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**OBSERVATIONS**

Clinical course and histopathology of a patient diagnosed with ARN caused by infection with EBV confirmed by molecular pathology.

**CONCLUSIONS AND RELEVANCE**

Epstein-Barr virus is a recognized cause of intraocular inflammation and has been implicated as a possible cause of ARN. However, to our knowledge, tissue demonstration of EBV in a patient with ARN has not previously been reported. We identified the organism in the necrotic retina of a patient receiving immunosuppression because of idiopathic pulmonary fibrosis.

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nation showed rapid progression of the retinal necrosis to involve the optic nerve and macula (Figure, B). An enucleation of the left eye was performed to confirm the infectious diagnosis in the event that a similar clinical presentation affected the fellow eye. Polymerase chain reaction of the microdissected, affected retinal cells detected EBV DNA using EBV-specific primer pair and universal HSV primer. No bacterial DNA was detected using 16S ribosomal RNA gene primer pair. Histologic analysis showed extensive necrosis of the retina and retinal pigment epithelium, with moderate mononuclear inflammatory cellular infiltration composed of lymphocytes (T cells>B cells) and macrophages (Figure, C).

Discussion
The role of EBV in ARN is unclear because its seroprevalence in the United States is greater than 90% and PCR detects EBV in 20% of normal cadaveric eyes, yet reports of EBV-related ARN have been described with variable levels of causative evidence. Our case yielded positive vitreous PCR results for EBV without detection of DNA from other herpesviruses. Furthermore, to our knowledge, this is the first case in which EBV was detected by molecular pathology within retinal cells, eliminating the possibility that infiltrating lymphocytes were responsible for the positive data. This is an important distinction, since EBV-infected lymphocytes may be detected within the retina without the virus being the cause of the retinal infection.

Traditionally, ARN has been diagnosed clinically in immunocompetent patients and treated with intravenous acyclovir. More recently, clinicians have used oral and/or intravitreal antiviral agents, early prophylactic laser retinopexy, and/or early vitrectomy for treatment. Because EBV is relatively resistant to antiviral medication, early sampling of the aqueous and/or vitreous with PCR for herpesviruses should be considered to determine the precise etiologic pathogen. In cases where EBV is confirmed to be responsible for the infection, we suggest that early vitrectomy with intravitreal injection of multiple antiviral drugs be considered, especially in immunosuppressed patients. To the best of our knowledge, this is the first case of ARN in which EBV was identified in ocular tissue and confirmed as the sole causative agent.