A 54-year-old man presented to the emergency department with painful lesions at the base of the right palm that had progressed to include areas of erythema and warmth migrating proximally along the right forearm and distal right arm. He stated that similar lesions had occurred episodically in the same location approximately 100 times over the last 20 years. Each time, the lesions began as painful vesicles that he subsequently popped with a sewing needle. He denied any history of orolabial or genital herpes simplex virus infection. Physical examination revealed erythematous scattered papules with dry hemorrhagic crust over the base of the right palm with expressible serous fluid upon forceful pressure. Swelling, erythema, and warmth of the distal right forearm also were observed.

WHAT’S THE DIAGNOSIS?

a. bullous tinea manuum
b. contact dermatitis
c. dyshidrotic eczema
d. herpes simplex virus dermatitis
e. scabies

PLEASE TURN TO PAGE 122 FOR THE DIAGNOSIS
A swab of the lesions yielded negative varicella-zoster virus and herpes simplex virus (HSV) cultures, but polymerase chain reaction (PCR) was positive for HSV DNA. The patient was started on acyclovir, which resulted in resolution of the lesions.

Recurrent HSV dermatitis most frequently is encountered in the orolabial or genital regions. After primary infection, HSV is retrogradely taken up into the dorsal root ganglion and may be reactivated in the same dermatome upon stress induction, forming clustered vesicles that rupture to form painful erosions.1 Our patient’s history of numerous recurrent episodes in the same area of the palm in the distribution of the median nerve suggests viral latency in the C5 through T1 dorsal root ganglia with reactivation rather than autoinoculation or external infection from another source. The incidence of HSV involving the hand has been estimated at 2.4 cases per 100,000 individuals per year, with finger, thumb, or palm/wrist involvement accounting for 67%, 22%, and 11% of cases, respectively.2 Of the palmar cases that have been reported, most have a positive history for genital or orolabial HSV infection.2-5

In cases of suspected HSV dermatitis with atypical presentations, diagnostic studies are of importance. Although viral culture is the diagnostic gold standard in active lesions, it has lower sensitivity in improperly handled specimens; cases of recurrent disease; and specimens from dried, crusted, or aged lesions,1 which helps to explain the negative culture result in our patient. Viral culture has been largely replaced in clinical practice by nucleic acid amplification tests using PCR, which is fast and type specific.6,7 The sensitivity of PCR approaches 100% when vesicles or wet ulcers are sampled, and PCR has better yields from dry ulcers or crusts compared to viral culture.3 However, because viral shedding is intermittent, a negative PCR result does not rule out HSV infection.8 Additional bedside diagnostic techniques include Tzanck smear, a rapid and inexpensive test in which lesions are scraped and stained with Giemsa, Wright, or Papanicolaou stains. Under light microscopy, multinucleated giant cells are seen in 60% to 75% of cases.9 This method, however, cannot distinguish HSV from varicella-zoster virus and must be followed by direct fluorescent antibody testing or immunohistochemistry for viral typing.10 Serologic testing also may be useful in patients who have a suspicious history for HSV infection but do not have lesions on physical examination to diagnose clinically or sample for PCR. Enzyme-linked immunosorbent assay testing can detect IgG starting 3 weeks after infection, and newer type-specific assays can distinguish between HSV types 1 and 2.4 In low-incidence populations, false positives from enzyme-linked immunosorbent assay can be seen and should be confirmed by western blot.6,7

Preferred treatment of HSV includes antiviral medications such as acyclovir, valacyclovir, and famciclovir. Regimens vary based on the site of infection, primary or recurrent nature of the infection, immune status of the patient, and whether or not viral suppression is desired to prevent recurrent outbreaks.7,10

Tinea manuum also may present with unilateral vesicles and erosions involving the palms;11 however, it was less likely than HSV dermatitis in this patient presenting with a history of numerous recurrent episodes and without scaling on physical examination. Dyshidrotic eczema, contact dermatitis, and scabies are more characteristically pruritic rather than painful. Additionally, dyshidrotic eczema and scabies would be more likely to have symmetric involvement of the arms. Although vesicles are seen in both dyshidrotic eczema and HSV dermatitis, the vesicles of dyshidrotic eczema usually are noninflammatory compared to the painful vesicles on an erythematous base classically seen in HSV dermatitis.

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