Case report:

Crusted Scabies

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Abstract

Crusted scabies (Norwegian scabies) is an extremely contagious variety of scabies in which millions of mites inhabit in skin. It occurs more frequently in people who have immune suppression due to a disease or medical treatment. Patients with crusted scabies typically have thicker, fissured hyperkeratotic crust. In the context of the application of topical corticosteroids, we describe the case of a 17-year-old patient who had hyperkeratotic scabies. He was successfully treated by using a combination of topical permethrin and oral Ivermectin.

Introduction

A skin condition known as scabies is brought on by the infection of the human-specific ectoparasite Sarcoptes scabiei var. hominis, which has been classified as a neglected tropical illness.[1]

Crusted scabies is a severe and contagious form of scabies in which millions of mites proliferate and cause widespread hyperkeratotic crusting of the skin.[2] The clinical appearance of crusted scabies differs from typical scabies in that it is characterized by extensive local or diffuse hyperkeratosis on an erythematous background, as well as crusting and fissures on various body areas.[3]

Scabies spreads globally and has an impact on all social groups and communities. Because these individuals continue to be contagious for a very long time, it is very difficult to get rid of the mites from the parts of the skin that are heavily crusted.4 It spreads through close personal contact or indirectly through fomites (clothes or bed linens).[2] Crusted scabies is more likely to affect patients who have systemic or powerful topical glucocorticoids, organ transplant recipients, immunocompromised, malnourished, and people with human immunodeficiency virus (HIV).[1]

Clinical observations and microscopic inspection of scales obtained by skin scraping are used to confirm the diagnosis. The burrow ink test, video-dermatoscopy, recently developed serologic assays like PCR/ELISA, and specific IgE targeted toward key mite components are further diagnostic techniques. To stop an outbreak of scabies, patients with crusted scabies must be strictly isolated. Ivermectin has been successfully utilized in the treatment of crusted scabies, either alone or in conjunction with other scabicidals.[5-7]

In view of the delayed diagnosis and incorrect application of topical corticosteroids, we report a patient who had crusted scabies.

Case report

A 17-year-old boy from Rajbari, Bangladesh, complained of 2-month-long crusting, widespread erythema, and itching when he visited the department of Dermatology and Venereology at BSMMU. He had a small red papule and vesicle covering his entire cutaneous surface two months prior. His general physician had prescribed him topical steroids for his pruritus for an extended period. His symptoms initially got better, but after a few days they came back with a thick crusted lesion. When the skin was examined, it showed widespread erythema, numerous fissured hyperkeratotic lesions, extensive scales, primarily across the trunk and limbs, and pedal oedema Fig1(a, b).

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Cite this Article:
Pudel H, Uddin MJ. Crusted Scabies. Ban Acad Dermatol. 2023; 03 (02): 78-80

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An official publication of Bangladesh Academy of Dermatology (B.A.D.)

For a time, the patient was unable to attend school. The lesions were painful and tender hampering his regular activities. His family members similarly experienced excoriations and pruritic popular lesions. After admitting the patient, we immediately scraped the hyperkeratotic lesion, placed the sample on a slide, and added a drop of mineral oil. Microscopic examination revealed Sarcoptes scabiei mite, fig 2. It was determined that the patient had crusted scabies. He received a combined treatment that included oral ivermectin (200 mcg/kg/dose) and topical permethrin 5%.

Oral ivermectin was given on day 1,2,8,9, and 15. Permethrin 5 % cream was applied every two to three days for two weeks. Antihistamine was administered for pruritus. His family member was also treated with anti-scabietic therapies. After one week of treatment, the patient significantly improved (fig. 3a-b). We chose to continue treatment with outpatient care when the lesion began to regress.

Discussion

We describe the case of a 17-year-old boy without any comorbidity but had a history of long-term use of steroids, which may contribute to the host's susceptibility to infestation by Sarcoptes scabiei. Crusted scabies is more common in immunocompromised, underweight and handicapped individuals, but this case is of a young boy with crusted scabies due to delayed diagnosis and inappropriate use of topical steroids.

Crusted scabies is a serious public health issue, and misdiagnosis can have further negative health and economic effects, particularly when outbreaks occur in medical facilities.[4] Topical corticosteroids reduce local cell-mediated immune responses when used for an extended period, allowing one to develop this severe form of human scabies.6 Scabies epidemics can cause long-term health effects (such as heart and kidney problems) that can have a major financial impact on national health services.[4]

The basis of therapy is an early diagnosis and appropriate care. The systemic medication of preference is ivermectin, and many treatments may be necessary. Never disregard the contact individual's prophylactic treatment.[5] Since mites die over 72 hours when they are isolated from their human host, clothing and linens should either be kept in a plastic bag or machine-washed at a temperature of at least 50 degrees Celsius to avoid re-infestation. If there are no signs of active scabies (no active lesions, no nocturnal pruritus) one week following the completion of therapy, the infestation is considered to be under control. Itching following therapy could last for up to 2-4 weeks.[7-8]

Conclusion

It is essential to suspect someone having scabies if they have a pruritic popular lesion and a favourable family history. Its outbreaks and life-threatening complications can be avoided with prompt diagnosis and appropriate treatment. The hospital staff or household contacts should be advised to take the necessary steps to avoid becoming infected.

Conflict of Interest
None

Funding source
None

Patient Consent
Taken from parents.

IRB approval status
Not applicable

a.

b.

Fig 1(a) hyperkeratoticlesions with fissuring on the trunk and upper extremities; 1(b) hyperkeratotic lesions on the lower extremities with bilateral pedal edema.

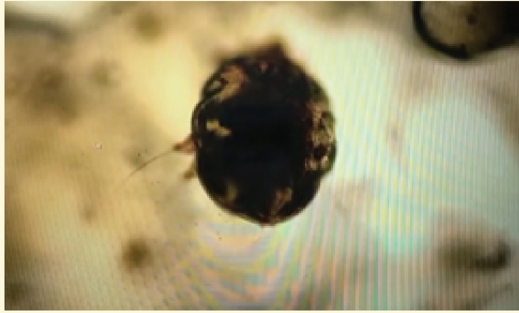
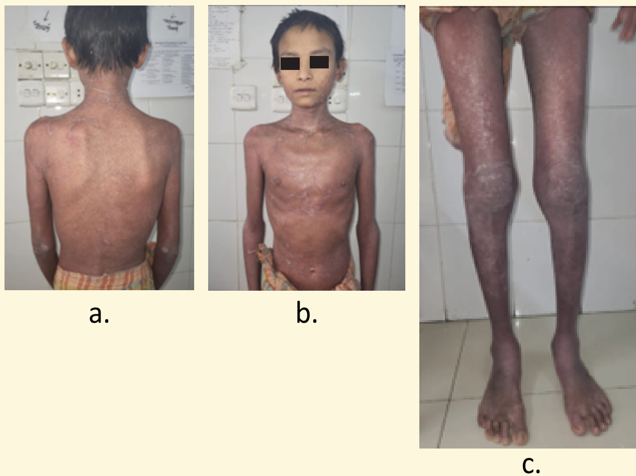


Fig 2. Sarcoptes scabiei on microscopic examination
(Photo: Bhuiyan Mohammed Saiful Islam Bhuiyan)



a. b. c.

fig 3(a,b,c) regression of the lesions after a week.

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