ocular corticosteroid injection may be from CSCR that is related to a periorbital route should be investigated. Periocular corticosteroids are in-jected directly behind the globe to induce a posterior pole effect. The presence of intraocular inflammation secondary to uveitis may affect the retinal pigment epithelial barrier and increase susceptibility to local periocular corticosteroid effects. A similar mechanism has been proposed in a small series that reported CSCR following systemic corticosteroid therapy for uveitis that occurred secondary to bird-shot cho-riorioretinopathy, Vogt-Koyanagi-Harada disease, and scleritis.

A variety of contributing factors may account for the paucity of reports linking CSCR and the common procedure of periocular corticosteroid injection. In eyes with uveitis, clinical features such as synchiae, pupil constriction, or media opacity severe enough to warrant periocular corticosteroid administration may preclude visualization of distinct macular details. Subtle fluid from CSCR that is related to a periocular corticosteroid injection may be interpreted as CME or may be overshadowed by features of coexisting CME. Visual symptoms from secondary CSCR may be attributed to the primary diagnosis of uveitis, and thus the fundus examination that is required to detect this entity may be omitted. Optical coherence tomographic imaging may be especially helpful in this scenario to differentiate between the features of CSCR and CME. It is unlikely that the topical corticosteroid drops played a role in the development of CSCR because of the relatively brief time of administration and the lack of posterior-segment penetration, especially in this patient with phakic eyes. In contrast, periocular corticosteroids are injected directly behind the globe to induce a posterior pole effect.

Because almost every other route of corticosteroid administra-tion, including local intra-articular injection, has been linked with CSCR thus far, it appears logical that the periocular depot corticosteroid injection would be associated with development of this disorder. The periocular route should be included in the suggested etiologic association between corticosteroid therapy and development or exacerbation of CSCR.

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**Acitretin-Associated Maculopathy**

Isotretinoin and etretinate are synthetic retinoids commonly used to treat skin disorders. Ocular adverse effects have been reported after short- and long-term use of these drugs,1-4 with keratoconjunctivitis sicca1 being the most common one. Nictalopia and decreased dark adaptation have been described in patients treated with isotretinoin5 and etretinate.3 Furthermore, abnormalities in the electroretinogram (ERG), including reduced scotopic amplitudes3,5 and color vision,3 have also been reported.

The case of a 32-year-old man who noted decreased visual acuity (VA) after long-term use of acitre-tin (Neotigason), a metabolite of etretinate, is reported. Slitlamp biomicroscopy, fluorescein angiography (FFA), and electrophysiology findings are described.

**Report of a Case.** A 32-year-old white man was seen in the emergency department on July 26, 2002, reporting a 3-day history of blurred
vision in both eyes. His medical history was remarkable for previous hepatitis B infection and severe psoriasis for which he had been treated with acitretin, 30 mg/d, for the past year. His ocular and family histories were unremarkable.

On ophthalmic examination, VA was measured at 6/9 OU. Anterior segment and intraocular pressures were normal. On fundus examination, retinal pigment epithelium (RPE) abnormalities at the macula and cystoid macular edema were present (Figure 1). Diffuse early and late hyperfluorescence at the level of the RPE at the macula was observed on FFA (Figure 1). Late leakage of fluorescein in foveal cystic spaces was also noted (Figure 1). Retinal changes were suspected to be possibly related to the use of acitretin, and thus, this treatment was then discontinued. Therapy with slow-release oral acetazolamide (Diamox-SR), 250 mg twice a day, was also started. Three days later, his symptoms of blurred vision had improved, although his VA remained 6/9 OU. The cystoid macular edema had completely resolved (Figure 2). Only hyperfluorescence from RPE was present (Figure 2). Treatment with oral acetazolamide was discontinued.

Electrophysiology, including full-field ERG and pattern ERG (PERG), was performed on December 12, 2002, and disclosed no abnormalities. At his last follow-up visit, March 31, 2003, his VA was 6/6 OU and no macular edema was present. The RPE abnormalities, although attenuated compared with baseline, were still observed on FFA.

Comment. The patient described herein had diffuse RPE changes at the macula and macular edema. To our knowledge, these retinal abnormalities have not been previously described in patients using oral retinoids. The cystoid macular edema observed at the initial examination resolved in only 3 days after discontinuation of acitretin therapy and initiation of oral acetazolamide treatment. Because etretinate has a prolonged half-life, it seems more likely that the resolution of the macular edema observed was the result of the treatment with acetazolamide rather than being related to the discontinuation of the retinoid therapy. It is also likely that the

Figure 1. Color fundus photographs (A and B) and fluorescein angiograms (C and D) obtained at the initial examination. Cystoid macular edema was observed on slitlamp biomicroscopy in both eyes and demonstrated in late frames of the fluorescein angiogram. In addition, diffuse hyperfluorescence at the level of the retinal pigment epithelium and involving most of the macula was also noted.
macular edema was the result of RPE dysfunction, since the leakage observed on FFA appeared to come from RPE and responded well to oral acetzolamide therapy. Furthermore, diffuse RPE changes were present on FFA and no abnormalities on the retinal vessels were seen.

Evidence suggests that retinoids are directly involved in the formation and accumulation of lipofuscin in the RPE6,7 that, in its turn, could compromise RPE function.7 However, the mechanism by which acitretin could have caused the RPE changes observed in this patient remains uncertain. Although a dysfunction in the fluid-pumping mechanism of the RPE appeared to be present in this patient, the alteration of the RPE was not severe enough to compromise the supporting role of the RPE on photoreceptor cell function and, thus, to impair the PERG. This is, however, not surprising. Salzman et al8 found that 47% of patients with aphakic macular edema had a normal PERG. Furthermore, diffuse RPE abnormalities on fundus autofluorescence images have been detected in some patients with a normal PERG (N. L. and G. E. Holder, PhD, unpublished data, 1998).

Because symptoms, VA, and macular abnormalities appeared months after initiating acitretin therapy and have continued to improve since its discontinuation, it is possible that this drug may have played a role in their occurrence. However, this could be confirmed only if the above anatomical and functional changes reappear following reinitiation of the therapy. Because it is not yet clear whether these changes are totally reversible, treatment with acitretin has not been reestablished.

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Self-induced, Bilateral Retinal Detachment in Tourette Syndrome

In 1885, the French neurologist Georges Gilles de la Tourette described 9 patients with childhood-onset tics accompanied in some by uncontrollable noises and utterances, as well as hyperactivity and obsessive-compulsive behavior.1 The current diagnosis of Tourette syndrome, according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), involves multiple motor tics and at least 1 vocal tic, which occur many times a day, nearly every day, or intermittently for more than 1 year. Tics must begin before age 18 years.2 The average age of onset is 7 years, and boys are more commonly affected than girls. Motor tics are characterized by involuntary movements such as facial grimacing, frequent eye blinking, blepharospasm, spitting, and arm jerking. Vocal tics often have an aggressive or sexual component, such as grunting, barking, echolalia, and coprolalia (uncontrolled swearing). The condition often results in deleterious social consequences. We report a case of self-induced bilateral retinal detachment in a young man with Tourette syndrome who was