

Herpetic Finger Infection

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We present a case of herpetic gingivostomatitis and finger infection. Vesicular hand lesions may result from autoinoculation of oral herpes simplex virus (HSV) infection in children, which may be evident or asymptomatic.

Herpes simplex virus (HSV) infections are among the most commonly encountered infections in humans. The main pathway of transmission is direct contact with infected secretions. Although primary HSV-1 infections are generally asymptomatic, they can cause gingivostomatitis, pharyngitis, and keratitis. Children with gingivostomatitis also can autoinoculate their fingers and other parts of the body. Herpetic finger infections are commonly mistaken for pyogenic infections; healing of the former can be delayed by secondary bacterial infections caused by incisions made to treat the latter. Herpetic finger infections may cause gangrene in immunocompromised patients.¹⁻⁵ We present the case of a 20-month-old boy with herpetic gingivostomatitis and finger infection and draw attention to autoinoculation of herpetic digital infections.

Case Report

A 20-month-old boy developed a fever and then watery lesions in the mouth and on the lips. These lesions spread to the hands and other parts of the body. A week after the fever began, the boy, unable to eat, was brought to the hospital.

Results from the physical examination included a temperature of 38.8°C, pulse of 120 beats/min, weight of 9.250 kg (3rd–10th percentile), height of 77 cm (3rd–10th percentile), perioral vesicular and crusty lesions on hyperemic background (Figure 1), left retroauricular watery and infected lesions on hyperemic background, and multiple 4×4-cm vesicular lesions on hyperemic background on the proximal phalanx of the right thumb (Figure 2). Other systemic findings were within reference range.

Laboratory findings were a hemoglobin level of 10.9 g/dL and white blood cell count of 11,890/μL

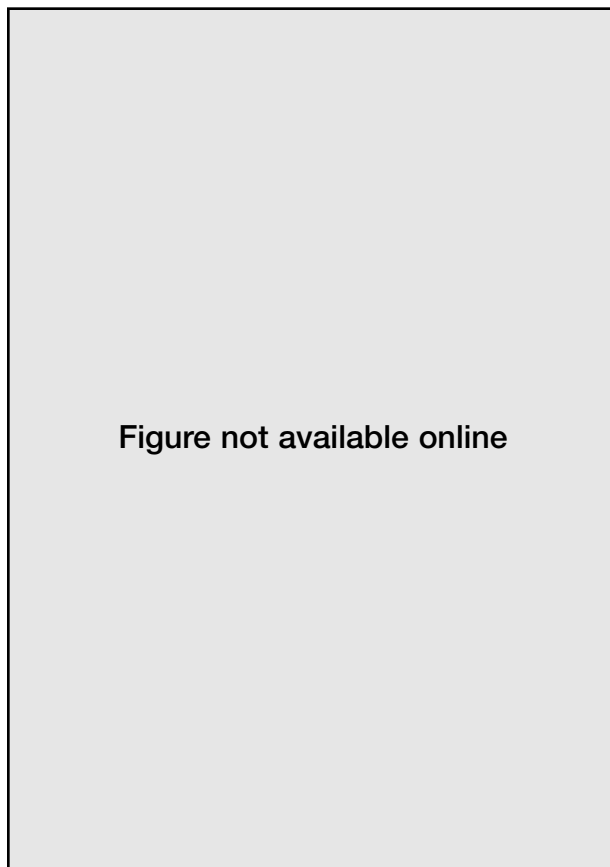


Figure 1. Perioral vesicular and crusty lesions on hyperemic background.

(65% polymorphonuclear leukocytes, 35% lymphocytes). Urinalysis results, serum biochemistry results, urine-serum amino acid levels, levels of immunoglobulin (IgG, IgG subclasses, IgM, IgA), and C3 and C4 levels were all within reference range. HSV-1 IgM was positive at 2.5 IU/mL (reference range, 0.5–1 IU/mL).

Hematoxylin and eosin (H&E) stain applied to a smear prepared from the digital lesions showed numerous multinuclear cells and epithelial cell clusters with ground-glass nuclei, widespread multinucleation, much cell debris, and many polymorphonuclear leukocytes (Figure 3). Because the lesions were late-stage, intranuclear inclusions were not present. These cytologic findings led to a diagnosis of HSV infection.

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Figure 2. Multiple vesicular lesions on hyperemic background on the proximal phalanx of the right thumb.

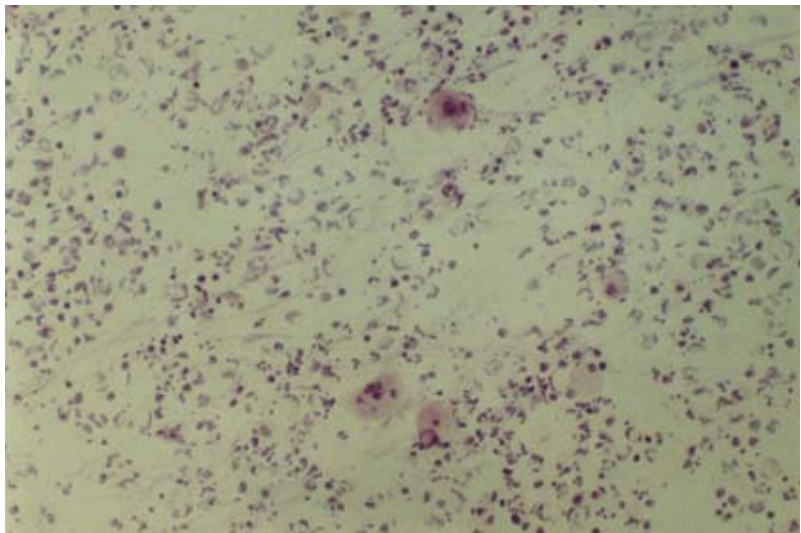


Figure 3. Multinuclear cells, epithelial cell clusters, and polymorphonuclear leukocytes (H&E, original magnification $\times 40$).

Because the lesions were widespread and highly infectious, we began antibacterial and antiviral (acyclovir) treatment. The lesions regressed on the fourth day and disappeared within 7 days. All findings were normal at 1-week follow-up.

Comment

Herpetic digital lesions are rare and generally heal spontaneously within 3 to 4 weeks. They often are mistaken for pyogenic lesions, and this healing is delayed by treatment (incisions) for the misdiagnosed condition and secondary bacterial infections. When a digital infection is found in a child with gingivostomatitis, HSV infection should be considered. Our patient's case of gingivostomatitis was evident, so herpetic finger infection was easily diagnosed. A caveat is that, even in the absence of symptoms, a patient may have HSV in his or her oral secretions—that is, a child may have herpetic finger infection

with asymptomatic herpes gingivostomatitis. When a digital lesion is evaluated, the possibility of an HSV infection must be considered.

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