

Pictorial Essay Cornea

Petal-shaped herpetic dendritic keratitis in an immunosuppressed patient

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ABSTRACT

We report a case of herpetic epithelial keratitis in a patient recently diagnosed with mixed connective tissue disease and central nervous system vasculitis, who had been receiving systemic immunosuppression for 1 month. The patient presented with pain, redness, and watering of the right eye for 7 days. Slit-lamp examination revealed multicentric, petal-shaped dendritic epithelial lesions on fluorescein staining under a cobalt blue filter, along with a few other healing lesions. This case highlights the need for vigilance regarding ocular manifestations of viral infections in immunosuppressed individuals.

Keywords: Dendritic ulcer, Herpes simplex keratitis, Herpetic dendritic keratitis, Immunosuppression, Petaloid ulcer, Viral keratitis

INTRODUCTION

A 45-year-old male presented with complaints of pain, redness, and watering in the right eye for the past 7 days. He has a recent diagnosis of mixed connective tissue disease, aseptic meningitis, and suspected central nervous system vasculitis, for which he has been receiving systemic immunosuppression, including oral prednisolone, mycophenolate mofetil, and hydroxychloroquine, for the past 1 month. He was positive for autoimmune markers such as anti-Ro-52 and anti-PM/Scl antibodies. On clinical examination, the best-corrected visual acuity in the right eye was 6/9, and the intraocular pressure was 18 mmHg. Slit-lamp examination revealed two central petaloid-shaped dendritic epithelial lesions on the cornea and two small healing lesions with scalloped margins located paracentrally and another one healing lesion near the limbus at the 5 o'clock position. The lesions stained positively with fluorescein under a cobalt blue filter as shown in the figure 1. No anterior chamber reaction was noted. Corneal sensation was decreased in the right eye compared to the left eye. Examination of the left eye was unremarkable. A clinical diagnosis of herpetic epithelial keratitis in the right eye was made, likely precipitated by systemic immunosuppression. The patient was started on topical ganciclovir ophthalmic ointment 0.15% 5 times daily and moxifloxacin 0.5% eye drops 4 times daily.

DISCUSSION

Herpetic keratitis is a common, debilitating ocular condition caused by herpes simplex virus type 1 and type 2, affecting up to two-thirds of the global population at some point in their lives.^[1]

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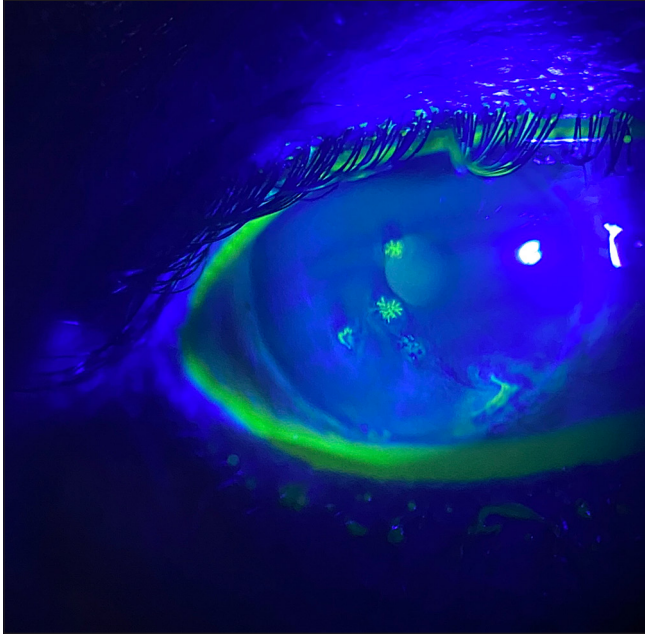


Figure 1: Slit-lamp image showing multicentric herpetic epithelial keratitis. Two central lesions display a characteristic petal-shaped dendritic pattern, while two paracentral lesions appear as healing ulcers with scalloped margins. Another healing lesion is noted near the limbus at the 5 o'clock position.

Following the primary infection, the virus remains latent in the dorsal root ganglia and may reactivate in response to triggers such as stress, uncontrolled diabetes, or systemic immunosuppression.^[1-3] Reactivation can result in a spectrum of corneal manifestations, including herpetic epithelial, stromal, and endothelial keratitis, as well as keratouveitis.^[1-3] In the present case, systemic immunosuppression may have contributed to viral reactivation and corneal involvement. Treatment of herpetic epithelial keratitis typically includes topical antiviral agents such as acyclovir 3% ointment or ganciclovir 0.15% gel, applied 5 times daily for 1 week and then tapered to 3 times daily for another week.^[1-3] For patients with recurrent episodes, prophylactic oral acyclovir

400 mg twice daily is recommended, with regular monitoring of renal function.^[1-3]

CONCLUSION

This case highlights the risk of herpetic epithelial keratitis in immunosuppressed patients as a potential complication. Warning signs needs to be explained to the patients who are going to receive immunosuppression for a long time. Prompt diagnosis and antiviral treatment are crucial to prevent further ocular morbidity.

Ethical approval: The Institutional Review Board approval is not required.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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