The interface between the vitreous and optic nerve head is difficult to evaluate clinically. While vitreomacular traction has been well described, less attention has focused on the clinical effects of persistent attachment of contracting vitreous to the optic nerve head, especially as an isolated phenomenon. Both vitreomacular and vitreopapillary traction occur as manifestations of anatomic posterior vitreous detachment. Evaluation of the posterior vitreous cortex has been recently enhanced by optical coherence tomography (OCT). We describe 2 patients referred for neuro-ophthalmic evaluation of papilledema in whom optic nerve head elevation was shown by OCT to be caused by vitreopapillary traction in the absence of diabetic vitreoretinopathy or central retinal vein occlusion.

**Report of Cases.** Case 1. An 87-year-old woman was referred for evaluation of apparent optic nerve head swelling in her right eye. She had undergone phacoemulsification with intraocular lens placement in her left eye 3 months prior to evaluation. She was pleased with the vision in the left eye and noted blurring with glare in the right eye.

Best-corrected Snellen visual acuity was 20/30 OD and 20/30 OS. The pupils were equally reactive, with no relative afferent pupillary defect. Color vision was normal, and visual fields (Humphrey 30-2; Allergan, Inc, Irvine, Calif) contained minimal, nonspecific changes. Slitlamp examination showed a moderate nuclear sclerotic cataract in the right eye and a posterior chamber intraocular lens in the left eye. Funduscopic examination revealed a few macular drusen in each eye. The right optic disc margins were blurred 360°, with the margins appearing elevated (Figure 1A). The posterior vitreous cortex was visibly attached at the optic nerve head, but it was separated from the adjacent retina. The left optic disc was elevated superiorly. Magnetic resonance imaging and computed tomographic examination results of the head and orbit were unremarkable.

Optical coherence tomography demonstrated elevation of the borders of the right optic nerve with linear densities extending from the areas of maximal elevation of the nerve head into the vitreous cavity (Figure 2A). Optical coherence tomography of the left optic nerve showed relatively normal optic disc curvature with a small, curled pre-papillary membrane and a preretinal membrane elevating the temporal papillary retina slightly. Both maculas appeared normal on initial examination. Four months later, the patient underwent right cataract extraction. Two months after that, she developed vitreomacular traction with macular edema in the right eye as well as a partial separation of the vitreopapillary membrane in the left eye. When last seen (15 months after we first saw her), the vitreopapillary traction was still present, the macula was slightly thickened (Figure 1B and Figure 2B), and visual acuity was 20/30 OD and 20/30 OS.

Case 2. An 83-year-old woman was referred for evaluation of apparent optic nerve head edema in the right eye. She had undergone cataract extraction and Yag capsulotomy in both eyes 5 years prior to evaluation. Postoperatively, an optic disc hemorrhage was noted in the right eye; 10 months prior to referral, a disc hemorrhage was noted in the left eye. The patient had noted some blurring of vision in her right eye for the last few months.

Best-corrected Snellen visual acuity was 20/70 OD and 20/20 OS. There was a trace relative afferent papillary defect in the right eye. Slitlamp examination showed posterior chamber intraocular lenses in both eyes. Fundus examination revealed macular drusen and peripapillary atrophy in each eye. The right optic nerve head was elevated nasally with disc hemorrhages temporally (Figure 1C), and there was elevation of the posterior vitreous cortex temporally, visible as a straight edge anterior to the disc. Nasally, vitreous bands were seen adherent to the nerve head. There was also cystoid macular edema in the right eye. The left fundus appeared normal.

Optical coherence tomography of the right eye showed elevation of the nasal margin of the disc by a linear density as well as a less distinct density temporally (Figure 2C). The right macula was elevated and contained cystoid edema with linear densities extending from the macular surface into the vitreous cavity.
Figure 1. Red-free fundus photographs showing blurred right optic disc margins in case 1 (A), the same eye after cataract extraction in case 1 (B), the right eye before vitrectomy in case 2 (C), and the right eye after vitrectomy in case 2 (D).

Figure 2. Optical coherence tomographic images of composite macular and optic disc scans showing vitreous bands apparently pulling the optic disc margins anteriorly in case 1 (A), the same eye after cataract extraction with persistent vitreous bands pulling up on the optic disc and mild thickening of the macular region in case 1 (B), vitreous bands pulling the optic disc margins and the macula anteriorly in case 2 (C), and the same eye after vitrectomy with restoration of the normal optic disc and macular anatomy in case 2 (D).
(Figure 2C). Results of OCT of the left eye appeared normal.

The patient underwent vitrectomy on the right eye to relieve the vitreous traction on the macula. Postoperatively, visual acuity was 20/40. The macula was flat, and the optic disc was less elevated (Figure 1D). The apparent vitreous bands were no longer seen by OCT, except for a thin band extending upward from the temporal disc edge (Figure 2D).

**Comment.** Vitreomacular traction syndrome has been well described in the literature. Vitreopapillary traction syndrome has also been described, but usually in conjunction with other manifestations of anomalous posterior vitreous detachment, which also includes rhegmatogenous retinal detachment, macular pucker, macular holes, and proliferative diabetic vitreoretinopathy.² Vitreopapillary traction can occur in the absence of other forms of anomalous posterior vitreous detachment in diabetic vitreoretinopathy,³ but there are few articles describing tractional forces exerted by the posterior hyaloid on the optic nerve head in the absence of diabetes mellitus or other forms of retinovascular disease. Schepens⁴ described the histopathology of what he referred to as pseudopapilledema with incomplete posterior vitreous detachment from the optic disc. Katz and Hoyt⁵ using slit-lamp biomicroscopy and ultrasonography in a series of 8 patients, observed that vitreopapillary traction could produce intrapapillary and peripapillary hemorrhages. Wisotsky et al⁶ also described 2 patients with vitreopapillary traction causing optic nerve head elevation demonstrated by ultrasonography.

Optical coherence tomography is a valuable tool for illustrating vitreous traction on the optic nerve. Recently, Rumelt et al⁷ described OCT findings in 3 patients with optic disc traction as well as macular traction associated with central retinal vein occlusion. Our cases were referred for apparently isolated optic nerve head elevation, and OCT confirmed the presence of idiopathic vitreopapillary traction. One patient (case 1) subsequently developed vitreomacular traction, and the other (case 2) had concurrent vitreomacular traction. Evaluating patients with OCT in the setting of optic nerve head elevation may show vitreopapillary traction and can obviate the need for more extensive procedures, such as neuroimaging, or invasive procedures, such as lumbar puncture.

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