

Herpes Simplex Virus Infection of the External Ear

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A 23-year-old man with a history of seasonal allergies and recurrent herpes labialis, but who was otherwise healthy, presented with a burning sensation of the external ears, with the left ear more affected than the right ear.

History. The man, a university student, reported a recent history of stressful weeks, including final examinations and the death of his grandfather. A week before presentation, he had noted a prodromal feeling in the right corner of his mouth that did not develop into any visible lesion. He reported a 2-day history of red and burning ears with occasional itching. At first, he thought that the erythema and pain might be related to a recent spell of dry, cold weather, but he sought medical care because the symptoms had not resolved and were reminiscent of the prodrome he had experienced before outbreaks of recurrent herpes labialis.

The patient was up to date on all vaccinations and was immunocompetent.

Physical examination. The patient appeared healthy, with normal vital signs; he was alert, awake, and oriented. The only pertinent physical examination findings were vesicular lesions and erythema involving the left and right auricles. Both auricles were inflamed in appearance, with the left side (**Figure**) being warmer and more erythematous than the right side

with the left side (Figure) being warmer and more erythematous than the right side.



Diagnosis. Based on the patient's history of recurrent herpes infection, his report of prodromal symptoms, and the physical examination findings of lesions with a "dew drop on a rose petal"

symptoms, and the physical examination findings of lesions with a dew drop on a rose petal appearance, a clinical diagnosis of recurrent herpes simplex involving the bilateral auricles was made.

Discussion. Herpes labialis, caused by infection with herpes simplex virus 1 (HSV-1), can be differentiated from other conditions such as varicella-zoster virus infection (chickenpox) or reactivation (herpes zoster) and closed or open comedonal acne.

Herpes simplex can present on the face, the nose, and around the lips. Gingivostomatitis is the primary presentation and is seen primarily in younger children. After the primary presentation of lesions, affected persons generally experience less-severe recurrent herpetic lesions with a shorter duration of presentation. The prodromal sensation of pain, burning, or tingling, such as that reported by our patient, is often noted before the vesicular lesions appear.

The highest rate of virus-positive lesions (approximately 89%) on culture tests occurs within the first 24 hours of the outbreak of lesions.¹ Viral culture tests are not always reliable given that the rate of detection decreases with time. Polymerase chain reaction is another diagnostic technique that has been used specifically in ocular HSV-1 infection.² Tzanck tests can be performed on active lesions but are only helpful when results are positive, in which case they demonstrate multinucleated giant cells that also can be seen with infection due to other herpesviruses.³

Acyclovir, 400 mg 5 times daily for 5 days, is a regimen that has been shown to be effective in immunocompetent persons with herpes labialis.⁴ Famciclovir (750 mg twice daily for 1 day or 1500 mg as a 1-time dose)⁵ and valacyclovir (2 g twice daily for 1 day)^{6,7} also have been shown to be effective in treating immunocompetent persons with recurrent herpes labialis. Topical penciclovir⁸ and acyclovir⁹ creams also are treatment options but require repetitive and consistent application.

Our patient presented with lesions of the ears bilaterally, which is not a common presentation, but facial symptoms and signs of prodrome and lesions can be used to diagnose herpes simplex recurrence in a variety of anatomic locations. Upon further questioning, our patient reported past herpes labialis outbreaks characterized by lesions in and around his nose, slightly caudal to his bottom lip, and on his frenulum midway between his nose and upper lip. He also reported a particularly severe herpes labialis outbreak that had involved his entire mandibular lip, both inside and outside the oral cavity; the vesicles on his oral mucosa turned to aphthous ulcers with time and subsequently resolved, while the vesicles exterior to the oral cavity crusted over before eventually resolving.

Outcome of the case. The patient was prescribed 400 mg of acyclovir, 5 times daily for 5 days, given that his past use of the medication had reduced the severity and duration of herpes labialis outbreaks. He responded well to the treatment, with complete resolution of vesicular

lesions within 7 days. He was advised to watch for recurrent episodes in other locations such as the cheeks, nose, and eyes. He was counseled to carefully avoid contact with prodromal areas and vesicular lesions, especially with subsequent contact of the noninfected areas of his own skin and of other persons. The patient is likely to experience further recurrent herpes labialis outbreaks as he has since childhood, and he was counseled as such.

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