drops to treat glaucoma and oral acetazolamide. After resolution of the corneal edema, the patient’s vision improved to 20/20. During the next year our patient experienced recurrent episodes of elevated intraocular pressure and was diagnosed as having Posner-Schlossman syndrome. There was no further visual field loss associated with her subsequent attacks of elevated pressures and no evidence of recurrence of NAION. Her visual field deficit showed mild improvement at the 1-month visit but remained stable thereafter. Two months later, her left optic nerve showed mild temporal pallor and resolved edema.

Comment. Perfusion of the optic disc is directly proportional to mean arterial pressure and inversely proportional to intraocular pressure. In our case, the presumed mechanism causing NAION was decreased perfusion to the optic disc secondary to the rise in intraocular pressure. In addition, our patient had a small cup-disc ratio, which implies crowding of the nerve fibers as they pass through a smaller scleral canal. This renders the disc more susceptible to fluctuations in perfusion pressure. Recurrence of NAION in the same eye is rare, probably because after the initial episode, a reduction in the number of nerve fibers results in decompression of the crowded disc. Interestingly, this may explain why our patient had no further detectable visual field loss with recurrent rises in intraocular pressure. This case further suggests that the mechanism of NAION is related to decreased perfusion of the optic nerve. It also illustrates the importance of pressure control in all cases to prevent NAION.

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Traumatic Retinal Break From Viscoelastic Cannula During Cataract Surgery

The overall incidence of retinal detachment after extracapsular cataract extraction is between 1% and 2%. Retinal detachment after cataract surgery usually occurs after a posterior vitreous detachment creates one or more retinal tears in the region of the vitreous base. In rare cases, direct surgical trauma to the posterior segment can cause a retinal break and subsequent retinal detachment. To our knowledge, this is the first report of a retinal tear secondary to direct trauma from a cannula used to inject viscoelastic material.

Report of a Case. A 59-year-old woman was referred to the Retina Service at the Scheie Eye Institute, Philadelphia, Pa, for evaluation after cataract surgery. The patient had undergone extracapsular cataract extraction by phacoemulsification the previous day. After the cataract was extracted, a syringe containing the viscoelastic hyaluronate sodium with an appropriate-sized cannula tip was inserted into the eye. While the viscoelastic was being injected into the capsular bag, the cannula was forcefully ejected from the syringe. The cannula pierced the posterior capsule of the lens centrally (Figure) and drove inferiorly into the posterior segment, where it directly struck the retina. The cannula was removed, an anterior vitrectomy was performed, and a posterior chamber intraocular lens was placed. The clear corneal incision was left unsutured.

On postoperative day 1, the patient noted floaters in the right eye. Her visual acuity was 20/40 and the intraocular pressure was 23 mm Hg. Slitlamp examination was notable for a Seidel-negative clear corneal incision, minimal anterior segment inflammation, and a well-centered posterior chamber intraocular lens. A few pigmented cells were present in the vitreous.

The patient was referred to our service because the posterior segment examination showed a blood clot that emanated through a peripheral retinal break inferonasally and an operculated hole at the 9-o’clock meridian. The posterior pole was normal. The retinal breaks were treated with laser retinopexy.

Six weeks later the patient had a visual acuity of 20/20. The preretinal hemorrhage was almost completely resorbed, and no new retinal breaks or tears were seen. The retinopexy surrounded both retinal tears with moderate pigmentary response; no subretinal fluid was present. The patient retained 20/20 visual acuity and was without complication at 12 months of follow-up.

Comment. Iatrogenic retinal breaks occur rarely during cataract sur-
surgery and are often related to inadvertent ocular penetration during anesthetic administration. Direct surgical trauma to the posterior segment structures is rarely caused by intraocular manipulation, as instruments are under direct visualization and surgical control. This case illustrates a possible cause of inadvertent trauma: the forceful ejection of an unsecured cannula during injection of viscoelastic. Because of the high resistance provided by the viscoelastic, significant pressure is generated during injection, allowing for a sudden, explosive release of the cannula into the eye. To avoid this surgical complication, the surgeon should secure the connections of all surgical instruments, including cannulas, phacoemulsification tips, and intraocular lens injectors, before inserting them into the eye, especially if prepared by an assistant. Aiming the cannulas toward the angle and lens injectors toward the ciliary body may prevent forceful posterior capsular tears and retinal breaks. If traumatic retinal breaks do occur, retinopyexy should be considered to prevent retinal detachment.5

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Bilateral Serous Retinal Detachments Following Diode Laser Treatment for Retinopathy of Prematurity

We report a rare retinal complication in a premature infant undergoing diode laser treatment for retinopathy of prematurity (ROP).

Report of a Case. A male infant (triplet 2) was born at 27 weeks postconceptional age at a birth weight of 810 g. Retinopathy of prematurity was present when he was screened at 31 weeks postconceptional age. Threshold ROP was reached at 33 weeks (8-9 cumulative clock hours of stage 3 ROP in zone 2 with plus disease in 4 quadrants bilaterally). Both eyes received indirect diode laser treatment (400-mW intensity/400-millisecond duration; 1200 burns OD and 840 burns OS). No retinal problems were noted following treatment. This infant also developed grade 4 intraventricular hemorrhage. Triplet 3 (female; 990-g birth weight) reached threshold ROP at 35 weeks (8-9 cumulative clock hours of stage 3 ROP in zone 2 with plus disease in 4 quadrants bilaterally). Both eyes received indirect diode laser treatment (400-mW intensity/400-millisecond duration; 1200 burns OD and 840 burns OS). No retinal problems were noted following treatment. This infant also developed grade 4 intraventricular hemorrhage. Triplet 3 (female; 990-g birth weight) developed ROP bilaterally but did not reach threshold. All 3 infants received supplemental oxygen.

All infants undergoing ROP screening and treatment undergo dilation with a combination of 0.5% cyclopentolate hydrochloride and 0.5% hydrochloride and 2.5% phenylephrine drops (repeated once). When diode laser treatment is indicated, children are sedated with intravenous morphine.

Comment. Bilateral serous retinal detachment with pigmentary macular change following diode laser treatment for ROP has not been previously re-