recovered uneventfully, indicating that deep tissue inflammation, dacryoadenitis, and dacryocystitis are likely to be common manifestations of adenoviral conjunctivitis.

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En Face Optical Coherence Tomography of Outer Retinal Discontinuity and Fan-Shaped Serous Macular Detachment in Diabetic Macular Edema

We report en face optical coherence tomographic (OCT) imaging of serous macular detachment secondary to retinal microangiopathy in a patient with diabetic retinopathy and macular edema. The en face OCT clearly delineated a fan shape of the detachment. Our findings implicate an outer retinal discontinuity as the site through which fluid may have entered the subretinal space.

Optical coherence tomographic examinations have identified discontinuities of the outer aspect of the swollen neurosensory retina in eyes with serous macular detachment from retinal vascular disease. To our knowledge, the pathophysiologic relationship between such outer retinal discontinui-
ties and their contribution to the extent and distribution of macular detachment has not been determined.

En face (C-scan) OCT imaging is growing in use.2,3 In this study, we report a case of outer retinal discontinuity in a patient with retinal microangiopathy associated with diabetic retinopathy and demonstrate the use of en face OCT imaging to determine the pathophysiology of the associated macular detachment.

Report of a Case | A woman in her early 60s described sudden onset of an inverted fan-shaped scotoma in her right eye. Her history was significant for myopia, glaucoma, diabetes mellitus, and hypertension. She had a history of laser therapy in the left eye for a branch retinal vein occlusion. On examination, best-corrected visual acuity was 20/40 OD and 20/20 OS and intraocular pressure was 11 mm Hg OU. Fundus examination revealed increased cup-disc ratios in both eyes (0.8 OU). The right macula showed edema (approximately 1.5 disc areas) just below the fovea. Fluorescein angiography of the right eye showed prominent punctate macular leakage from a cluster of microaneurysms inferior to the fovea and a few scattered microaneurysms elsewhere (Figure 1). Optical coherence tomographic examination of the right eye showed inferior macular edema and subfoveal detachment of the sensory retina. Notably, there was a discontinuity in the outer layers of the detached retina contiguous with both the macular edema and foveal detachment. En face imaging with correlation with B-scan spectral-domain OCT (Figure 2) showed a fan-shaped foveal detachment with the outer retinal discontinuity at its apex and within the border of retinal edema. This finding was not appreciated by ophthalmoscopy.

The patient received focal, direct, thermal laser treatment only to areas of punctate leakage in the inferior macula of the right eye 7 months after initial presentation. Three months later, best-corrected visual acuity remained unchanged at 20/40 OD, but fluorescein angiography showed reduced leakage. En face OCT showed reduction of the macular detachment and reduced prominence of the outer retinal discontinuity (not shown). The patient also noted reduction in the scotoma size.
Discussion | In this case of macular edema, correlation of en face B-scan OCT images implicated an outer retinal discontinuity as a site through which intraretinal fluid may have entered the subretinal space by virtue of its location at the apex of the detachment. The orientation of the fan-shaped detachment, spreading diagnostically away from the fluorescein leakage site, suggested a directional component to fluid flow away from this site. The presumed focality of flow through an outer retinal discontinuity combined with a distant source of primary leakage were unique features of this case. En face OCT demonstrated the orientation of the fan in a manner less easily visualized by B-scan OCT and helped identify the physiologically important leakage site. We speculate that expansion of a cystoid space and dehiscence of the contiguous outer retina may have created such a discontinuity, opening a path for the fluid to enter the subretinal space. In this case, laser treatment at the leakage site, although distant from the outer retinal discontinuity, was associated with improvement of the macular detachment.

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OBSERVATION

Self-induced Orbital Compression Injury: Saturday Night Retinopathy

Inadvertent compression of ocular tissues is an exceedingly rare cause of vision loss. Herein, we describe the second reported case, to our knowledge, of a self-induced orbital compression syndrome and the first set of images obtained with optical coherence tomography and fluorescein angiography in this condition.

Report of a Case | An obese man in his mid-30s with no prior systemic or ocular disorders presented to a local emergency department after waking with no light perception OD. He also had pain, numbness, and erythematous induration of his right eyelids and forehead that increased throughout the day. The night prior to vision loss, he was drinking alcohol heavily and took 2 buprenorphine hydrochloride/naloxone hydrochloride pills. He denied any trauma. On presentation, he had acute renal failure due to rhabdomyolysis (creatinine level, 2.2 mg/dL [to convert to micromoles per liter, multiply by 88.4]; creatine kinase level, 29 320 U/L [to convert to microkatalas per liter, multiply by 0.0167]) and had compartment syndrome of his right forearm for which he underwent an emergent fasciotomy.

An ophthalmology consultation confirmed that visual acuity was no light perception OD and 20/20 OS. Anterior segment examination findings were notable for tense eyelid edema, chemosis, and corneal haze on the right as well as restricted motility in all fields of gaze. The right pupil was mid-dilated and had a relative afferent papillary defect. Intraocular pressure (IOP) was 37 mm Hg OD and 21 mm Hg OS. Ophthalmoscopic examination revealed tortuous vessels, a serous retinal detachment sparing the inferior periphery, and macular whitening. Findings on examination of the left eye were normal. Noncontrast computed tomography of the head and orbits demonstrated periorbital soft-tissue swelling. Owing to suspicion of orbital compartment syndrome, a right lateral canthotomy with inferior cantholysis was performed. This procedure improved the patient’s eyelid edema and motility, but the IOP remained elevated at 32 mm Hg OD. He began treatment with intravenous dexamethasone and topical IOP-lowering medications. Despite these interventions, the IOP increased to 42 mm Hg OD the next day and did not normalize until hospital day 3.

Three weeks later, the patient presented to the Wills Eye Hospital Retina Service where evaluation revealed a pale, edematous retina with attenuated vessels, retinal folds, and peripheral retinal pigment epithelial abnormalities. He also had optic nerve pallor. Optical coherence tomography showed complete loss of the normal retinal architecture with a retinal detachment (Figure 1). Fluorescein angiography demonstrated delayed chorioidal and retinal arterial filling (Figure 2).

Discussion | Our patient’s presentation is consistent with the diagnosis of Saturday night retinopathy, a term coined by Jayam et al2 in 1974. A MEDLINE search showed no other reports of this disorder. Although self-induced orbital compressive syndromes are extremely rare, they are similar to findings in several patients who woke from prone neurosurgical procedures with severe unilateral vision loss and signs of orbital compartment syndrome.3-6