HSV Acute Retinal Necrosis – A Painful Threat to Vision

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INTRODUCTION

Ocular Herpes Simplex (HSV) is a serious infection with variable clinical manifestations ranging from isolated blepharitis and keratitis to vision-threatening uveitis and acute retinal necrosis (ARN). The presence of keratitis is a valuable diagnostic sign, however, when absent, the differential is wide, encompassing autoimmune and idiopathic etiologies. We report two cases of patients who presented with acute painful vision loss, who subsequently were diagnosed with HSV-2 panuveitis and ARN.

CASE 1

A 33 year-old healthy female with three prior episodes of unilateral iritis without definitive etiology, presented to her ophthalmologist with painful red eye and photophobia similar to her previous iritis flare-ups.

On initial exam, she had conjunctival injection and 2+ cells in the anterior chamber. A clinical diagnosis of anterior uveitis was made, and topical steroid therapy was initiated. However, compared to her prior episodes, her symptoms progressed over the next 3 days and on subsequent exam, she had evidence of vitritis and retinitis. She was diagnosed with panuveitis and ARN, initially most suspicious for endogenous bacterial endophthalmitis.

However, a diagnostic vitreous fluid PCR revealed HSV-2 infection. Upon further questioning, she reported recurrent painful ulcers in the inguinal region. She was treated with Valacyclovir 2g QID with subconjunctival steroid injections and retained good vision.

CASE 2

A 27 year-old, 30-week pregnant, female presented to the ophthalmology clinic with 3 days of right eye pain, photophobia and blurry vision. Ocular exam showed periorbital swelling, panuveitis, disc edema (blue circle), phlebitis, and focal retinitis with macular hemorrhages.

She was started empirically on Acyclovir, and received intravitreal Ganciclovir+Foscarnet injections. Aqueous and vitreous fluid PCR were HSV-2 positive; other infectious and rheumatological etiologies were ruled out. Despite maximal therapy, her vision deteriorated to Count Fingers within 36 hours, and over days her ARN progressed to retinal detachment, requiring surgical management. Despite aggressive measures, her visual acuity only marginally improved.

DISCUSSION

- ARN is most often caused by VZV infection.
- HSV ARN is rare and typically manifest as reactivation of latent disease.
- Previously reported risk factors for HSV uveitis include trauma, older age and immunosuppression.
- Treatment involves steroids and acyclovir. Treatment is indicated to prevent progression of disease and involvement of the fellow eye.

REFERENCES


CONCLUSION

- HSV panuveitis and ARN are rare but can occur in young, immunocompetent hosts.
- In cases of clinical uncertainty, ocular fluid PCR has high sensitivity.
- High index of suspicion is key to correct diagnosis.
- The sequela of misdiagnosing such aggressive and potentially treatable infection can be vision-threatening.