Recurrence vesicular eruption on the right hand

The 8-year-old boy was otherwise healthy. So what was causing these painful lesions to erupt on his hand?

The parents of an 8-year-old boy brought their son to our clinic because they were worried about the recurrent painful lesions on the pinkie, ring, and middle fingers of his right hand (FIGURE 1A AND 1B). The lesions, which had recurred monthly for the past 3 years, typically lasted a few days and then spontaneously resolved.

Physical examination revealed numerous skin-colored vesicles on an erythematous base, with overlying crusting and impetiginization over the distal aspects of the fingers. The patient was otherwise healthy and not on any medication.

What is your diagnosis?

How would you treat this patient?

FIGURE 1

8-year-old boy with painful hand lesions*

*Suture on the pinkie is where the biopsy was taken.
The diagnosis: Herpetic whitlow

Herpetic whitlow, or herpes simplex virus (HSV) infection of the hand, was first reported by Adamson in 1909.1 Herpes infection of the hand classically has a bimodal age distribution. It may be seen in children younger than 10 years of age or in adults between 20 and 30 years of age.2 In children, it is caused almost exclusively by HSV-1, whereas in adults it can be caused by HSV-1 or HSV-2.2,3

HSV infection of the hand classically occurs as a result of autoinoculation following herpetic gingivostomatitis. After inoculation, the virus has an incubation period of 2 to 20 days before vesicles appear.4 The appearance of the lesions is associated with intense throbbing pain. Fever and systemic symptoms are rare.

What you’ll see. Patients with herpetic whitlow will develop a single vesicle or cluster of vesicles on a single digit a few days after their skin has been irritated or exposed to minor trauma.2,4 Vesicles are typically clear in color and have an erythematous base. However, they are often superinfected with bacteria and may exhibit signs of impetiginization. The most common location of the vesicles is on the terminal phalanx of the thumb, index, or middle finger.3

Differential includes dactylitis

Painful fingers may also be suggestive of dactylitis.

1 Blistering distal dactylitis, mostly caused by group A β-hemolytic streptococci, is a bacterial infection that manifests as tense bullae over the anterior fat pad of the volar aspect of the distal part of a single finger (or rarely a toe); diagnosis is usually confirmed by culture.5

1 Sickle cell dactylitis, or hand-foot syndrome, is caused by localized bone marrow infarction of the carpal and tarsal bones and phalanges. Patients will complain of a sudden onset of warm, tender global swelling of the hands and/or feet that is occasionally accompanied by fever and leucocytosis.5

1 Spondyloarthritides dactylitis, or a “sausage-like” digit, is usually caused by flexor tenosynovitis and presents as diffuse painful swelling of the fingers and toes, mainly over the flexor tendons.5

Making the diagnosis

The diagnosis of herpetic whitlow is clinical. If the diagnosis is unclear, diagnostic tests can include viral culture, serum antibody titers, a Tzanck smear, lesion specimen antigen testing, or histopathologic examinations.

In this case, swab cultures revealed moderate growth of group A β-hemolytic streptococci. Fungal smears and cultures were negative. Histopathology revealed intraepidermal vesiculation with ballooning and reticular degeneration and cytopathic changes of herpetic infection.

The natural history of the untreated, uncomplicated herpetic whitlow is complete clearance within 2 to 3 weeks.4 Rare complications include systemic viremia, ocular infection, nail dystrophy, nail loss, scarring, and localized hyperesthesia or hypoesthesia.5,4,6,7

Treatment with acyclovir

Oral acyclovir (2 g/day in 3 doses for 10 days) taken during the prodromal stage of recurrent HSV-2 herpetic whitlow has been shown to reduce the duration of symptoms from 10.1 to 3.7 days.8 Prophylactic use of oral acyclovir (200 mg, 4 times daily for up to 2 years) has been shown to be effective in suppressing recurrent HSV infection of nongenital skin.9

A good outcome

Our patient was given a 10-day course of acyclovir 400 mg orally 3 times daily and cefadroxil 500 mg orally twice daily (for superimposed bacterial infection). The lesions had completely disappeared upon follow-up 2 weeks later.

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References
2. Feder HM Jr, Long SS. Herpetic whitlow. Epidemiology, clin-
vesicular eruption

Vesicular eruption of the hands and feet is a common condition that can cause discomfort and may require treatment. The condition is characterized by small, fluid-filled blisters, often accompanied by redness and itching. Vesicular eruptions can occur on various parts of the body, but they are particularly common on the hands and feet. 

The causes of vesicular eruptions can vary, but they often result from viral infections. Herpes simplex virus (HSV) is a common cause of vesicular eruptions, particularly in the hands and feet. Other viruses, such as human papillomavirus (HPV) and varicella-zoster virus (VZV), can also cause vesicular eruptions.

Diagnosis of vesicular eruptions typically involves a physical examination and a medical history. In some cases, skin samples may be taken to check for the presence of viral or bacterial agents. Treatment for vesicular eruptions often involves the use of antiviral medications, such as acyclovir or valacyclovir, which can help to reduce the severity and duration of the condition.

In addition to medical treatment, there are several steps that can be taken to help manage vesicular eruptions. These may include gentle cleaning and moisturizing of the affected skin, avoiding scratching, and wearing clean, dry clothes and shoes to prevent further irritation.

References:

For information on pain management, go to our Web site at www.currentpainperspectives.com and check out these articles:

- Diagnosing fibromyalgia and myofascial pain syndrome: A guide
- Neurogenic thoracic outlet syndrome: Often overlooked, but treatable
- How best to prevent acute pain from becoming chronic?