

Scabies mimicking relapsing atopic dermatitis

Flavia Pigliacelli, Elva Abril, Norma Cameli, Paolo Iacovelli, Maria Mariano

San Gallicano Dermatological Institute IRCCS, Rome, Italy

Abstract

Atopic dermatitis (AD) is a chronic inflammatory skin disease clinically characterized by eczematous skin manifestations. Sometimes, it can manifest with non-specific clinical features, which are common with other skin conditions, such as infectious and neoplastic diseases. We would like to underline the importance of accurate dermatologic examination and rigorous anamnesis in patients affected by AD to avoid misdiagnosis and delayed treatments.

Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disease that classically affects children but can also occur in adolescents and adults. It is clinically characterized by erythematous and eczematous skin patches and plaques on flexural areas, trunk,

face, and hands accompanied by intense itch.¹ AD can reduce the patient's quality of life (QoL), with a negative influence on daily activities and sleep. The treatment includes topical and systemic drugs, phototherapy, biologics, and Jak inhibitors, according to the severity of the disease and the impairment of the patient's QoL.

Case Report

A 20-year-old female patient was referred to our dermatology outpatient for an itching eczematous rash. She suffered from atopic dermatitis from childhood, with a progressive worsening during adolescence. The dermatology examination revealed the presence of erythematous papules, scaling patches, and eczematous lesions on the trunk, extremities, and face, accompanied by severe pruritus and impairment of the patient's QoL (Eczema Area and Severity Index [EASI]: 26; pruritus-Numeric Rating Scale [p-NRS]: 10; Dermatology Life Quality Index [DLQI]: 27). She was previously treated with topical emollients and short courses of systemic steroids with unsatisfactory results. Subsequently, dupilumab 300 mg was administered every 15 days with good improvement, but it was interrupted after 5 months for the development of severe conjunctivitis. For this reason, we decided to start therapy with upadacitinib 15 mg, with a fast clinical response and a reduction of pruritus after only 1 month (EASI: 10; pruritus NRS: 2; DLQI: 3). However, after 3 months of treatment, a clinical worsening was observed, with an apparent relapse of AD. In fact, the clinical examination revealed the presence of erythematous papules, excoriations, oozing, and crust on hands, buttocks, nipples, armpits, and abdomen (Figure 1A). The patient complained of intense itching with sleep disturbance without response to systemic antihistamines. In addition, burrows were observed on interdigital areas of the hands and wrists, suggesting the hypothesis of scabies. The patient reported similar signs and symptoms in family members. The diagnosis was confirmed, demonstrating the presence of mites and eggs from scrapings of the cutaneous lesions and direct microscopy (Figure 2).² Topical permethrin 5% and oral ivermectin were administered with a complete resolution of clinical manifestations and pruritus (Figure 1B).

Discussion

Scabies is a mite infestation caused by *Sarcoptes scabiei*, which is characterized by intense pruritus and the presence of papules and burrows on the interdigital spaces of the hands, axillae, wrists, buttocks, and genitalia. The presentation of scabies can mimic other skin conditions, making it tricky to diagnose and leading to possible outbreaks.³ Also, AD can sometimes manifest with non-specific clinical features, which can be in common with other skin conditions, such as inflammatory, neoplastic, or infectious diseases.^{1,4}

Correspondence: Flavia Pigliacelli, San Gallicano Dermatological Institute IRCCS, via Elio Chianesi 53, 00144 Rome, Italy
E-mail: flavia.pigliacelli@ifo.it

Key words: atopic dermatitis; *Sarcoptes scabiei*; scabies; eczema.

Conflict of interest: the authors declare no conflict of interest.

Ethics approval and consent to participate: all procedures adopted in this study adhered to the ethical standards of the World Medical Association Declaration of Helsinki.

Consent for publication: the patient in this manuscript has given written informed consent.

Availability of data and materials: all data underlying the findings are fully available.

Received: 18 June 2024.

Accepted: 8 July 2024.

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0).

©Copyright: the Author(s), 2024

Licensee PAGEPress, Italy

Dermatology Reports 2025; 17:110070

doi:10.4081/dr.2024.110070

Publisher's note: all claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article or claim that may be made by its manufacturer is not guaranteed or endorsed by the publisher.

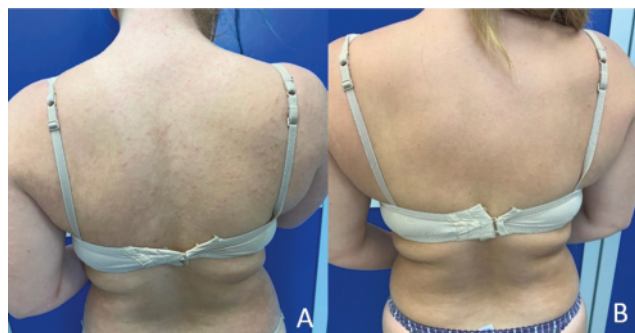


Figure 1. A) A 20-year-old female patient with an apparent relapse of atopic dermatitis three months after starting upadacitinib; **B)** clinical improvement following topical permethrin 5% and oral ivermectin therapy.



Figure 2. Scabies mites from direct microscopy examination (magnification x40). The sample from cutaneous scraping is placed on a slide, and some drops of 10% potassium hydroxide are added. Then, the sample is analyzed under a microscope for the presence of mites, larvae, or ova.

Conclusions

The purpose of this case report is to underline the importance of accurate dermatologic examination and rigorous anamnesis in AD patients in order to avoid misdiagnosis and delayed treatments without interfering with effective underlying therapy, resulting in an aggravation of dermatologic disease⁵ and, in the case of an infectious condition, a possible spread to family and close contacts.

References

1. Siegfried EC, Hebert AA. Diagnosis of Atopic Dermatitis: Mimics, Overlaps, and Complications. *J Clin Med* 2015;4: 884-917.
2. Siddig EE, Hay R. Laboratory-based diagnosis of scabies: a review of the current status. *Trans R Soc Trop Med Hyg* 2022;116:4-9.
3. Gilson RL, Crane JS. Scabies. [Updated 2022 Aug 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023.
4. Lugović-Mihić L, DelašAždajić M, Bešlić I. Scabies cases misdiagnosed and treated as allergic diseases: itch as alarm. *Acta Clin Croat* 2022;61:349-53.
5. Napolitano M, Fabbrocini G, Martora F, et al. Children atopic dermatitis: Diagnosis, mimics, overlaps, and therapeutic implication. *Dermatol Ther* 2022;35:e15901