

Bilateral disciform keratitis: A rare entity

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Abstract

Introduction: Herpetic disciform keratitis is a primary endotheliitis resulting in both stromal and epithelial edema in a round (disciform) distribution with keratic precipitates underlying the area of edema.

Objective: To report an unusual case of bilateral disciform keratitis following viral conjunctivitis.

Case Description: A 21 year old male who developed viral conjunctivitis followed by bilateral disciform keratitis in the span of 3 weeks with widespread sub-epithelial corneal infiltrates in addition to central corneal edema with white distinct border resembling Wessely ring, as well as Descemet's folds and keratic precipitates in the central area. Patient was treated with oral antiviral, topical antiviral, and topical steroid where the patient showed significant improvement.

Conclusion: bilateral disciform keratitis is a late complication of viral conjunctivitis and it can be treated medically with antiviral and steroid.

Keywords: Bilateral disciform keratitis, Wessely ring, Descemet's fold, Keratic precipitates.

Introduction

Keratitis caused by HSV, or herpes simplex keratitis (HSK), is the most common cause of corneal blindness in developed nations. Previously it was thought that HSV-1 had a predilection for the trigeminal ganglion and HSV-2, for the sacral ganglion.¹ However, an increasing number of cases of ocular herpes are caused by HSV-2 and can cause more scarring. Primary HSV infection occurs by direct contact with infected secretions. On contact, the virus enters epithelial cells and starts replicating. Within hours, it enters the sensory nerve endings and travels to the sensory ganglion, where it may remain in a dormant form called latency. Alternatively, it may replicate and travel back down the nerve to cause a primary infection that is clinically evident in 1% to 6% of infected patients.² Once the primary infection resolves, the virus becomes latent and remains in this state until certain triggers, such as fever, sunlight exposure, stress, and menses, cause it to reactivate, multiply, and travel back down the nerve to cause recurrent infection. It is uncertain whether ocular recurrences are caused by virus that initially infected ocular tissues or by "back-door spread," via the trigeminal ganglion,⁴ from an initial oral infection.³

History

A 21 year male patient came to Santosh Hospital in Ophthalmology OPD with complaint of fever with chills 3 weeks ago, which was sudden in onset, intermittent in nature and was relieved on local medication. It was associated with redness, photophobia, watering and foreign body sensation which was gradual in onset and progressive in nature. It was not associated with any aggravating or relieving factors. He also started complaining of diminished distant as well as near vision since 10 days, which was sudden in onset, painless in intensity and progressive in nature for which he consulted a local doctor and the medicine Ciplox-D was prescribed for four times a day for 3 days and was not relieved. On examination his visual acuity was finger counting (FC) at 3

meter in right eye and 6/60 in left eye. On slit lamp examination, it shows bilateral mild conjunctival congestion. On corneal examination, it found was normal in shape and size, a circular disc shaped stromal haze is present measuring 5 mm x 5 mm with a immune ring present between 4'o' clock to 6'o' clock (Wessely's ring) with stromal infiltrates (Figure 1 and 2). Descemet's folds present at the level of endothelium with pigmented keratic precipitate present inferiorly between 5'o'clock to 6'o' clock in both eye (Fig. 3 and 4), anterior chamber was normal without any flare, pupils were mid dilated slight sluggishly reactive to light. Fundus could not be visualized due to stromal haze. The remainder findings of general and systemic examination revealed no abnormalities.



Fig. 1: Right eye



Fig. 2: Left eye



Fig. 3: Right eye



Fig. 4: Left eye

Fig. 1, 2, 3 and 4: Slit lamp photograph showing disc shaped stromal haze and infiltrates.

Investigations

Clinical diagnosis was made on slit lamp bio microscopy which is the most reliable methodology in case of herpes stromal/endothelial keratitis. Laboratory testing can not be done since virus cannot be cultured. On blood investigation, complete blood count was normal. ESR was normal. On Chest X-ray AP / lateral view, the lung field was normal with no pathology. Blood sugar levels were within normal limits for both fasting and post-prandial. Special test like ELISA, PCR, TZANCK SMEAR and Direct Fluorescein Antibody are done under special circumstances.

Diagnosis and Treatment

The patient was diagnosed with bilateral disciform keratitis and treated with oral antiviral (Acyclovir), topical antiviral (Acivir) and topical steroid (Loteprednol).

Discussion

Herpes simplex virus endothelial keratitis is relatively uncommon and usually presents independently of other forms of HSV keratitis. Historically, HSV endothelial keratitis has often been referred to as disciform keratitis, because some patients present with a discrete, well demarcated round or oval area of keratic precipitates with overlying corneal edema referred to as disciform keratitis. Laboratory testing is not much useful in case of a HSV stromal keratitis.⁴ In our patient. The bilateral presentation of disciform keratitis followed by viral conjunctivitis responded very well to oral

acyclovir, topical Acivir and topical Loteprednol followed with tear substitutes.^{5,6} After 10 days of follow-up the patient had improved drastically in both the eyes (Fig. 5 and 6).



Fig. 5: Right eye



Fig. 6: Left eye

Fig. 5 and 6: Slit lamp photograph showing no stromal haze and descemet's fold after 10 days of treatment

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