

Eczema herpeticum in a child with atopic dermatitis

Mitali Sahni

CASE REPORT

Four-year-old boy with a history of atopic dermatitis (AD) presented to the emergency room with one-day history of worsening rash on the face, inadequate oral intake, fever, and clear rhinorrhea. He had multiple papulovesicular lesions with punched out, crusted ulcers surrounding his mouth and on both his cheeks (Figure 1A and B). The lesions had suddenly appeared and spread rapidly over the past 24 hours. Past medical history was significant for AD for which the patient was prescribed triamcinolone, however, his mother reported non-compliance with treatment. The patient was febrile, dehydrated, and had cervical lymphadenopathy on physical examination. The patient was clinically diagnosed with eczema herpeticum and a direct fluorescence antigen test, which was positive for herpes simplex virus (HSV)-1, confirmed the diagnosis. Our patient's clinical course was complicated by secondary bacterial infection. He was treated with intravenous antibiotics and acyclovir, and the lesions resolved over the next four weeks.

DISCUSSION

Eczema herpeticum is a secondary HSV infection that occurs in skin diseases like AD, psoriasis, burns, contact dermatitis, and seborrheic dermatitis [1]. It is more common in infants and children, especially those with severe AD due to presence of impairment of skin barrier, unbalanced skin microbiota, and dysfunctional immune response. Eczema herpeticum can be diagnosed clinically based on the presentation and history provided. Initially,

it may present with erythematous small, monomorphic, dome-shaped papulovesicles that subsequently rupture to form tiny punched-out ulcers. Herpetic vesicles may present over large mucocutaneous surfaces like face, neck, and upper trunk. Patients may also have associated fever, malaise, and lymphadenopathy. In cases where laboratory confirmation is required, it can be done with viral culture, immunofluorescence, or polymerase chain reaction testing for HSV virus. A Tzanck smear test can also be used to confirm testing since it shows the cytopathic effects of herpes viruses but its utility is limited by its inability to distinguish between HSV-1, HSV2, and varicella zoster viruses [2].

The differential diagnosis includes eczema vaccinatum, impetigo, and primary varicella infection. Patients with AD can get frequently colonized with *Staphylococcus aureus* and can have impetigo, which can be confused with eczema herpeticum. Other autoimmune conditions such as pemphigus foliaceus, bullous pemphigoid, and pemphigus vulgaris can mimic atypical presentations of HSV infections. If these patients receive corticosteroids without antiviral therapy, it can lead to a fatal outcome. In immunocompromised patients with malignancy HSV can present atypically as painful intertriginous linear or chronic superficial ulcers that could be misdiagnosed as pressure sores [3].

Eczema herpeticum is a serious condition which can lead to various complications like scarring from blisters, spread of infection to eye can cause keratitis and blindness, if left untreated and in rare cases multiorgan spread infection and death can occur. Early diagnosis and prompt antiviral treatment with acyclovir can minimize the risk of severe and lethal complications [4]. Patients with AD should be counseled to avoid contact with anyone who has cold sores, including sharing personal items and silverware with anyone who has herpes infection.

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Figure 1: Multiple papulovesicular lesions with punched out, crusted ulcers surrounding (A) mouth and (B) cheeks.

CONCLUSION

Eczema herpeticum is a serious illness and considered an emergency. Clinicians should have a high index of suspicion for this disease, especially in children with history of atopic dermatitis. Prompt treatment with oral acyclovir is recommended and hospitalization for systemic antivirals should be considered in cases of severe disease or concurrent immunodeficiency.

Keywords: Eczema, Herpes, Rash, Viral

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Author Contributions

Mitali Sahni – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Author declares no conflict of interest.

Data Availability

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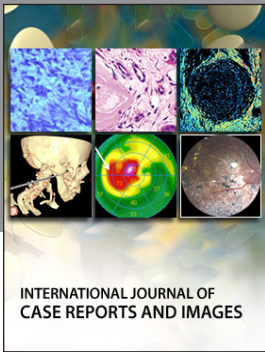
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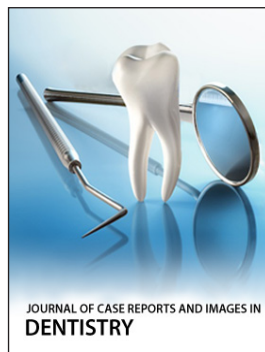
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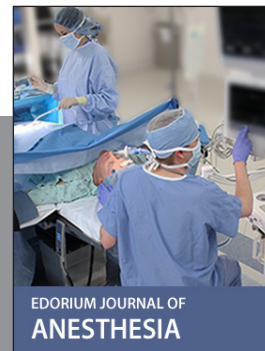
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