Exuberant Cutaneous Involvement in a Primary Herpes Simplex Virus Infection

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Keypoints

What is known:

- Gingivostomatitis is the most common presentation of primary *Herpes simplex* virus infection in children.
- Polymerase chain reaction assay is the most sensitive method to confirm *Herpes simplex* virus infection.

What is added:

- Primary *Herpes simplex* virus infection can present with extensive and severe cutaneous involvement.
- *Herpes simplex* virus infection should be considered in the differential diagnosis of vesiculobullous diseases.

Introduction

A 1-year-old girl with no history of atopy was admitted to the emergency department with a three-day history of vesiculobullous pruritic rash surrounded by an erythematous base in the right cervical region. She had no fever or other symptoms. The disease's epidemiological context was denied. Oral flucloxacillin and topical fusidic acid were administered without improvement. Physical examination revealed the described dermatosis, with some ulcerated lesions with hemorrhagic crusts (Fig. 1), and perioral satellite lesions.

On suspicion of bullous impetigo, she was admitted for inpatient treatment with intravenous amoxicillin-clavulanic acid (50 mg/kg/day). There was an unfavorable progression, with zosteriform distribution, and purulent exudate after 72 hours (Fig. 2). The diagnosis of superinfected herpetic infection was then considered, and empirical treatment was started with intravenous acyclovir (80 mg/kg/day), flucloxacillin (200 mg/kg/day), and clindamycin (40 mg/kg/day). As an ampicillin resistant *Klebsiella pneumoniae* was isolated in the bacterial culture of the exudate, flucloxacillin was suspended, and ceftriaxone (75 mg/kg/day) was initiated. The blood culture was negative.

Treatment with acyclovir (for five days) and clindamycin and ceftriaxone (for 10 days) resulted in the gradual improvement of the rash. Later, polymerase chain reaction assay of skin lesions samples yielded a positive result for *Herpes simplex* virus (HSV) type 1. Upon re-evaluation, there was a significant clinical improvement (Fig. 3). The mother reported herpes labialis in one family member the week before the appearance of the rash.

Herpetic gingivostomatitis is the most common clinical presentation of primary HSV infection in children.[1] However, primary HSV infections can present in atypical and exuberant forms, making their diagnosis difficult and dependent on a high index of suspicion.[1,2] Eczema herpeticum, a rare but potentially life-threatening complication of HSV infection, should be considered in the differential diagnosis of a vesiculobullous rash in patients with an underlying cutaneous disease, such as atopic dermatitis.[1,3] Deoxyribonucleic acid detection by polymerase chain reaction is the most sensitive method to confirm the clinical diagnosis of HSV infection.[1,2]

Figure 1. Vesiculobullous rash with ulcers and hemorrhagic crusts, surrounded by an erythematous base in the right cervical region.

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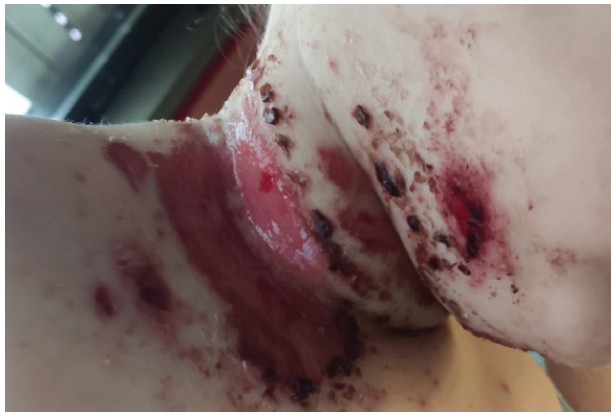

Figure 2. Bleeding exulcerated lesion, hemorrhagic crusts, and new lesions with the zosteriform distribution.

Figure 3. Erythematous macules in previously affected areas.

Keywords: Herpes Simplex/complications; Herpes Simplex/diagnosis; Herpes Simplex/drug therapy; Infant; Skin Diseases/diagnosis; Skin Diseases/drug therapy; Skin Diseases/etiology; Skin Diseases/virology

Author Contribuitions

SNM participated in the study conception or design. SNM and CGP participated in acquisition of data. SNM and CGP participated in the analysis or interpretation of data. SNM participated in the drafting of the manuscript. ALL and CV participated in the critical revision of the manuscript. All authors approved the final manuscript and are 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.

Conflicts of Interest

The authors declare that there were no conflicts of interest in conducting this work.

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Protection of human and animal subjects

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Confidentiality of data

The authors declare that they have followed the protocols of their work centre on the publication of patient data

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