

## CASE REPORT

# Herpeticum-like rash in a child with atopic dermatitis: early clinical suspicion is valuable

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### ABSTRACT

Dermatological conditions may be associated with serious underlying medical conditions which require urgent treatment. We describe the case of a 6-year-old boy with erythematous vesicles with erosion and crusting on face, cheeks, and forehead. Due to the medical history of atopic dermatitis, eczema herpeticum was suspected and appropriate treatment was immediately initiated. This resulted in significant improvement of skin lesions.

### KEYWORDS:

Eczema herpeticum; Kaposi's varicelliform eruption; Atopic dermatitis; Children.

### INTRODUCTION

Atopic dermatitis is one of the most frequent inflammatory conditions of the skin in all age groups. Its course is chronic with bouts and recessions and management of these patients is mainly based on topical agents. Nevertheless, it can exert an adverse influence on the quality of life, while it may also be associated with various emergencies and serious complications, which demand immediate therapy [1].

### CASE REPORT

A 6-year-old boy with atopic dermatitis since infancy was admitted to our emergency department with a 3-day history of low-grade fever and eruption of pruritic, erythematous vesicles with erosion, and crusting on his face, predominantly over cheeks and forehead (Figure 1). Parents described previous eczematous lesions in the above locations. The boy also presented with bilateral orbital cellulitis and received oral antibiotic treatment with no clinical improvement.

Based on the medical history of atopic dermatitis and clinical traits of the rash, a diagnosis of eczema herpeticum was highly suspected and intravenous acyclovir was immediately initiated along with antibiotic eye drops. The child's condition dramatically improved and 3 days later, fever, skin lesions, and orbital cellulitis had almost resolved. After 7 days of intravenous treatment, the boy was discharged and recommended to receive acyclovir orally for an additional 7 days. A series of virological screening assays were requested and antibodies against herpes simplex virus (HSV) type 1 (HSV-1) and HSV-2 were negative, while no HSV-1/HSV-2 DNA was detected in the patient's blood with polymerase chain reaction (PCR) method. Bacterial cultures from skin lesions were negative. Due to technical limitations, PCR screening or a direct fluorescent antibody test for HSV of a sample taken from

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**Figure 1** - Erythematous vesicles with erosion and crusting were visible on the patient's face, predominantly over cheeks and forehead.

skin lesions were not possible. HSV-1/HSV-2 antibodies were also checked in the resolution stage of Kaposi's varicelliform eruption and were found to be negative, as well.

## DISCUSSION

Eczema herpeticum or Kaposi's varicelliform eruption represents a dermatology emergency with potentially life-threatening complications (e.g., septicemia and ocular disorders), and a clinician should be familiar with this entity [2]. The primary type of the disease occurs mainly in children, while the recurrent type is more often encountered in older ages, has a milder course and skin lesions are generally more localized. Although atopic dermatitis is the most known risk factor, it can also co-exist with a series of additional skin disorders (e.g., ichthyosis vulgaris, bullous pemphigoid, dyskeratosis follicularis, mycosis fungoides, and contact dermatitis). The underlying pathophysiology has not been completely understood; nevertheless, the defects in the skin barrier along with immune dysfunction seem to contribute to the development of the disease [3]. Furthermore, according to recent research, the occurrence of eczema herpeticum after HSV activation can be due to an underlying proliferation of regulatory T

cells and proinflammatory monocytes along with enhancement of their effector functions [4].

Our case underscores the value of an early clinical suspicion of this condition, especially in patients with a history of atopic dermatitis, even in the absence of more specialized laboratory testing methods. Prompt treatment with systematic antiviral medication can prevent or lessen complications [5]. Acyclovir is the gold standard therapy, although immunomodulatory treatments have also been considered with controversial results [6]. According to Aronson *et al.* [7], antibiotics do not really affect the prognosis of this entity, although the prophylactic use of antibiotics could prevent certain secondary bacterial infections.

## CONCLUSION

In conclusion, dermatological problems should not constitute a "no man's land" for primary health care practitioners, and elevated awareness is warranted, as they may be indicative of a serious underlying pathology.

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