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Herpes Zoster Ophthalmicus (HZO)

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A R T I C L E I N F O

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A B S T R A C T

Herpes Zoster Ophthalmicus (HZO) is a reactivation of the varicella-zoster virus that can cause serious ocular complications, particularly in elderly patients. We report a case of a 60-year-old female presenting with unilateral facial vesicular rash, right eye pain, redness, and decreased vision. Ophthalmologic examination showed conjunctival hyperemia, pseudodendritic keratitis, corneal infiltrates, and suspected anterior uveitis, with a positive Hutchinson's sign. Laboratory findings were within normal limits. The patient was diagnosed with Herpes Zoster Ophthalmicus complicated by keratitis and anterior uveitis and was treated with systemic antiviral and supportive topical therapy. Early recognition and appropriate management are essential to prevent vision-threatening complications

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INTRODUCTION

Herpes Zoster Ophthalmicus (HZO) is a reactivation of latent varicella-zoster virus (VZV) infection in the ophthalmic division (V1) of the trigeminal nerve. It accounts for approximately 10–20% of all herpes zoster cases and represents one of the most serious forms due to its potential for significant ocular morbidity. HZO commonly occurs in older adults, immunocompromised individuals, and those with reduced cell-mediated immunity (1,2).

The condition is characterized by a prodromal phase of burning pain, followed by vesicular rash in the ophthalmic dermatome, which does not cross the midline. Ocular involvement occurs in approximately 50–70% of HZO cases, including conjunctivitis, keratitis, episcleritis, uveitis, and, in more severe cases, acute retinal necrosis or optic neuropathy (3).

One of the hallmark signs of severe ocular involvement is Hutchinson's sign, defined as vesicular eruption on the tip, side, or root of the nose, indicating nasociliary nerve involvement—highly correlated with keratitis and uveitis (4). Prompt recognition and treatment with systemic antiviral therapy within 72 hours of rash onset significantly reduces complications, post-herpetic neuralgia, and ocular morbidity. However, delayed diagnosis or untreated cases may result in chronic keratitis, scarring, neurotrophic keratopathy, and permanent visual impairment (5).

This case report discusses a 60-year-old female with HZO involving dermatome V2 with ocular complications including keratitis and suspected anterior uveitis.

Case Report

Name	: Mrs. B
Age	: 60 Years Old
Gender	: Female
Address	: Rheum Timur, Simpang Mamplam, Bireuen
Religion	: Islam
Job	: Housewife
Entry Date	: November 13th, 2025
Examination Date	: November 13th, 2025

Anamnesis

1. Main Complaint
   Pain around the right eye, right facial rash, and decreased vision.
2. Additional Complaint
   Redness of the right eye, Burning sensation on the right face, Warmth/heat in the right facial area
3. History of Current Illness
   The patient, a 60-year-old woman, presented with pain in the right eye, decreased vision, and a history of vesicular rash on the right side of the face that began approximately two weeks prior to admission (20 October 2025). Her symptoms initially started with a prodromal burning sensation, followed by the appearance of a unilateral vesicular rash limited to the right V2 dermatome and not crossing the midline. Over the following days, she experienced progressively worsening right facial pain, heat sensation, and subsequent ocular symptoms

including redness and blurred vision. No Hutchinson's sign was observed initially, possibly due to the late presentation; however, the patient reported increasing discomfort and visual decline over time. She denied any history of stress, immunosuppression, chronic illness, previous herpes infection, or long- term medication use. Her symptoms persisted despite no prior antiviral or analgesic treatment, prompting her return one week after discharge to the ophthalmology clinic for further evaluation.

4. History of Past Illness
   The patient confessed to never having experienced the same complaint.
5. History of Family Disease
   There is no history of diabetes, asthma, heart disease, or hypertension on the family. None of the patient's family members experienced something similar
6. History of Drug Use
   The patient has never used any medication.
7. History of Allergic
   The patient has no history of allergic.
8. History of Socioeconomic Medical fees are covered by BPJS.

Physical Examination

1. Vital Sign

Consciousness	: Compos mentis (E4M6V5)
Blood Pressure	: 120/70 mmHg
Heart Rate	: 82 beats per minute
Respiratory Rate	: 21 breaths per minute
Temperature	: 36.5 ℃

2. Ophthalmologist Status

Table 1. Ophthalmologist Status

Examination	Oculi Dextra (OD)	Oculi Sinistra (OS)
Vision	6/30 F2	6/21
Supra cilia		
Madarosis	(-)	(-)
Sikatriks	(-)	(-)
Superior Palpebra		
Oedema	(-)	(-)
Spasm	(-)	(-)
Bumps	(-)	(-)
Inferior Palpebra		
Oedema	(-)	(-)
Spasm	(-)	(-)
Bumps	(-)	(-)
Lacrimal Punctum		
Puncture	not inspected	not inspected
Bumps	(-)	(-)
Superior Palpebral Conjuctiva		

Hyperemic	(+)	(-)
Corpus alienum	(-)	(-)
Secret	(-)	(-)
Inferior Palpebral		
Conjuctiva	(+)	(-)
Hyperemic		
Corpal	(-)	(-)
Secret	(-)	(-)
Bulbar Conjuctiva		
Conjunctival injection	(-)	(-)
Ciliary Injection	(-)	(-)
Pterygium	(-)	(-)
Subconjuntival Bleeding	(-)	(-)
Corpus Alienum	(-)	(-)
Sclera		
Hyperemic	(-)	(-)
Ichteric	(-)	(-)
Cornea		
Oedem	(-)	(-)
Infiltrate	(+)	(-)
Keratitis	(+)	(-)
Pseudodendritic Lession	(+)	(-)
Laceration	(-)	(-)
Iris/Pupil		
Direct Light Reflex	(+)	(+)
Indirect Light Reflex	(+)	(+)
Lens		
Clarity	Clear	Clear
Important Signs	(+)	-
Hutchinson's Sign		
Intraocular Pressure	Not assessed	Not assessed
Spasm	(-)	(-)
Bumps	(-)	(-)
Lacrimal Punctum		
Puncture	not inspected	not inspected
Bumps	(-)	(-)
Superior Palpebral		
Conjuctiva		
Hyperemic	(+)	(-)
Corpus alienum	(-)	(-)
Secret	(-)	(-)
Inferior Palpebral		
Conjuctiva	(+)	(-)
Hyperemic		
Corpal	(-)	(-)
Secret	(-)	(-)
Bulbar Conjuctiva		
Conjunctival injection	(-)	(-)
Ciliary Injection	(-)	(-)
Pterygium	(-)	(-)
Subconjuntival Bleeding	(-)	(-)
Corpus Alienum	(-)	(-)

Sclera		
Hyperemic	(-)	(-)
Ichteric	(-)	(-)
Cornea		
Oedem	(-)	(-)
Infiltrate	(+)	(-)
Keratitis	(+)	(-)
Pseudodendritic Lession	(+)	(-)
Laceration	(-)	(-)
Iris/Pupil		
Direct Light Reflex	(+)	(+)
Indirect Light Reflex	(+)	(+)
Lens		
Clarity	Clear	Clear
Important Signs	(+)	-
Hutchinson's Sign		
Intraocular Pressure	Not assessed	Not assessed

Supporting Examination

Table 2. Supporting Examination

Nama tes	**Hasil**	**Satuan**	**Nilai**
Hematologi Darah Lengkap			
Hemoglobin	13.4	g/dL	13.0-18.0
Eritrosit	4.70	juta/uL	4.5-6.5
Hematokrit	36.4	%	37.0-47.0
MCV	57.2	fl	79-99
MCH	28.5	pg	27.0-31.2
MCHC	37.0	g/dl	33.0-37.0
Leukosit	8.54	ribu/uL	4.0-11.0
Trombosit	312	ribu/uL	150-450
Hitung Jenis Leukosit			
Basophil	0	%	0-1
Eosinophil	2	%	1-2
Neutrofil Segmen	64	%	40-70
Neutrofil Batang	0	%	2-6
Limfosit	27	%	20-40
Monosit	7	%	0-6
Glukosa Darah Sewaktu	129	mg/dl	<180

Skin Lesion Photo

Figure 1. Skin Lesion Photo

Differential Diagnosis

1. Herpes simplex keratitis
2. Preseptal cellulitis
3. Orbital cellulitis
4. Contact dermatitis

Working Diagnosis

Herpes Zoster Ophthalmicus (HZO) OD with keratitis and anterior uveitis.

Management

1. Education
   - Maintain eye hygiene and avoid touching or rubbing the eye.
2. Pharmacological
   - Acyclovir 400 mg 4× daily for 7–10 days
   - Erythromycin Eye Ointment 0.5%
   - Cendo Lyteers Eye Drops 15 mL
   - Gentamicin Skin Ointment 0.1% 5 gr KF
3. Procedural Care
   - Skin lesion care with sterile saline
   - No corneal debridement indicated at this stage

LITERATURE REVIEW

Herpes Zoster Ophthalmicus (HZO) is caused by reactivation of the varicella-zoster virus involving the ophthalmic branch of the trigeminal nerve and accounts for approximately 10–20% of all herpes zoster cases. Ocular involvement occurs in about 50–70% of patients and may include conjunctivitis, keratitis, uveitis, episcleritis, and, in severe cases, optic neuropathy or retinal necrosis. Hutchinson's sign, characterized by vesicular lesions on the nose, is a strong predictor of ocular involvement due to nasociliary nerve involvement. Early systemic antiviral therapy, ideally within 72 hours of rash onset, has been shown to reduce ocular complications, post-herpetic neuralgia, and long-term visual impairment.

METHODS

Problem Solving Methods

RESULTS AND DISCUSSION

Herpes Zoster Ophthalmicus (HZO) represents reactivation of the varicella-zoster virus in the ophthalmic branch of the trigeminal nerve. It frequently affects elderly individuals, with increasing incidence in populations with decreased cellular immunity (1). Reactivation results in pain, dermatomal vesicular eruptions, and potential involvement of the ocular structures.

This patient presented with key diagnostic features of HZO: dermatomal rash, unilateral distribution not crossing the midline, ocular involvement, and decreased visual acuity. Although the rash occurred in the V2 dermatome rather than V1, ocular complications may still arise due to spread through the nasociliary branch or via inflammatory mechanisms. The presence of Hutchinson's sign, although late in presentation, strongly correlates with ocular involvement, especially keratitis and uveitis (4).

Ocular manifestations seen in this case include conjunctival hyperemia, keratitis with pseudodendritic lesions, anterior uveitis, and scleral injection—all classical features of HZO-related ocular disease. Pseudodendritic keratitis is characteristic of HZO and differs from HSV dendrites by lacking terminal bulbs and demonstrating less fluorescein uptake (3). Anterior uveitis is a frequent complication, often associated with elevated intraocular pressure due to trabeculitis; though IOP was not measured, clinical suspicion existed (5).

Early antiviral therapy is critical and ideally initiated within 72 hours of rash onset. However, this patient presented two weeks after initial onset, increasing risk for complications such as post-herpetic neuralgia and chronic keratitis (2). Management included antiviral therapy, corticosteroids for uveitis, topical lubrication, and pain control.

The prognosis of HZO depends on age, timeliness of antiviral initiation, and degree of ocular involvement. Although delayed treatment may reduce visual outcomes, appropriate management can still prevent severe complications such as neurotrophic keratopathy, chronic uveitis, or corneal scarring (5,6,7).

This case highlights the importance of early recognition, timely antiviral therapy, and close monitoring of ocular complications in patients with HZO.

FURTHER STUDY

Further studies are needed to better understand the clinical spectrum and long-term outcomes of Herpes Zoster Ophthalmicus, particularly in elderly patients and those presenting with delayed treatment. Future research should employ multicenter, prospective cohort designs with larger sample sizes to evaluate prognostic factors influencing visual outcomes, including age, immune status, dermatome involvement, and the presence of Hutchinson's sign.

Additionally, comparative studies assessing the effectiveness of different antiviral regimens, treatment duration, and the optimal timing of therapy initiation are warranted. The role of adjunctive therapies, such as topical and systemic corticosteroids, in preventing chronic complications like recurrent uveitis, neurotrophic keratopathy, and corneal scarring should also be further investigated.

REFERENCES

Johnson RW, Alvarez-Pasquin MJ, Bijl M, et al. Herpes zoster epidemiology, management, and disease burden in Europe. Vaccine. 2015;33(6):802–14.

Koshy E, Mengting L, Kumar H, et al. Epidemiology, complications, and management of herpes zoster: a comprehensive review. J Clin Virol. 2018; 102: 56–64.

Liesegang TJ. Herpes zoster ophthalmicus. Ophthalmology. 2008;115(2): S3–S12.

McDonald E, Heyes C, Balaggan K, et al. Ocular manifestations of herpes zoster infection. Surv Ophthalmol. 2023;68(2):185–205.

Tewfik MA, Lee DJ. Herpes zoster ophthalmicus. StatPearls. Updated 2024.

Yawn BP, Wollan PC, St Sauver JL. Herpes zoster eye complications: rates and trends. Mayo Clin Proc. 2013;88(6):562–70.

Zaal MJW, Völker-Dieben HJ, D'Amaro J. Prognostic value of Hutchinson's sign in acute herpes zoster ophthalmicus. Graefes Arch Clin Exp Ophthalmol. 2003;241(3):187–91.