

Herpes zoster ophthalmicus

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■ Cite as: *CMAJ* 2018 May 28;190:E656. doi: 10.1503/cmaj.180063

1 A painful vesicular rash limited to the V1 dermatome of the trigeminal nerve should be considered herpes zoster ophthalmicus until proven otherwise

Herpes zoster has a lifetime risk of 33%, and older adults and patients who are immunocompromised are at higher risk.¹ Herpes zoster ophthalmicus occurs in 10% to 20% of cases of herpes zoster, with ocular involvement in 50% of those of herpes zoster ophthalmicus.¹ Lesions on the tip, side or root of the nose (Hutchinson sign, Figure 1A) confer a high risk of ocular complications because of the shared innervation by the nasociliary branch of the V1 nerve.²

2 Ocular complications can threaten vision and require assessment by an ophthalmologist

Patients with decreased visual acuity, a red or painful eye, neurologic involvement (e.g., an afferent pupillary defect or ophthalmoplegia) or those who are immunocompromised should be referred urgently to an ophthalmologist.¹ Ocular sequelae include infectious or inflammatory keratitis or uveitis, necrotizing retinopathy or orbital inflammation (Figure 1B).

3 Antiviral therapy can be started by primary care physicians

Starting antiviral agents within 72 hours of onset of the rash minimizes complications in herpes zoster ophthalmicus; however, given the risk of vision-threatening and other complications, antiviral agents may be started beyond this window.¹ Valacyclovir (1 g taken orally three times a day for seven days) or famciclovir (500 mg taken orally three times a day for seven days) are as effective as acyclovir (800 mg taken orally five times per day for seven days), with more convenient dosing and lower costs.³

4 Systemic sequelae require multidisciplinary management

Uncommon complications of herpes zoster ophthalmicus include encephalitis and cerebral vasculitis, which require neurologic consultation and intravenous antiviral therapy.¹ Postherpetic neuralgia after ophthalmic involvement is more common and difficult to treat, often requiring prolonged treatment.^{1,4}

5 Vaccination reduces but does not eliminate the risk of herpes zoster

The adjuvanted herpes zoster subunit vaccine is more effective (97% v. 51%) than the live attenuated herpes zoster vaccine in preventing herpes zoster.⁵

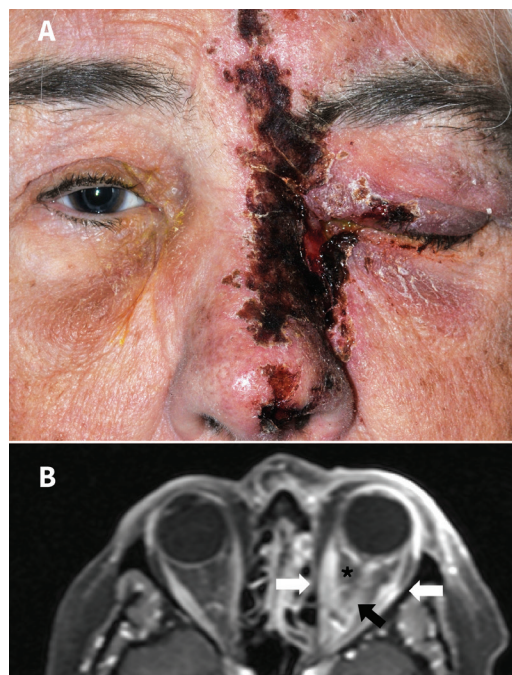


Figure 1: (A) Positive Hutchinson sign shown by a healing vesicular rash in the V1 dermatome on the left side of the nose of a 68-year-old woman with herpes zoster ophthalmicus. (B) T_1 -weighted magnetic resonance image (axial view) with gadolinium (fat saturated) of the same patient showing enhancement of the optic nerve (black arrow), extraocular muscles (white arrows) and fat stranding (*) within the orbital soft tissue, consistent with optic neuritis, myositis and orbital inflammation.

Competing interests: None declared.

This article has been peer reviewed.

The authors have obtained patient consent.

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References

- Cohen EJ. Management and prevention of herpes zoster ocular disease. *Cornea* 2015;34(Suppl 10):S3-8.
- Butsch F, Greger D, Bustch C, et al. Prognostic value of Hutchinson's sign for ocular involvement in herpes zoster ophthalmicus. *J Dtsch Dermatol Ges* 2017;15:563-4.
- Fan S, Stojanovic D, Malvankar-Mehta MS, et al. Treatment of herpes zoster ophthalmicus: a systematic review and Canadian cost-comparison. *Can J Ophthalmol* 2018;53:117-23.
- Schutzer-Weissmann J, Farquhar-Smith P. Post-herpetic neuralgia — a review of current management and future directions. *Expert Opin Pharmacother* 2017;18:1739-50.
- Lal H, Cunningham AL, Godeaux O, et al. Efficacy of an adjuvanted herpes zoster subunit vaccine in older adults. *N Engl J Med* 2015;372:2087-96.