Jpn J Ophthalmol
Vol 52: 130–145, 2008

presence of residual LECs, and recommend performing Nd-YAG capsulotomy in the early stage of CCS, before complete closure of the capsule opening. Prolonged application of topical steroids may prevent significant LEC proliferation and might help to prevent CCS in certain cases.

Key Words: capsule contraction syndrome, capsular phimosis, intraocular lens

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A High Viral Load of Epstein-Barr Virus DNA in Ocular Fluids in an HLA-B27-Negative Acute Anterior Uveitis Patient with Psoriasis

It is well established that acute anterior uveitis (AAU) is unilateral anterior uveitis and is associated with HLA-B27. Many AAU patients are HLA-B27-negative, although the clinical manifestations are the same as for HLA-B27-positive patients. Previous reports demonstrated an association between HLA-B27-negative AAU patients and Epstein-Barr virus (EBV, human herpes virus 4),[1] but no reports have shown an EBV viral load in the ocular fluids of AAU patients. Here we report an HLA-B27-negative AAU patient with psoriasis who had a high EBV viral load in his ocular fluid.

Case Report

A 70-year-old Japanese man who had a 20-year history of psoriasis vulgaris (Fig. 1A) developed acute inflammatory episodes several times a year affecting only one eye at each episode. The patient had been on oral corticosteroids for many years for the treatment of psoriasis vulgaris. In 2003, he was referred to us because of severe ocular inflammation in the right eye with hypopyon iridis, vitreous opacities, and optic disc hyperemia (Fig. 1B–D). A few months later, the patient developed a similar episode in the left eye (Fig. 1E). He had no systemic symptoms of other clinical entities of uveitis, and the results of systemic examinations, including for HLA-B27, were negative. All anti-EBV antibodies in

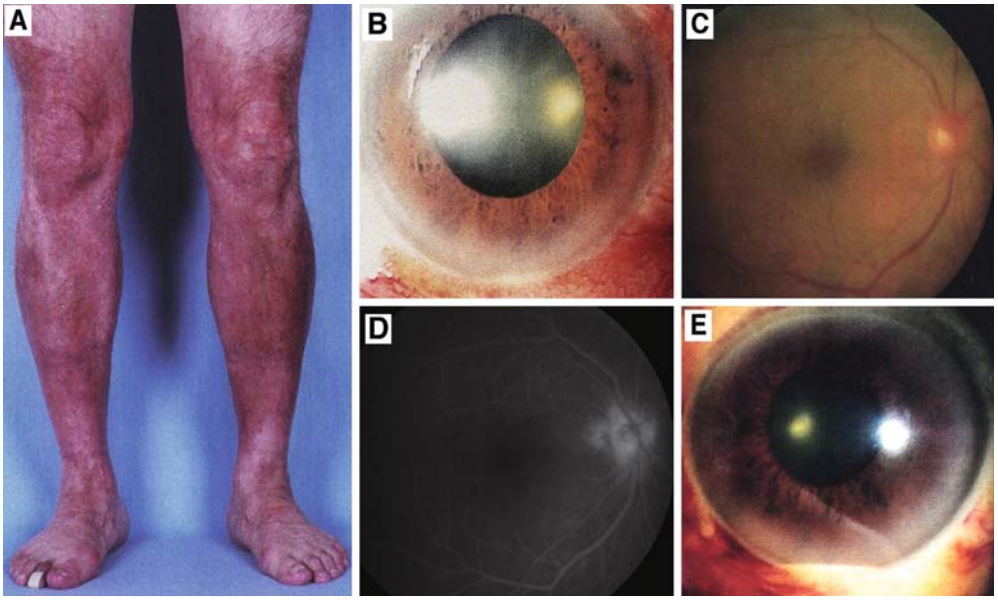

Figure 1A–E. Slit-lamp, fundus, and psoriasis photographs. **A** Legs of a patient with long-term, recurrent psoriasis. **B** Acute anterior uveitis (AAU) with nonfibrous hypopyon in the right eye. **C** Slight vitreous opacity and hyperemia of the right optic disc. **D** Fluorescein dye leakage from the optic disc. **E** AAU with hypopyon in the left eye.

Table 1. Detection of genome and antibodies against EBV in serum and ocular fluids from a patient with psoriatic uveitis

	Genome	Antibodies		
	DNA (copies/ml)	anti-VCA IgG	anti-EBNA IgG	anti-EA-DR IgG
Serum	<50	1:320	1:10	1:40
Vitreous	4.0×10^7	1:40	nt	nt
Aqueous humor	2.4×10^8	nt	nt	nt

Control vitreous from uveitis patients ($n = 10$) did not contain any EBV DNA (<50 copies/ml) or anti-VCA IgG (<10).

EBV, Epstein-Barr virus; VCA, viral capsid antigen; EBNA, EBV nuclear antigen; EA-DR, early antigen diffuse or restricted; nt, not tested.

the serum were examined by fluorescent antibody tests. All anti-EBV antibodies in the serum were positive (Table 1).

In 2006, the patient developed heavy vitreous opacities in his right eye. A diagnostic pars plana vitrectomy was performed to rule out ocular lymphoma and infectious diseases. Cytological examinations and bacterial assay showed negative results. However, multiplex polymerase chain reaction (PCR) detected genomic DNA of EBV but not of other human herpes viruses [herpes simplex virus (HSV)-1, or HSV-2, varicella zoster virus, or human herpes virus (HHV)5, HHV6, HHV7, or HHV8]. Real-time PCR disclosed high virus loads in the vitreous (4.0×10^7 copies/ml) and in the aqueous humor (2.4×10^8 copies/ml) (Table 1). The vitreous sample was also positive for anti-VCA IgG (Table 1).

Comments

After a primary infection, EBV is considered to be latent in B lymphocytes. However, immunological disturbance causes the virus to be reactivated and to proliferate, resulting in B lymphocyte-related disorders. Examples are infectious mononucleosis and Burkitt B cell lymphoma.[2] In the eye, Sjögren syndrome and Stevens-Johnson syndrome are thought to be associated with EBV.[3] It is of note that EBV genome and EBV receptors have been detected in various normal ocular tissues.[4] Furthermore, EBV DNA has been detected in the ocular fluid of human immunodeficiency virus-negative immunocompromised patients with uveitis.[5]

The present patient had a high EBV viral load in the ocular fluids. The relevance of this high viral load to the clinical status of the patient is not clear at present. However, the patient has intense episodes of unilateral acute anterior uveitis with hypopyon. The frequency of inflammatory episodes in this patient has been several times a year for many years, and the vitreous opacities do not respond to corticosteroids. This clinical manifestation is different from that of typical HLA-B27-positive or -negative AAU. Psoriasis is also known to cause anterior uveitis with hypopyon. However, in this case, when the patient had inflammatory episodes in the eye, he did not have any aggravation of psoriasis vulgaris. Therefore, it is possible that the high EBV viral load in ocular fluids of this patient might exacerbate the clinical manifestations of the ocular inflammation.

Another consideration is that the patient had been on systemic corticosteroids for many years, and this might have caused immunosuppressive conditions allowing reactivation of the virus. In fact, serum antibodies to EBV disclosed a reactivation pattern.

To the best of our knowledge, this is the first report that demonstrates a high EBV viral load in ocular fluids of an HLA-B27-negative AAU patient with psoriasis vulgaris.

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Key Words: acute anterior uveitis, Epstein-Barr virus, ocular fluids, polymerase chain reaction

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Jpn J Ophthalmol
Vol 52: 130–145, 2008

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Pigment Epithelial Changes with Abnormal Fundus Autofluorescence after Photodynamic Therapy for Idiopathic Choroidal Neovascularization

Photodynamic therapy (PDT) stabilizes and improves vision in patients with subfoveal idiopathic choroidal neovascularization (CNV).[1] However, there have been several reports of unusual complications associated with PDT, including marked retinal pigment epithelium (RPE) alterations and decreased vision, especially in young myopic women.[2,3] We report a case of idiopathic CNV with RPE changes and abnormal fundus autofluorescence (FAF) after uncomplicated PDT.

Case Report

A 44-year-old woman with an unremarkable medical history developed blurred paracentral vision OD. She had been examined initially at another institution. Her best-corrected visual acuity was 1.0 OD with –4.0 diopters spherical equivalent. Fundus examination and fluorescein angiography (FA) showed classic juxtafoveal CNV (Fig. 1a, b). FAF images obtained with a confocal scanning ophthalmoscope (HRA2, Heidelberg Engineering, Heidelberg, Germany) showed slightly increased central autofluorescence corresponding to the area of the CNV and surrounding decreased autofluorescence with a subretinal hemorrhage (Fig. 1c). Her left eye was normal. Despite initial treatment with a posterior sub-Tenon injection of triamcinolone acetonide, the vision in the right eye gradually deteriorated to 0.5. The patient underwent standard PDT with a spot size of 3740 μm.

After PDT, FAF images showed gradual enhancement of the FAF corresponding to the area of laser application

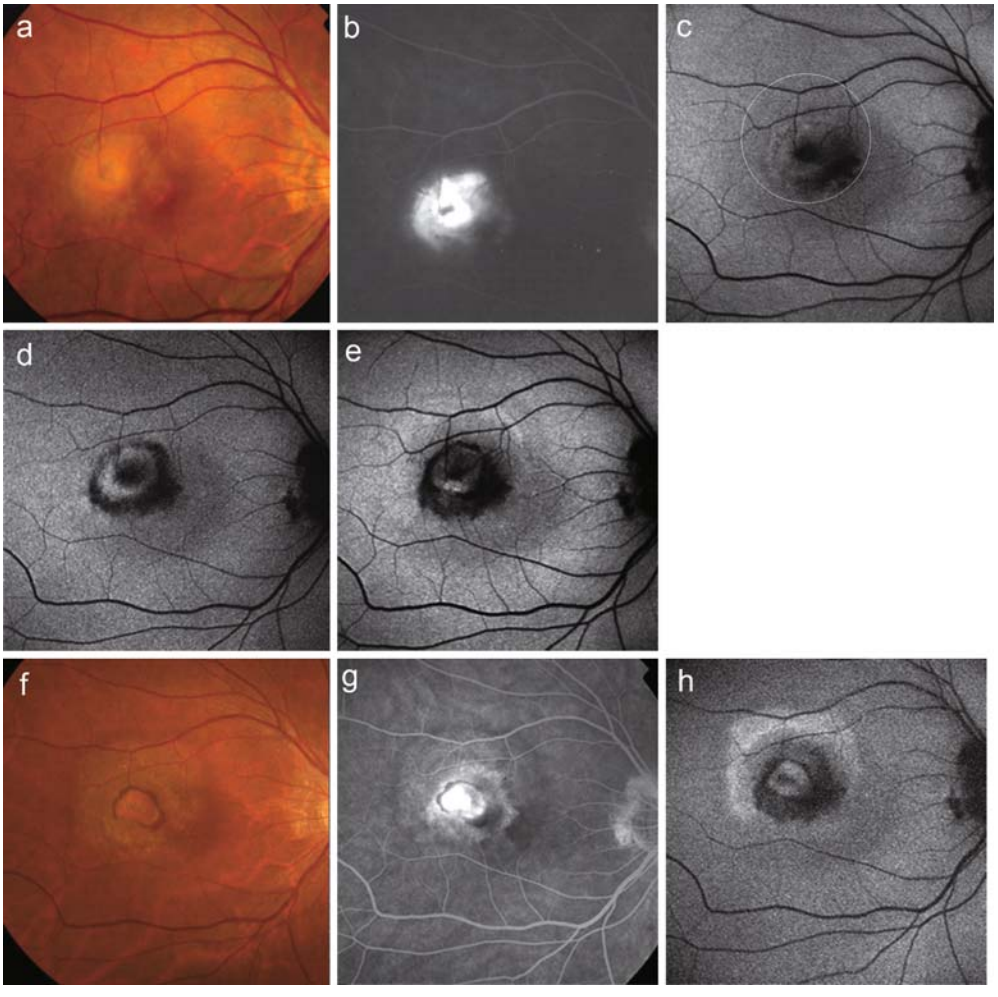

Figure 1. Fundus photographs, fluorescein angiography (FA), and fundus autofluorescence (FAF) images before and after photodynamic therapy (PDT). Fundus photographs (**a**) and FA (**b**) before PDT reveal classic juxtafoveal choroidal neovascularization (CNV). The visual acuity is 0.5 OD. FAF image before PDT (**c**) shows slightly increased autofluorescence corresponding to the CNV and decreased autofluorescence in the surrounding area with a subretinal hemorrhage. PDT was performed with a 3740-μm laser irradiation spot, indicated by the *white circle*. In FAF images 1 month (**d**) and 2 months (**e**) after PDT, increased FAF centrally corresponding to the CNV and slight enhancement of FAF corresponding to the area of the laser application are visible. Two and a half months after PDT, the fundus photograph (**f**) shows retinal pigment epithelial (RPE) alteration, and FA (**g**) demonstrates a faint halo of RPE disturbance corresponding to the region of laser application. The visual acuity is 0.05 OD. **h** The elevated FAF signal is more apparent within areas of laser application.