



## When scabies mimics atopic dermatitis in twins: a diagnostic pitfall

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Aim: to re-evaluate common diagnosis assumptions through the analysis of classic misdiagnosis

Take home messages: Always look beyond the rash

Do not let the common diagnosis blind you to the common impostor

No conflict of interest

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# Introduction

- **Scabies:** an infestation of the skin by the arthropod mite *Sarcoptes scabiei* var. *hominis* <sup>[1]</sup>
- 30% of patients may present with lesions that mimic other skin conditions <sup>[2]</sup>
- **Global Burden:** affects approximately 300 million people annually worldwide, with a high incidence in children under 2 years old <sup>[3]</sup>

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1. Engelman D, Yoshizumi J, Hay RJ, et al. The 2020 International Alliance for the Control of Scabies Consensus Criteria for the Diagnosis of Scabies. *Br J Dermatol*. 2020 Nov;183(5):808-820. doi: 10.1111/bjd.18943.

2. Micali G, Lacarrubba F, Verzi AE et al. Scabies: Advances in noninvasive diagnosis. *PLoS Negl Trop Dis*. 2016;10(4):e0004691. doi:10.1371/journal.pntd.0004691.

3. Karimkhani C, Colombara DV, Drucker AM et al. The global burden of scabies: a cross-sectional analysis from the Global Burden of Disease Study 2015. *Lancet Infect Dis*. 2017 Dec;17(12):1247-54. doi: 10.1016/S1473-3099(17)30483-8

# Case presentation

- Monozygotic twins, male (B&R)
- Two-month history of severe, diffuse pruritus and skin lesions
- Lesions began on limbs → rapid generalization → late cephalic involvement
- Failed Prior Care: diagnosed as "allergy" or atopic dermatitis
- Treated by a general practitioner with H1-antihistamines, topical corticosteroid, emollients, and dietary restrictions without improvement
- No personal or family history of atopy or other previous medical history

# Case presentation

- **Clinical examination**



Figure 1-2: Hypopigmented malar patches with fine scaling and asymmetric palmar pustules in twin B . Source: photo from the department

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# Case presentation

- **Clinical examination**



Figure 3-4: Widespread excoriated and pruritic vesicles and papules, finely scaly.

Source: photo from the department

# The Initial Presentation: A Textbook Case of atopic dermatitis (AD)?

- Similar skin rash in twins: *unknown genetic predisposition?*
- Hypopigmented malar patches with fine scaling
- Widespread excoriated vesicle
- **Initial working diagnosis:** Atopic Dermatitis.

*A common, logical first diagnosis in a pediatric population.*

*Managed initially with standard therapy: Emollients, H1-antihistamines*

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**The First Red Flag: Treatment Failure**

**The Pivotal Sign:** Asymmetrical palmar pustules in one twins



# Diagnostic confirmation

## Step1

### Epidemiological clue

7 family members in one household.  
Is anyone else itchy? NO

## Step 2

### Contagion check

examination of parents.

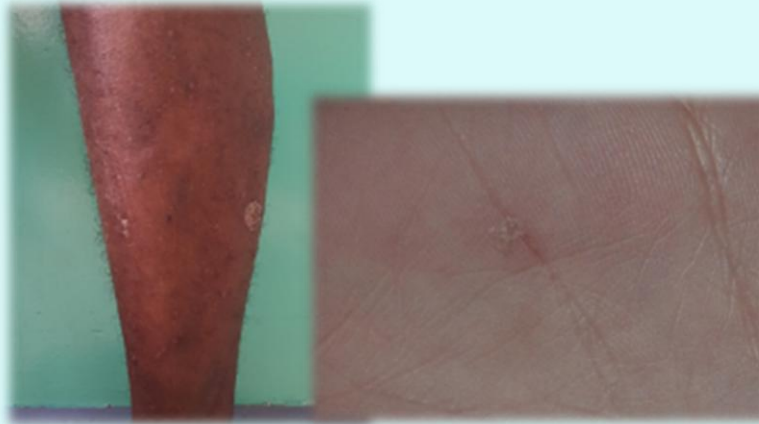


Figure 5-6: scratch lesion and scabies burrow in a parent. Source: photo from the departement

## Step 3

### Dermoscopy

Confirmation: « delta wing jet » and scabies burrows in asymptomatic parent

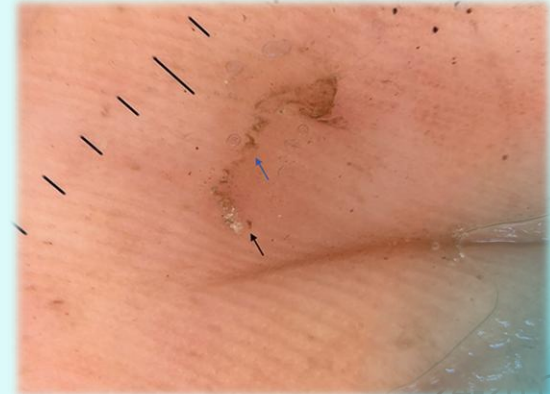


Figure 7: delta wing sign in dermoscopy. Source: Gaurav V, et al. Journal of Skin and Sexually Transmitted Diseases 2025

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# Case presentation

- **Treatment:** new management plan (for entire family):

Topical Scabicide: Benzyl Benzoate/Permethrin.

Oral Therapy: Ivermectin (200 µg/kg, repeated dose).

Environmental decontamination: washing of clothes, bedding and fomites

- **Outcome: rapid and significant improvement** in symptoms and signs, confirming the diagnosis

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## Discussion




- # Scabies incognita

**PLOS** NEGLECTED TROPICAL DISEASES

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RESEARCH ARTICLE

# The disability-adjusted life years (DALYs), prevalence and incidence of scabies, 1990–2021: A systematic analysis from the Global Burden of Disease Study 2021

Jiajia Li , Zehu Liu \*, Xiujiao Xia 

Department of Dermatology, Hangzhou Third People's Hospital, Hangzhou Third Hospital Affiliated to Zhejiang Chinese Medical University, Hangzhou, Zhejiang Province, China

The disability-adjusted life years (DALYs), prevalence and incidence of scabies, 1990–2021: A systematic analysis from the Global Burden of Disease Study 2021

Department of Dermatology, Hangzhou Third People's Hospital, Hangzhou Third Hospital Affiliated to Zhejiang Chinese Medical University, Hangzhou, Zhejiang Province, China

> [Dermatol Reports](#). 2025 Feb 6;17(1):10070. doi: 10.4081/dr.2024.10070. Epub 2024 Aug 9.

# Scabies mimicking relapsing atopic dermatitis

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International Journal of General Medicine

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ORIGINAL RESEARCH

# Frequent Misdiagnosis of Scabies as Eczema in China: A Descriptive Study of 23 Cases

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ORIGINAL RESEARCH

Xumei Wu<sup>1,2</sup>, Feifei Yang<sup>3</sup>, Ruina Zhang<sup>1</sup>

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## Article in Journal of the Egyptian Women's Dermatologic Society · January 2017

6 October  
2025

# Discussion

## The 2020 International Alliance for the Control of Scabies Consensus Criteria for the Diagnosis of Scabies

D. Engelman<sup>1,2,3</sup>, J. Yoshizumi<sup>4,5</sup>, R.J. Hay<sup>6</sup>, M. Oati<sup>1,2</sup>, G. Micali<sup>7</sup>, S. Norton<sup>8</sup>, S. Walton<sup>9</sup>, F. Boralevi<sup>10</sup>, C. Bernigaud<sup>11,12</sup>, A.C. Bowen<sup>13,14,15</sup>, A.Y. Chang<sup>16</sup>, O. Chosidow<sup>15,17</sup>, G. Estrada-Chavez<sup>17</sup>, H. Feldmeier<sup>18</sup>, N. Ishii<sup>19</sup>, F. Lacarrubba<sup>2</sup>, A. Mahé<sup>20</sup>, T. Maurer<sup>16,21</sup>, M.M.A. Mahdi<sup>22,23</sup>, M.E. Murdoch<sup>24</sup>, D. Pariser<sup>25</sup>, P.A. Nair<sup>26</sup>, W. Rehmus<sup>27,28</sup>, L. Romani<sup>1,29</sup>, D. Tilakaratne<sup>15,30</sup>, M. Tuicakau<sup>31,32</sup>, S.L. Walker<sup>33,34</sup>, K.A. Wanat<sup>35</sup>, M.J. Whitfield<sup>36</sup>, R.R. Yotsu<sup>37,38</sup>, A.C. Steer<sup>1,2,3</sup> and L.C. Fuller<sup>39,40</sup>

### A. Confirmed scabies

At least one of:

- A1: Mites, eggs or faeces on light microscopy of skin samples
- A2: Mites, eggs or faeces visualized on an individual using a high-powered imaging device
- A3: Mite visualized on an individual using dermoscopy

### B. Clinical scabies

At least one of:

- B1: Scabies burrows
- B2: Typical lesions affecting male genitalia
- B3: Typical lesions in a typical distribution and two history features

### C. Suspected scabies

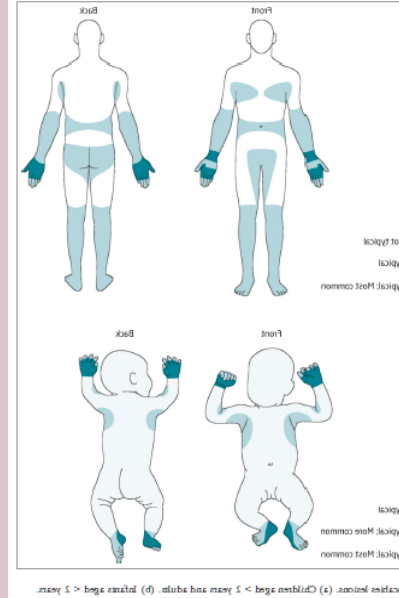
One of:

- C1: Typical lesions in a typical distribution and one history feature
- C2: Atypical lesions or atypical distribution and two history features

### History features

- H1: Itch
- H2: Positive contact history

Diagnosis can be made at one of the three levels (A, B or C). A diagnosis of clinical or suspected scabies should only be made if other differential diagnoses are considered less likely than scabies.



The power of a simple tool

Diagnostic approach validated

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# Conclusion

- **Our case report call for vigilance especially in pediatric population:** scabies is a great imitator, one must never say that it is a simple diagnosis
- The triad of **epidemiology** , **atypical findings** and **dermoscopy** is a powerful diagnostic toolkit

Investigation of pruritus in close contacts (family members).

Characteristic burrows and palmoplantar lesions.

Dermoscopy, even in contact

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- **Public health impact:** misdiagnosis perpetuates a cycle of individual suffering and community transmission especially in areas with a high prevalence of AD