



Painful rash on face

Not only was the rash on this patient's face and scalp painful, but he had a burning feeling—with vision problems—in his right eye, too.

A 58-YEAR-OLD MAN sought care at our clinic for burning in his right eye and a skin eruption on his right forehead and scalp. The pain in both had been getting progressively worse over the previous 10 days. The patient also reported that he had decreased vision in his right eye, as well as a fever, chills, photophobia, and headache. He had a history of psoriasis, which was being treated with adalimumab and methotrexate.

A physical exam revealed vesicles on an erythematous base on his right scalp, forehead, upper and lower eyelids, dorsum of his nose, and cheek (FIGURE). The distribution of the vesicles corresponded to the ophthalmic branch of the trigeminal nerve.

- WHAT IS YOUR DIAGNOSIS?
- HOW WOULD YOU TREAT THIS PATIENT?

FIGURE

Vesicular rash on right forehead, scalp, and eyelids



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➤ Herpes zoster ophthalmicus begins with headache, fever, and unilateral pain in the affected eye, followed by a vesicular eruption along the trigeminal dermatome.

Diagnosis: Herpes zoster ophthalmicus

An ophthalmologic exam confirmed the diagnosis of herpes zoster ophthalmicus (HZO), a serious condition that has been linked to reactivation of the varicella-zoster virus (VZV) within the trigeminal ganglion.¹ Primary infection with VZV results in varicella (chickenpox), whereas reactivation of a latent VZV infection within the sensory ganglia is known as herpes zoster.

HZO occurs in 10% to 20% of patients who have herpes zoster.² The ophthalmic division of the trigeminal nerve is most frequently involved, and as many as 72% of patients experience direct ocular involvement.¹

The acute syndrome begins with headache, fever, and unilateral pain in the affected eye, followed by the onset of a vesicular eruption along the trigeminal dermatome, hyperemic conjunctivitis, and episcleritis.^{3,4} Almost two-thirds of HZO patients develop corneal involvement.⁵

Rule out other types of vesicular eruptions

Impetigo, herpes simplex virus-type 1 (HSV-1), atopic dermatitis, acute contact dermatitis, and chickenpox should be included in the differential diagnosis of HZO.

■ **Impetigo** is a superficial bacterial infection. The lesions begin as papules and then progress to vesicles that enlarge and rapidly break down to form adherent crusts with a characteristic golden appearance. These lesions usually affect the face and extremities.

■ **HSV-1** is characterized by multiple vesicular lesions superimposed on an erythematous base on the skin or mucous membranes of the mouth or lips.

■ **Atopic dermatitis** is characterized by pruritus, erythema, scale, and crusting. The flexural areas (neck, antecubital fossae, and popliteal fossae) are most commonly affected.⁶ Other common sites include the face, wrists, and forearms.

■ **Acute contact dermatitis** is an acute vesicular eruption accompanied by pruritus and erythema. The vesicles may be distributed in a characteristic linear pattern when a portion of an allergen (such as poison ivy)

has made contact with the skin or when the patient has scratched the skin.

■ **Chickenpox** is a primary infection with VZV. The clinical manifestations include a prodrome of fever, malaise, or pharyngitis, followed by the development of a generalized vesicular rash. Although the appearance of the chickenpox rash is similar to that of HZO, herpes zoster is usually localized to a dermatome.

Diagnostic testing is rarely indicated

A history of VZV infection and the characteristic rash are usually adequate to make a diagnosis of HZO. Of note: vesicular lesions on the nose—known as Hutchinson's sign—are associated with a high risk of HZO.⁷

If you suspect HZO, your patient will need an ophthalmologic exam, including an external inspection, testing of visual acuity, extraocular movements, and pupillary response, and various other exams (fundoscopy, anterior chamber slit lamp, and corneal).

A viral culture, direct immunofluorescence assay, Tzanck smear, or polymerase chain reaction may be used to confirm the diagnosis.

Treat with antivirals and steroid eye drops

An early diagnosis of HZO is critical to prevent progressive corneal involvement and potential loss of vision. The standard management is to initiate antiviral therapy with oral acyclovir (800 mg 5 times per day or 10 mg/kg intravenously 3 times per day), oral valacyclovir (1 g 3 times per day), or oral famciclovir (500 mg 3 times per day), and to use adjunctive steroid eye drops that are prescribed by an ophthalmologist to reduce the inflammatory response.⁸

In otherwise healthy individuals in whom HZO causes minimal ocular symptoms, outpatient treatment with 7 to 10 days of antiviral medications is recommended. Immunodeficient patients and those taking immunosuppressive agents should be admitted to the hospital so they can receive intravenous antiviral medications.

■ **Our patient** was admitted to the hospital and underwent an ophthalmologic

consultation and exam, which showed right erythematous conjunctiva and punctate corneal erosions. The iris, anterior vitreous, macula, and lens all appeared normal. He was given acyclovir 10 mg/kg intravenously and steroid ophthalmic drops, and his pain was controlled with oral oxycodone/acetaminophen (10 mg/325 mg) and ibuprofen 400 mg.

Our patient continued to improve and was discharged on oral valacyclovir 1 g 3 times per day and steroid eye drops with outpatient Ophthalmology follow-up. **JFP**

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