Vesicular eruption including the mouth

JENNIFER CLAY CATHER, MD, AND M. ALAN MENTER, MD

A 42-year-old woman presented with a 3-day history of a tender, slightly "burning" eruption on the palms and soles that included the sides of the fingers. She also complained of mouth sores and an associated "mild fever." Examination revealed a healthy woman with discrete, 4- to 5-mm oval vesicles, each surrounded by a thin erythematous halo, on her hands and feet *(Figures 1* and *2)* and a few small vesicles on the tongue and inner aspect of the lips *(Figure 3)*. There was no history of prior medication ingestion or recent "cold sores." She had no lymphadenopathy.

What is the diagnosis, and how can it be confirmed?

Figure 1. Discrete, oval vesicles ringed with erythema on the foot.

Figure 2. Classic small, oval vesicle with red areola.

Figure 3. Cluster of 2- to 3-mm vesicles on the lower lip.

From the Division of Dermatology, Department of Internal Medicine, Baylor University Medical Center, Dallas, Texas.

Corresponding author: Jennifer Clay Cather, MD, 5310 Harvest Hill Road, Suite 260, Dallas, Texas 75230.

DIAGNOSIS: Hand, foot, and mouth disease.

DISCUSSION

This relatively common, viral-induced condition often presents in mini-epidemics in otherwise healthy individuals. Coxsackievirus A16 is the most common pathogen. Coxsackieviruses are divided into 2 main groups: A, containing 24 serotypes, and B, containing 6. Both A and B may produce exanthematous, febrile or nonfebrile illnesses, as well as respiratory infections, aseptic meningitis, and encephalitis (1).

Coxsackieviruses A5, A10, and more rarely, other serotypes may also cause outbreaks of hand, foot, and mouth disease. Children are most commonly affected, frequently in the summer or fall, but outbreaks may be seen in adults (2).

Clinical features are similar to those described in this patient. Hand, foot, and mouth disease has an incubation period of 5 to 7 days and a similar 5- to 7-day benign, self-remitting course. The combination of discrete, oval vesicopapules with thin, reddish rims on the hands and feet together with mouth ulcers, usually few, in an otherwise healthy patient is diagnostic. Without a careful evaluation of patients' hands and feet, the condition is often diagnosed as fever blisters, herpes, or herpangina (another coxsackievirus-induced eruption producing tender mouth sores).

The differential diagnosis of vesicles on the palms, soles, and oral mucosa includes erythema multiforme and lichen planus. The skin lesions in erythema multiforme are more round than oval and usually have a targetoid or irislike appearance. In addition, other skin sites, especially the elbows and knees, are involved. In lichen planus, classic lesions are seen on the wrists. The lesions are usually pruritic; when vesicular, they are usually more tender than the lesions in hand, foot, and mouth disease. In addition, the mouth lesions of lichen planus, while occasionally vesicular, usually have a reticulated, lacelike pattern (3).

Rarely in hand, foot, and mouth disease, the cutaneous exanthem may be more widespread to involve the limbs and buttocks, especially in infants. Due to the benign, self-remitting course, treatment is seldom required outside of reassurance or possibly symptomatic therapy of the mouth ulcers, if required. This case demonstrates the need to examine the mucosa of all patients who have exanthematous, acute-onset eruptions and to examine the skin of patients who have mouth ulcers. Despite the classic triad of mouth, hand, and foot lesions, most cases are probably undiagnosed due to the benign, short course. Relapses are very rare.

Confirmation of the clinical diagnosis, especially in atypical cases when required, is done by gently deroofing a blister or two on the hand or foot, swabbing the base of the lesion with an appropriate swab, and placing the swab in viral transport media for culture. In addition, analysis by reverse-transcriptase polymerase chain reaction can be performed.

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