

Severe acute onset dry eye following presumed Epstein-Barr viral infection

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A 16-year-old girl presented with a right knee joint pain and severe redness with photophobia in both eyes for 3 weeks. Her uncorrected visual acuity was 20/60 in the right eye and 20/40 in the left eye. A slit lamp examination revealed an early shallowing of inferior fornices with fine bands of symblepharon inferolaterally, a significantly reduced tear meniscus height, and thick membranes that easily peeled off the tarsal surface [Fig. 1] in both eyes. There was diffuse grade 3 punctate epitheliopathy with filaments, but the rest of the ocular examination was normal. An extensive rheumatological evaluation for joint pain was negative except for a raised erythrocyte sedimentation rate (ESR). A working diagnosis of postinfective (? viral) reactive arthritis was made. Viruses

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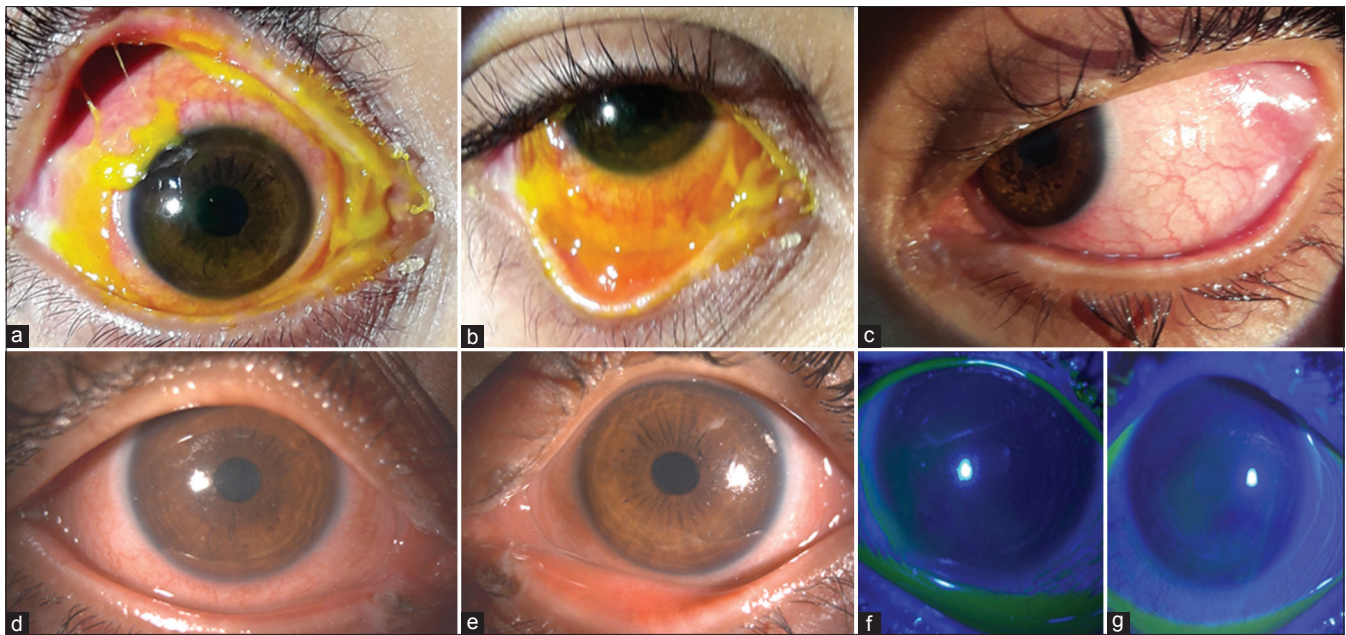


Figure 1: Slit lamp image of the right (a) and left (b) eye at the onset of the condition showing the presence of pseudomembranes, mucoid discharge, and severe dry eye with congestion. Evidence of superotemporal scarring in the left eye (c) at 1 month with the persistence of dry eye. At 3 months following punctal cauterization, the right (d and f) and the left eye (e and g) showing an improvement in the dryness, as well as corneal staining

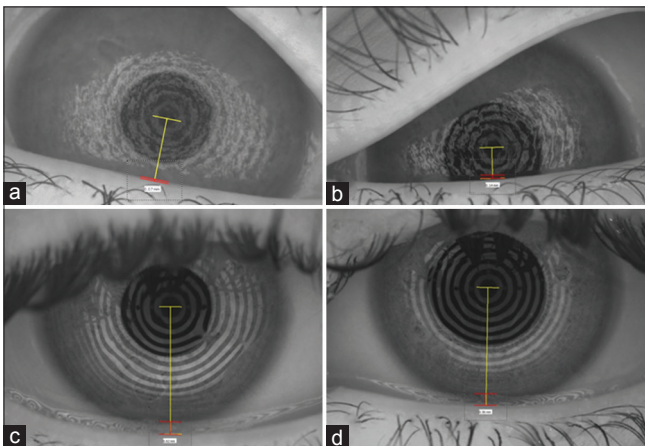


Figure 2: Pre-punctal cautery keratograph image of the right (a) and left (b) eye shows reduced tear meniscus height (0.07 and 0.14 mm, respectively) and distortion of mires because of severe dryness. Post-punctal cautery keratograph image of the right (c) and left (d) eye shows improved tear meniscus height (0.62 and 0.56 mm, respectively) with significantly improved mires

can act as adjuvants in the development of autoimmunity.^[1] Infection by the Epstein-Barr virus (EBV) may be related to lacrimal gland lymphocytic proliferation of Sjögren syndrome, causing severe dry eyes.^[2]

As the ocular symptoms did not improve with lubricants and topical steroids and severe dry eye with no Schirmer's wetting persisted, she underwent punctal cautery at 8 weeks. Keratography revealed increased tear meniscus height with significant improvement in symptoms on the second day with improving epitheliopathy [Figs. 1-3]. We investigated the patient further for infection by EBV, a possible etiology for the entire spectrum of manifestations.

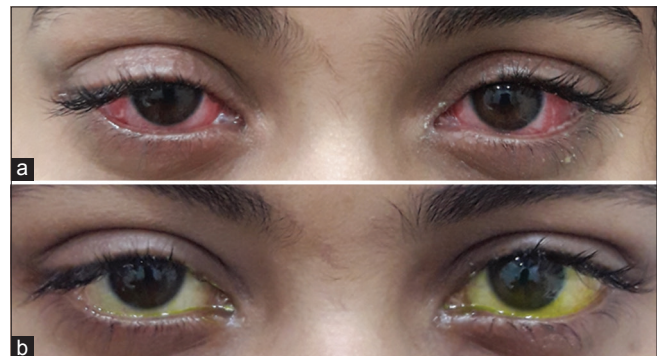


Figure 3: The external appearance of the eye at onset (a) and at 2 months (b) after punctal cautery

Serum IgG for EBV antibody to viral capsid antigen (VSA) level was > 150 U/mL with EBV Epstein-Barr nuclear antigen (EBNA) IgG level of 263 U/mL (considered positive if > 21.99).

EBV typically infects adolescents.^[3] Arthralgias are the most common joint manifestation of EBV infection.^[4] In an observational case report, severe keratoconjunctivitis sicca (KCS) was described postconjunctivitis because of EBV dacryoadenitis.^[5]

At 4 months from the onset, the patient had visual acuity of 20/20 and was comfortable with Schirmer's wetting of 4 mm in both eyes. She resumed her daily activities with a maintenance dose of lubricants.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/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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Nil.

Conflicts of interest

There are no conflicts of interest.

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