Erythroderma secondary to crusted scabies

Gurumayum Chitralkha Devi , Neirita Hazarika

Department of Dermatology,
Venereology & Leprosy, All
India Institute of Medical
Sciences, Rishikesh, Rishikesh,
Uttarakhand, India

Correspondence to

Dr Neirita Hazarika;
neirita.derma@aiimsrishikesh.
edu.in

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DESCRIPTION

A man aged 45 years with known case of psoriasis on remission presented with generalised erythema and scaling for 1 month. History of self-prescribed steroid, antibiotics, topical salicylic acid formulations led to only temporary relief. On examination, diffuse, hyperkeratotic, yellow scales were noted on an erythematous base, covering 95% body surface area (BSA) ([figure 1](#)). A provisional diagnosis of psoriatic erythroderma was made. During workup, 10% potassium hydroxide (KOH) mount of scales revealed 5–6 scabies mites/high power field ([figure 2](#)). Serum cortisol level at 08:00 hours was 0.3 µg/dL (normal: 5–23 µg/dL). Other investigations (complete haemogram, liver function test, kidney function test, random blood sugar, glycosylated haemoglobin, viral markers, urine routine microscopy, chest X-ray and ECG) were normal. Diagnosis of erythroderma secondary to crusted scabies with iatrogenic Cushing's disease (due to self-prescribed steroid) was made. Patient was put on oral ivermectin (200 µg/kg) on days 1, 2, 8, 9 and 15, and 5% permethrin cream daily for 7 days then twice weekly until no mite was detected on KOH mount. The hyperkeratotic plaques cleared by 3 weeks. For iatrogenic Cushing's disease, physiological doses of tablet prednisolone 5 mg in morning and 2.5 mg in evening were started as advised by endocrinologist and the patient was followed up in endocrinology OPD.

Crusted scabies is a hyperinfestation state, caused by mite *Sarcoptes scabiei* var. *hominis*, with millions of mites and hyperkeratotic skin lesions. A T helper 2 response, selective movement of CD8+ T cells, minimal helper T lymphocytes (CD4+) and absence of B cells in dermis, contribute to the uncontrolled growth of the mite.¹ Activated CD8+ T cells induce dysregulated keratinocyte

Figure 2 (A and B) Microscopy of mineral oil preparation of scales obtained by scraping revealed mites of *Sarcoptes scabiei* var. *hominis* (red arrow) and eggs (black arrow).

apoptosis contributing to epidermal hyperproliferation. Crusted scabies has been reported with immunosuppression, HIV, leprosy, tuberculosis, substance abuse, systemic lupus erythematosus, diabetes mellitus, hepatitis, neurological diseases causing reduced sensation, immobility states causing reduced scratching, in genetically susceptible patients and also in people with no susceptible factor.¹ A bedside KOH mount can easily establish the diagnosis of crusted scabies.

Learning points

- ▶ Crusted scabies is characterised by generalised itchy, hyperkeratotic yellowish scales.
- ▶ It can sometimes be mistaken for erythrodermic psoriasis.
- ▶ A bedside potassium hydroxide mount can easily establish the diagnosis of crusted scabies.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

ORCID iDs

Gurumayum Chitralkha Devi <http://orcid.org/0000-0002-6844-4084>

Neirita Hazarika <http://orcid.org/0000-0003-4768-2857>

Figure 1 (A and B) Diffuse, hyperkeratotic scales, fissures with bleeding and erosion on an erythematous base, present over trunk and lower limb.

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