A 54 year-old diabetic woman complained of blurred vision in the left eye for 5 days without scalp tenderness or headache.
Visual acuity (VA) was 20/20 right eye and 20/30 left eye.
Intraocular pressures were normal.
Funduscopic examination revealed left optic nerve edema and a small disc margin hemorrhage.
WBC count was 12,700, ESR was 7 (normal 0–20 mm/hr) and CRP was 2.4 (normal 0–1.0 mg/dL).
Three days later, she noted new left eye pain and her vision declined to counting fingers.
There was no pain on eye movement.
The right pupil was 4 mm and reacted to light; the left pupil was 4 mm, and there was a relative left afferent pupillary defect.
The left optic nerve was swollen with a few peripapillary nerve fiber layer hemorrhages along with a cherry red spot and mild macular edema consistent with central retinal artery occlusion; there were no posterior pole or peripheral retinal hemorrhages.
Trace cells were seen in the anterior chamber, but not in the vitreous fluid.
Repeat WBC, ESR and CRP were normal.
Treponemal and Bartonella antibodies, the QuantiFERON-TB test, blood cultures, EKG and carotid Doppler ultrasound were unremarkable.
Brain contrast MRI demonstrated no optic nerve enhancement.
Twelve days later, left eye pain and vision worsened, and the patient complained of jaw claudication and scalp pain.
VA declined to no light perception in the left eye with 1+ cells and flare in anterior chamber and 2+ vitreous cells and haze.
Funduscopic examination revealed extensive retinal necrosis and diffuse hemorrhages with multiple areas of focal venous beading (Fig.1), consistent with acute retinal necrosis.
Vitreous fluid was examined by PCR for amplifiable HSV, VZV, CMV and toxoplasma sequences and returned positive for VZV DNA.
She was treated with a one-time intravitreal injection of ganciclovir 2000 mcg/0.5 ml in the left eye, oral acyclovir 800 mg 5 times daily for 14 days and oral prednisone 60 mg daily for 7 days followed by 20 mg for 7 days.
Eleven days after starting treatment, because she had recently developed jaw claudication and intermittent scalp pain, a temporal artery biopsy was performed.
Histological examination was normal (Fig.2) while immunohistochemical analysis demonstrated VZV antigen in the arterial adventitia; evaluation of adjacent sections for HSV-1 antigen and infiltrating leukocytes (CD45, not shown) was negative (Fig.3).
Antiviral therapy was altered to intravenous acyclovir, 10 mg/kg every 8 h for 14 days, and steroids were discontinued.