



A CASE REPORT OF HSV ENDOTHELITIS WITH NON NECROTISING STROMAL KERATITIS

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ABSTRACT **Background:** Viral corneal endotheliitis may present with corneal edema, keratic precipitates, anterior segment inflammation and reduced vision, and may clinically overlap with other causes of endotheliitis, keratouveitis and secondary corneal decompensation. **Material and Methodology:** A 44-year-old man presented with diminution of vision, redness, intermittent watering, mild pain and discomfort in the left eye for 2 months. **Treatment and Outcome:** Topical homatropine three times daily, topical prednisolone acetate six times daily, oral acyclovir 400 mg five times daily, omeprazole and an analgesic, with advice for bandage contact lens application. At 3-day follow-up, symptoms had significantly improved. **Conclusion:** This case highlights the clinical features, differential diagnosis and short-term response to treatment in a clinically diagnosed case of presumed HSV corneal endotheliitis with associated stromal involvement and secondary anterior-segment changes.

KEYWORDS :

1. INTRODUCTION

Corneal endotheliitis is characterized clinically by corneal stromal edema associated with signs of anterior segment inflammation, including keratic precipitates and variable anterior chamber reaction. Viral etiologies are an important consideration when endotheliitis occurs with features such as recurrent inflammation, keratic precipitates, iris atrophy or associated keratouveitis.

2. Case Presentation

A 44-year-old male presented to the outpatient department of Ophthalmology at Maharani Laxmi Bai Medical College, Jhansi, with diminution of vision in the left eye for 2 months, redness for 2 months, intermittent watering for 2 months, and mild pain/discomfort for 2 months.

Symptoms followed a history of thorn exposure to the left eye and treatment elsewhere. Examination showed severe corneal haze with stromal edema, multiple epithelial bullae, old and new keratic precipitates, iris pigment, peripheral iris atrophy, a shallow anterior chamber with nasal iridocorneal touch, sluggish/eccentric pupil and absent fundal glow. The provisional clinical diagnosis was HSV corneal endotheliitis with non-necrotizing stromal keratitis and iridocorneal touch

History of Present Illness

The patient was apparently asymptomatic 2 months before presentation, when he sustained thorn exposure to the left eye and received treatment elsewhere. Following the episode and treatment, he developed gradually progressive diminution of vision associated with redness, mild pain, watering and discomfort.

Relevant Negative and Past History

There was no history of photophobia, coloured halos, floaters, ocular surgery or laser treatment. There was no history of fever, similar episodes in either eye, diabetes, hypertension, breathlessness, other systemic illness or drug allergy. He was a vegetarian, non-alcoholic and non-smoker, with normal sleep and bowel/bladder habits. There was no reported family history of similar ocular symptoms.

General and Systemic Examination

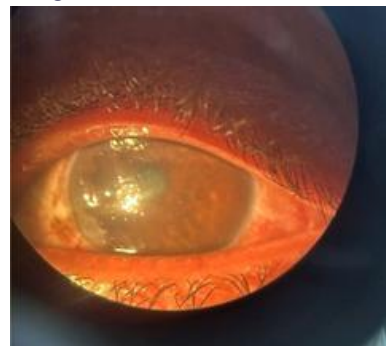
The patient was a middle-aged man of average build and nourishment and was oriented to time, place and person. Pulse rate was 84/min, respiratory rate 14/min, blood pressure 100/65 mmHg and random blood sugar 150 mg/dL. He was afebrile. Other systemic manifestations are insignificant

Ocular Examination

Parameter	Right eye	Left eye
Visual acuity	FC at 3 m; PH 6/12P	FC at face; PH FC at face
PL / PR	PL present; PR present in all quadrants	PL present; PR present in all quadrants

Lids	WNL	Mild lid edema
Conjunctiva/sclera	WNL	Circumciliary congestion
Cornea	Clear; stain negative	Hazy cornea with limbus-to-limbus stromal edema, multiple epithelial bullae; epithelial stain negative
Endothelium	—	Old and new KPs with iris pigment
Anterior chamber	Normal depth, quiet	Shallow; with PAS in 7 to 11 o'clock position
Iris	Normal colour/pattern	Peripheral iris atrophy at 12, 2 and 6 o'clock
Pupil	R/R/R	Mildly eccentric nasally; sluggish reaction
Lens	Greyish-black reflex	Greyish-white reflex
Fundal glow	Good	Absent
IOP	Digitally normal	Digitally normal; unreliable due to corneal/lid edema

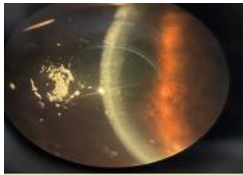
Slit-lamp Findings



Left Eye Slit-lamp Examination multiple epithelial bullae, imsc seen, limbus-to-limbus.



Bullae seen on slit lamp, corneal edema and corneal haze, reduced corneal sensitivity, and iridocorneal touch



old and new
KPs +
corneal edema
+ demarcated
bullae.

Investigations

Blood pressure was 100/65 mmHg and random blood sugar was 150 mg/dL. CBC, ESR and CRP were advised. B-scan ultrasonography was advised. A triple antigen kit was reported negative.

Provisional Diagnosis and Differential Diagnosis

Left eye HSV corneal endotheliitis with non-necrotizing stromal keratitis and iridocorneal touch.

Differential diagnoses considered were Fuchs heterochromic iridocyclitis, CMV endotheliitis, angle-closure glaucoma, anterior uveitis, varicella-zoster viral keratouveitis, endothelial rejection, post-surgical Descemet membrane detachment, bullous keratopathy.

Treatment

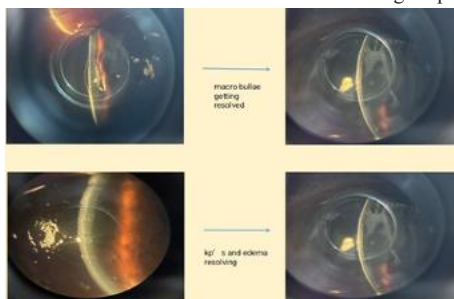
- Rx for left eye included
- eye drops Homatropime three times daily
- eye drops prednisolone acetate six times daily
- Oral acyclovir 400 mg five times daily
- Cap omeprazole 20 mg before food and an analgesic and Bandage contact lens applied

Patient counselling included avoiding contact with water, wearing dark goggles, avoiding eye rubbing and avoiding touching the right eye. Review was advised after 3 days.

Follow-up and Outcome



Showed reduction in corneal haze, resolution/reduction of bullae, decreasing iridocorneal touch, and improvement in keratic precipitates and corneal edema. The anterior chamber was becoming deeper.



3. DISCUSSION

This case demonstrates a clinically complex anterior-segment presentation following ocular trauma. The major diagnostic challenge is that several entities can produce overlapping findings, including CMV endotheliitis, Fuchs heterochromic iridocyclitis, varicella-zoster keratouveitis and non-infectious anterior uveitis.

The presence of multiple bullae and marked corneal edema can obscure deeper ocular structures and make measurement of intraocular pressure less reliable, as noted in this patient. The absence of a visible fundal glow in the affected eye was consistent with the marked corneal opacity/edema documented at presentation.

Clinical improvement over 3 days after initiation of antiviral, topical corticosteroid and cycloplegic therapy was documented. However, the diagnosis should be presented in a manuscript as a presumed/clinically diagnosed HSV endotheliitis rather than as laboratory-confirmed HSV infection.

4. Limitations of the Present Case

- HSV infection was not documented as laboratory-confirmed in the supplied material.
- No aqueous humour PCR or other pathogen-specific molecular test is reported.
- Long-term follow-up data are not included; the available outcome is primarily the 3-day response.
- Baseline and follow-up endothelial cell count/specular microscopy and pachymetry are not reported.
- Some investigations were advised but their results are not provided in the supplied presentation.

5. CONCLUSION

This case illustrates the clinical overlap between HSV endotheliitis and other causes of corneal edema and anterior-segment inflammation and documents short-term clinical improvement following treatment with oral acyclovir, topical corticosteroid and cycloplegia. Definitive etiological confirmation and longer follow-up would strengthen the diagnostic and outcome assessment.

6. DECLARATIONS

Patient Consent for Publication: To be obtained/documentated before journal submission.

Ethics Approval: Not stated in the supplied case material; confirm journal requirements.

Conflict of Interest: To be declared by the authors.

Funding: To be declared by the authors.

Author Contributions: To be completed by the authors.

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