

CASE IMAGE

An unusual adverse effect during crusted scabies treatment

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Key Clinical Message

Crusted scabies is a severe form of scabies infestation caused by the ectoparasite *Sarcoptes scabiei*. Risk factors include immunosuppression, neuropathies, and psychiatric disorders. Its management poses important challenges due to its contagious nature. Here we present a case of Acute Generalized Exanthematous Pustulosis secondary to Ivermectin therapy in a patient with crusted scabies.

KEYWORDS

acute generalized exanthematous pustulosis, crusted scabies, ivermectin, permethrin

1 | OBJECTIVES

1. Share the case of a patient with crusted scabies who presented AGEP during treatment.
2. Emphasize the importance of a comprehensive approach to managing scabies.
3. Familiarize clinicians from third world countries with infrequent adverse effects of ivermectin.

Crusted scabies is characterized by thick crusts, vesicles, and papules; it presents an intriguing aspect wherein pruritus may not always manifest.¹ Differential diagnoses may include conditions such as ostraceous psoriasis, Darier disease, seborrheic dermatitis, and dermatitis herpetiformis.²

Timely treatment is paramount as it can effectively prevent outbreaks. For crusted scabies, the recommended regimen typically involves applying permethrin cream 5% once daily for a week, followed by every other day until

lesions resolve, in conjunction with oral ivermectin. The dosage of ivermectin, usually administered at 200 mcg/kg/day, may vary depending on the severity and may span Days 1, 2, 8, or 1, 2, 8, 9, 15.³

2 | CASE DESCRIPTION

A 23-year-old man, experiencing homelessness with a history of cannabis and cocaine use, presented with a 6-month history of a progressive pruritic rash. Upon examination, he exhibited generalized pruritic, hyperkeratotic, crusted, fissured, and scaly plaques, predominantly in axillary folds, back, periumbilical skin, and flexor surface of the knees (Figure 1). Erythematous papules and excoriations were evident due to scratching. Laboratory findings were unremarkable except for leukocytosis. Microscopic examination of skin scraping revealed multiple mites, confirming the diagnosis of crusted scabies (Figure 2). Permethrin cream 5%

(once a day for 1 week) and ivermectin (200 micrograms/kg) were administered, but during the third day of hospitalization the patient presented fever (38°) and numerous non-follicular pustules over erythematous plaques on trunk and extremities, evolving 60% of total body surface.

A biopsy was performed (Figure 3), and findings were consistent with acute generalized exanthematous

pustulosis (AGEP). Oral ivermectin was discontinued and permethrin regimen was completed with satisfactory evolution after 2 weeks (Figure 4).

In our patient's case, malnutrition and social circumstances likely contributed to an elevated risk of crusted scabies. As ivermectin was the only oral medication the patient had been receiving during the last week, it was



FIGURE 1 Multiple hyperkeratotic, brownish, scaly plaques involving axillary folds, arms, elbows, glutes, and abdomen.

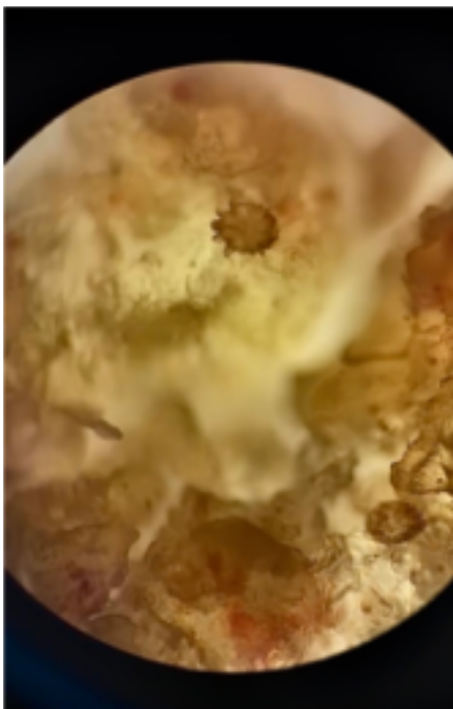


FIGURE 2 *Sarcoptes scabiei* under the microscope.

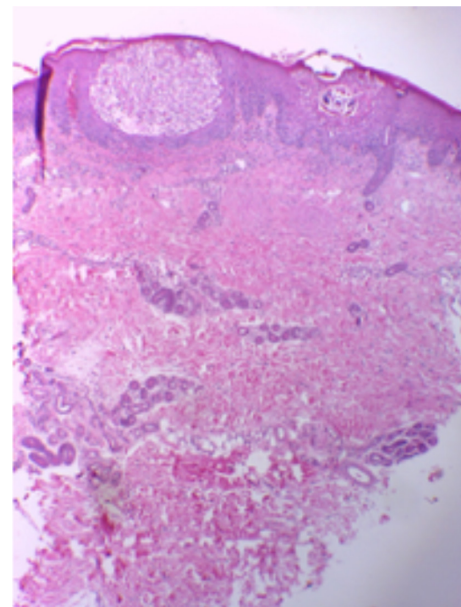


FIGURE 3 Acantosis and subcorneal pustules with the accumulation of neutrophils, an intact basal layer, and a moderate mixed inflammatory infiltrate of lymphocytes, plasma cells, neutrophils, and eosinophils. Note the intracorneal mite.

FIGURE 4 Patient's satisfactory evolution after the discontinuation of ivermectine and treatment with permethrin.



the only potential culprit suspected when he present AGEF.

AUTHOR CONTRIBUTIONS

Laura Jaramillo Santacoloma: Conceptualization; methodology; writing – review and editing. **Sara Saldarriaga:** Conceptualization; formal analysis; writing – original draft; writing – review and editing. **Ana María Mejía:** Writing – review and editing.

CONFLICT OF INTEREST STATEMENT

None declared.

DATA AVAILABILITY STATEMENT


While existing literature provides insights into the adverse effects of ivermectin, there is no data on its association with AGEF. This case report marks a significant milestone as the first documented instance of an AGEF manifestation in a patient undergoing ivermectin treatment, followed by their successful recovery through topical management with permethrin.

CONSENT

Written informed consent was obtained from the patient to publish this report.

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