with these clinical features and was initially diagnosed as cutaneous lupus erythematosus. This was due to resemblance of face lesions with malar rash and trunk lesions with papulo-squamous type of subacute cutaneous lupus. In view of presence of discrete scaly lesions arms and thigh, tinea corporis modified due to SLE and immunosuppression was also considered.

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His haemoglobin was 12.6 gram %, total count was 12,600 cells/cubic mm, platelet count was 1,46,000 cells/cubic mm and ESR was 44 mm at the end of 1 hour. Liver (LFT) and renal function test (RFT) results were normal. His past ANA test by indirect immunofluorescence was positive with speckled pattern, and extractable nuclear antigen panel testing revealed positivity for anti SM and Anti U1 RNP antibodies.

Direct microscopic examination with 10% Potassium hydroxide mount (KOH mount) was performed from the scales from lesions of scalp, face, pinna, chest and arm. Positive results with multiple branching filaments and spores were seen in all the examined sites. Scales were also sent for mycological culture, which grew *Trichophyton mentagrophytes*. Skin biopsy for histopathology was taken from the lesion on chest which showed compact orthokeratosis, spongiosis of epidermis with dermal oedema and mild chronic inflammatory infiltrate. Branching septate fungal structures were seen in the upper and lower layers of stratum corneum which was further confirmed by periodic acid Schiff (PAS) staining (Fig. 3). There were no interface dermatitis or other features of cutaneous lupus in the examined slide. Patient was evaluated and confirmed to be a case of SLE based on EULAR/ACR classification criteria having entry criterion (ANA positivity on indirect immunofluorescence) and 14 points [2]. Diagnosis of Systemic Lupus Erythematosus (SLE) with modified tinea corporis and tinea faciei was thus confirmed.

Patient was restarted on his previous SLE medication with detailed counselling to ensure compliance. Topical Luliconazole once daily and oral Itraconazole 100 mg BD as the treatment for tinea. There was minimal response at 1 month follow up. Dose of itraconazole was increased to 200 mg BD after repeating LFT, which was normal. After 1 month he showed good response with resolution of all lesions (Fig. 4) however direct

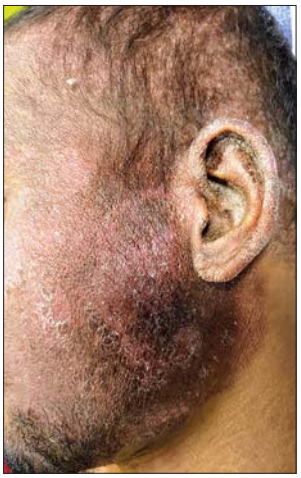

Figure 1: Diffuse scaly erythematous lesions involving the face, auricle and scalp.

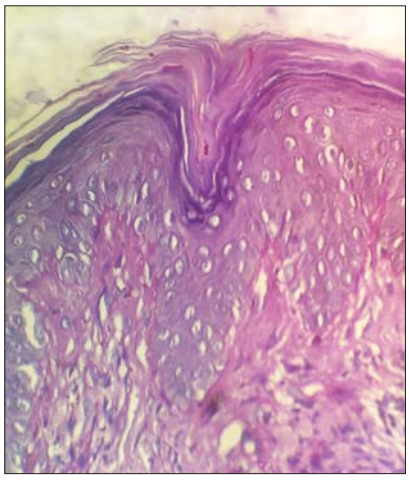

Figure 3: Orthokeratotic epidermis with sandwiching of PAS positive fungal hyphae with stratum corneum (PAS staining 400X).

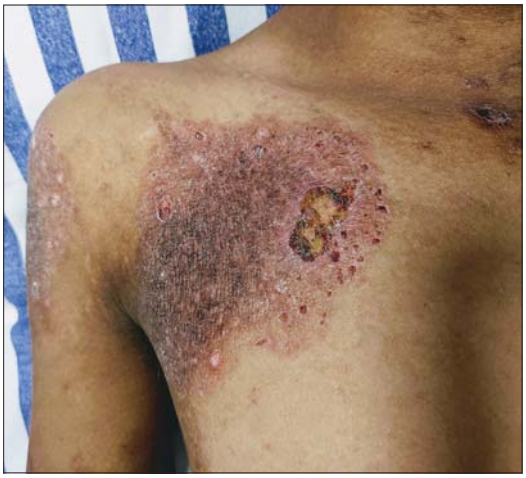

Figure 2: Erythematous scaly, ulcerated and crusted plaque on chest.

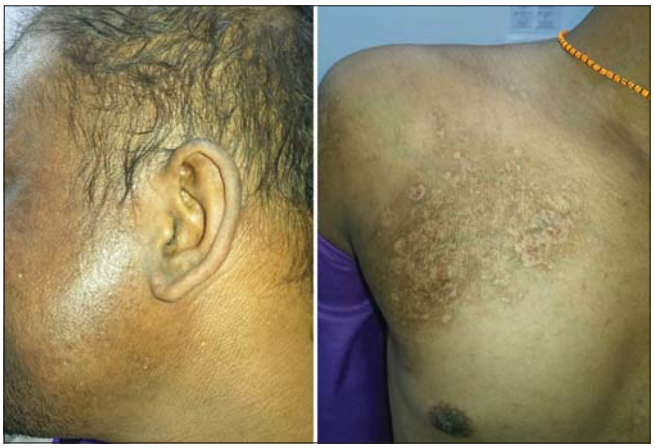

Figure 4: Good clinical response to therapy at 2 months of treatment.

microscopy was positive for fungal elements from scales on face. Same treatment was continued for another one month, and the antifungal therapy was stopped after ensuring mycological cure (negative KOH mount).

DISCUSSION

Dermatophytosis can be included in the list of great imitators in the recent times due to the diverse morphological presentations. Atypical morphologies such as psoriasis-like, eczema-like, seborrheic dermatitis-like, SLE-like and rosacea-like tinea have been reported. Association of SLE with extensive fungal infection is rarely described [3,4]. This case throws light on the fact that immunological defects of SLE with immunosuppressant therapy modifies dermatophytosis and probably predisposes too. Our patient had diffuse patches over the face and scalp with ulcerated and crusted lesions on the chest and arm. This unusual morphology is different than topical steroid modified tinea where the inflammation and scaling is markedly reduced and often concentric rings are seen at the edges. Concomitant dermatophyte infection may wrongly be attributed to one of the manifestations of SLE. However, awareness on the occurrence of atypical manifestations of tinea prompted us to work up as a cases of dermatophytosis. Modifications of tinea with systemic immune suppression masquerading as tinea has been reported [5].

Therapy of dermatophytosis in a patient with SLE has many implications. Apart from associated immune-alterations due to the disease and the treatment, drug interactions with antifungal therapy is a major concern. Griseofulvin and terbinafine can trigger or worsen SLE, hence they are better avoided [6,7]. Itraconazole was chosen since it does not have interactions with azathioprine and hydroxychloroquine sulphate, and is known to induce or worsen lupus erythematosus. Conventional dosage of 100 mg BID showed only a minimal improvement at the end of 1 month. He responded to a higher dose of itraconazole and was clinically and mycologically cured at the end of 3 months of antifungal therapy. We did not notice any adverse effects due to itraconazole.

CONCLUSION

This case has been reported for the atypicality of tinea in the presence of SLE and immunosuppression, and its therapeutic implications. In the current scenario dermatophytosis epidemic in India, it is wiser to rule out dermatophytosis in all atypical scaly lesions.

Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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