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Case Report

Tinea incognito presenting as erythroderma

Mamatha George[1], Parvathy Santhosh[1], Fatima Shamsuddin[2]

Departments of [1]Dermatology, [2]Pathology, Malabar Medical College Hospital and Research Centre, Kozhikode, Kerala, India.

***Corresponding author:**
Dr. Parvathy Santhosh, Department of Dermatology, Malabar Medical College Hospital and Research Centre, Modakallur, Kozhikode, Kerala, India.

drparvathysanthosh@gmail.com

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ABSTRACT

Erythroderma or exfoliative dermatitis is a potentially fatal condition with myriad etiologies. Identifying the cause is essential for proper treatment. Dermatophytosis is an unusual cause of erythroderma. The use of topical steroids can alter the clinical picture of dermatophytosis. It can cause temporary symptomatic relief followed by an exacerbation. In this article, we describe a case of exfoliative dermatitis due to dermatophytosis which posed a diagnostic difficulty due to the application of topical steroids.

Keywords: Exfoliative dermatitis, Dermatophytosis, Tinea incognito, Erythroderma, Topical corticosteroids

INTRODUCTION

Erythroderma is a potentially life-threatening condition which can often pose a dilemma in determining the etiology and hence treatment. Initial histopathology may not always yield typical features of the underlying disease.[1-3] In this case report, we aim to highlight an unusual cause of erythroderma which was precipitated by over-the-counter topical medication.

CASE REPORT

A 65-year-old man presented to our outpatient department (OPD) with a history of generalized erythema and scaling. He reported that his complaints had started 2 months back as pruritic lesions over the lower back, for which he had applied an over-the-counter topical medication. There was an initial symptomatic improvement for a few days. However, he gradually developed generalized scaling. He continued applying the same topical medication intermittently, but since there was a worsening of symptoms, he had stopped the application two weeks prior to attending our OPD. There was no previous history of dermatological complaints. Diurnal variation in intensity of pruritus, photo exacerbation, and systemic symptoms were absent. The patient had not noticed any specific triggering factor for his symptoms. He was unemployed, had no comorbidities, and was not on any other topical or systemic medications. There was no family history of any dermatological illnesses.

On examination, there was generalized erythema and scaling with a small area of sparing over the right side of chest, 3 cm × 3 cm size, with mild scaling over palms, soles, and face [Figures 1a and b]. Nails and mucosae were unremarkable. Vitals were stable, and general and systemic examination revealed no abnormalities. Routine investigations including complete blood count, erythrocyte sedimentation rate, urine microscopy, serum electrolytes, liver and renal function tests, and peripheral smear were within normal limits. Chest X-ray was also normal. Skin biopsy was taken from a thickened scaly area on the trunk. Antihistamines and emollients were given for symptomatic relief.

Histopathology revealed mild hyperkeratosis with focal hemorrhagic exudate, irregular acanthosis, hypogranulosis, and spongiosis. Superficial dermis showed few dilated capillaries, perivascular lymphocytic infiltrate, focal edema, and elastotic degeneration.

The patient came for review after 1 week reporting symptomatic improvement. On examination, it was noted that the generalized nature of the erythema and scaling was subsiding, and well-defined erythematous plaques were becoming evident over the abdomen and axilla [Figure 2]. A skin scraping was done and KOH mount performed, which showed a few spores and branching hyphae. A repeat skin biopsy was taken from the edge of the plaque on the abdomen. The patient was given topical luliconazole 1% lotion and antihistamines while biopsy results were awaited. During this visit, he brought the tube of topical medication which he had been applying before the initial hospital visit, which was clobetasol propionate 0.05% lotion.

Irregular acanthosis, spongiosis, and mild hyperkeratosis were the findings observed in repeat biopsy. The dermoepidermal junction showed mild chronic inflammation. Periodic acid Schiff and Gomori methenamine silver stains showed many fungal hyphae in stratum corneum [Figures 3 and 4].

The patient reviewed after 2 weeks with moderate improvement of lesions. He was started on itraconazole 200 mg capsules once daily orally and topical luliconazole was continued. There was a significant improvement in lesions after 2 weeks of systemic antifungal therapy. He was maintained on topical luliconazole for 4 more weeks during which the lesions subsided completely.

DISCUSSION

Erythroderma, or exfoliative dermatitis, is a disease characterized by erythema and scaling involving >90% of the body surface area.[1] The single most common cause of adult

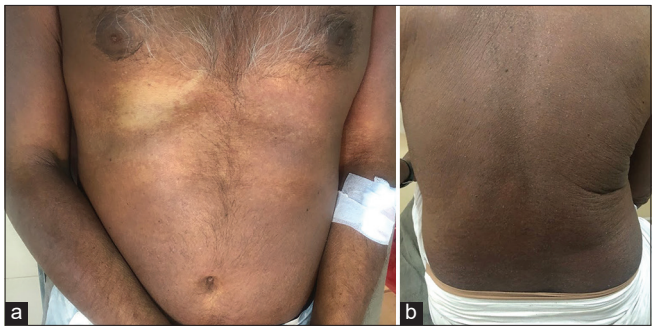

Figure 1: (a) Exfoliative dermatitis; front of trunk, with an area of sparing over the left side of chest, (b) Diffuse scaling over back of trunk.

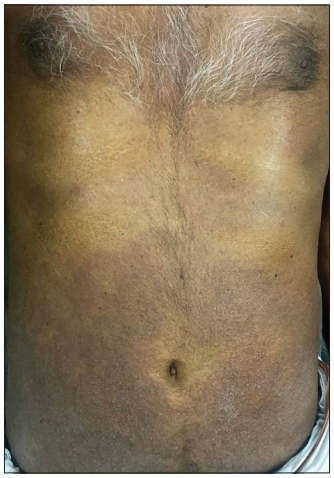

Figure 2: Well-defined erythematous scaly plaque over the abdomen.

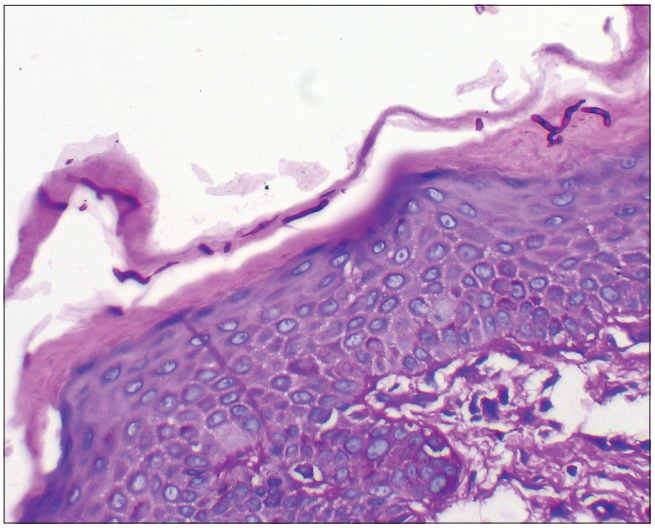

Figure 3: Epidermis with mild hyperkeratosis, many fungal hyphae in the stratum corneum, irregular acanthosis and spongiosis (periodic acid Schiff, ×400).

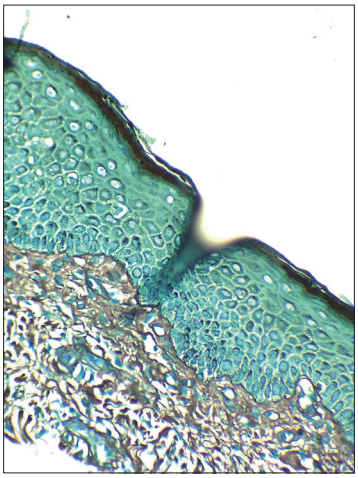

Figure 4: Fungal hyphae in stratum corneum (Gomori methenamine silver stain, ×400).

erythroderma is a pre-existing dermatosis, the most frequent of which are psoriasis and eczema.[1-3] Other causes include drug reactions, malignancies, and idiopathic erythroderma. Cutaneous infections can also result in exfoliation, especially in the immunosuppressed, and in untreated and misdiagnosed cases. Infections reported to cause erythroderma include staphylococcal scalded skin syndrome, crusted scabies, extensive dermatophytosis, and HIV seroconversion, among others.[1] Although several textbooks and articles list dermatophytosis as a cause of erythroderma, reported cases are few.

Dermatophytosis is common in our part of the country due to the hot and humid climate.[4] The main etiologic agents reported are *Trichophyton rubrum*, *Trichophyton mentagrophytes,* and *Epidermophyton floccosum*.[5] An important challenge in dermatophytosis is the diagnosis and management of cases that have previously been wrongly treated.

Topical corticosteroids are commonly used by patients as over-the-counter medications for a variety of dermatoses. Corticosteroid-containing topical preparations suppress inflammation, and hence, signs and symptoms of tinea show an initial improvement.[6] The term "tinea incognito" was first described by Ive and Marks in 1968, to denote the atypical clinical presentation of dermatophytosis resulting from prior use of topical or systemic steroids and other immunosuppressants.[7] Dermatophytes metabolize dead keratin and produce an eczematous response in the affected skin leading to a poor supply of keratin to the fungus. This has a role in limiting the infection. Topical steroids suppress this protective eczematous response, which reduces obvious clinical symptoms initially. However, dermatophytes flourish leading to an eventual flare of the disease.[4,7,8] This may present clinically as lesions with less scaling and without a prominently raised margin. They may be pustular, pruritic, erythematous or extensive, and may mimic other skin diseases.[5]

A patient without a prior history of skin lesions presenting with erythroderma can cause diagnostic difficulty. A skin biopsy may yield a diagnosis in only 50–66% of patients as reported by various authors, and multiple biopsies may often be required to determine the cause of erythroderma. Topical steroids can also alter the histopathological findings in dermatological diseases.[3,9,10]

Erythroderma can result in systemic complications such as hypoalbuminemia, electrolyte imbalance, and anemia, hence, this warrants a battery of blood tests. The treatment of erythroderma includes symptomatic and supportive therapy along with treatment of the underlying cause.[1]

Pharmacists dispensing medications without prescription is a major reason for tinea incognito in our country. Atypical presentations can often pose a dilemma for dermatologists. With this case, we wish to highlight the consequence of resorting to over the counter remedies.

CONCLUSION

Tinea incognito is an uncommon, but important cause of erythroderma, which may pose a diagnostic challenge due to steroid induced alteration of clinical picture.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Okoduwa C, Lambert WC, Schwartz RA, Kubeyinje E, Eitokpah A, Sinha S, *et al*. Erythroderma: Review of a potentially life-threatening dermatosis. Indian J Dermatol 2009;54:1-6.
2. Prakash BV, Sirisha NL, Satyanarayana VV, Sridevi L, Ramachandra BV. Aetiopathological and clinical study of erythroderma. J Indian Med Assoc 2009;107:100, 102-3.
3. Akhyani M, Ghodsi ZS, Toosi S, Dabbaghian H. Erythroderma: A clinical study of 97 cases. BMC Dermatol 2005;5:5.
4. Dutta B, Rasul ES, Boro B. Clinico-epidemiological study of tinea incognito with microbiological correlation. Indian J Dermatol Venereol Leprol 2017;83:326-31.
5. Arenas R, Moreno-Coutiño G, Vera L, Welsh O. Tinea incognito. Clin Dermatol 2010;28:137-9.
6. de Freitas RS, Neves PS, Charbel CE, Criado PR, Nunes RS, Santos-Filho AM, *et al*. Investigation of superficial mycosis in cutaneous allergy patients using topical or systemic corticosteroids. Int J Dermatol 2017;56:e194-8.
7. Ive FA, Marks R. Tinea incognito. Br Med J 1968;3:149-52.
8. Peixoto I, Maquine G, Francesconi VA, Francesconi F. Dermatophytosis caused by *Trichophyton rubrum* as an opportunistic infection in patients with cushing disease. An Bras Dermatol 2010;85:888-90.
9. Zip C, Murray S, Walsh NM. The specificity of histopathology in erythroderma. J Cutan Pathol 1993;20:393-8.
10. Banerjee S, Ghosh S, Mandal RK. A study of correlation between clinical and histopathological findings of erythroderma in North Bengal population. Indian J Dermatol 2015;60:549-55.

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